



Getting a Feel for Viriculture

Posted on [admin](#) Posted in [Book](#) E-book made possible by /pol/

vi·ri·cul·ture

Optimizing human development using environmental factors.

When I first set out to write a practical guide to viriculture, I wanted to create a manual for the mother of my own children. However, after nearly a decade of meditation on the subject, I have come to realize that it is not so much the mother, but the father who will best be able to make use of this work. Fathers are a neglected class in the modern West, portrayed as fat buffoons by the media, and skewered by our laws. The breakdown of gender boundaries in the last century has warped practical male education as well. While he has been encouraged to change diapers and warm up bottles, modern man completely lacks direction in the strategic, structural, and architectural aspects

of child-rearing. These are the areas in which the masculine nature can best contribute to child rearing, as opposed to the cyclical minute-to-minute needs of an infant, for which man is biologically unsuited.

However, while it may be difficult to perform viriculture without a father, it is impossible without a mother. Children are literally made out of their mother's body, especially during the earliest years. The choices she makes before, during, and after gestation determine, as we shall see, to an almost unbelievable degree, major life outcomes for the child. A mother who feels the importance of, and devotes herself to viriculture performs the loftiest and most noble role for her children, her family, and her community.

Once upon a time viriculture occurred spontaneously, but our culture is very different today. Culture as an entity exists between our primitive animal instincts and our deliberate philosophizing. It is the default way of life within a society. In varying degrees, culture arises spontaneously in all human groups, long before sophisticated scholarship or even means of intergenerational transmission exist. This essay is about the loss of culture – especially that of Western civilization – and the hope to regain humanity on Earth.

Say first, for Heav'n hides nothing from thy view
Nor the deep Tract of Hell, say first what cause
Mov'd our Grand Parents in that happy State,
Favour'd of Heav'n so highly, to fall off

Paradise Lost, Milton, 1667

Lamentation for what we once had – but have since lost – echoes through the history of Western Art – with “the Golden Age” the Pagan and “Eden” the Christian reference point. Today these cries are rarely heard, drowned out by ceaseless noise from TV and radio advertisement and propaganda about modern “Progress.” Worse still, the prerequisite budding realization itself is trampled during our modern fast-paced bargain-priced high-throughput tourist tours of the Acropolis, or Coliseum, or the Duomo of Milan, or the Great Houses of England, or the peasant cottages of England, or the old city of Vienna, or the Paris Garnier, or Boston's Old North Church. The key realization that people, many people, normal people, indeed whole societies lived, everyday and for hundreds of years in places that are to us idyllic once-in-a-lifetime vacation destinations. If Hesiod opined his own as an Age of Iron, ours is further degenerated still – an Age of Plastic, or of Asphalt, or of Garbage.

Architecture and urban design represent only the most visible of the long list of ways in which we, in the last century, have become completely unglued from the great traditions of the West, and have, at the time of writing, genuinely fallen into a Dark Age, which in the US may date from around the 1960s. Indeed any aspect of culture – sculpture, painting, poetry, music, gardening, farming, food, artisan craftsmanship, clothing, education, physical fitness, moral virtue, etiquette, and connoisseurship – essentially all have fallen into an unaesthetic, insincere morass – having been hijacked by “Harvard-Soviet” experts at the expense of human flourishing.

We have, by now, lost so much of our culture that my essay that aims at a practical solution to developing children into excellent adults cannot be made – as nearly all modern books on child rearing are – out of isolated recommendations on how to find the best obstetrician or pediatrician, a “good” school, day care, and after school activities for little Johnny, and how to get him to eat his vegetables and sleep straight through the night without waking Mommy who is tired and has work in the morning. Indeed, most modern parenting books, being purchased primarily by Mommy, cater to her – not so much the health of the baby. They are light, feel-good, pat-yourself on the back romps – soft, gentle, inoffensive – in other words feminized to the extreme – to suit the predominately female audience of expectant and new mothers. Were a book to contain harsh and strict recommendations, contrary or even offensive to what the average modern mother *already presupposes she will find* in such a book, we cannot expect that she would choose to buy it. Of course, it would be unfair to expect that the average mother is naturally an intrepid defender of Truth, Beauty and Virtue, the savior of civilization, a connoisseur of culture, or an expert on child development. But luckily for our purposes she does not need to be. It is enough that she be sensitive and compassionate, of reasonable intelligence and art, who above all desires her son or daughter to be the best.

These prescription on viriculture would hardly be at home in the “baby section” of a bookstore. The interested parent will find here a long approach and a further steep climb up a rough path with many forks, thorny vines and fallen trees. If he does not end the journey at the peak of some lofty intellectual mountain, at least we can hope to rise above to the clouds. For our discussion of viriculture is intended, not to oppose, offend, or humiliate, but to conduct the reader through the modern jungle of philosophy, physical anthropology, and statistical biology, so that by journey’s end he can appreciate the truth of this path. On the way, let us be relaxed, familiar, and avoid any pretense to excessive knowledge.

Our cultural decline has become so severe that our sons and daughters are physically, mentally, and emotionally deformed. This deformity is not a poetic metaphor, but rather is literally true – many, perhaps most, people you meet are deformed. We explore the stigmata of these deformities at length – and you may begin to see them in your family, friends, and possibly yourself.

The average person can never develop a safe and effective culture from scratch, but rather must rely on traditional practice. Only the very pretentious would attempt to “improve” on tradition – and these people generally cause more harm than good. How then can I profess to improve on current child-rearing practice? Because our traditional culture has degenerated so completely there is no longer much to disturb. Furthermore, attempting to restore effective traditions is different than top-down imposing newly invented culture and claiming it will be “good for us.”

I have been forced to perceive that here, once more, we have one of those not infrequent cases where an ancient and stubbornly retained popular belief seems to have come nearer to the truth of the matter than the opinion of modern science.

The Interpretation of Dreams, ((Freud)), 1899

Culture is a way of life and has a pervasive influence in how the average member of society goes about making her life decisions. The culture can therefore be said to have a sort of “wisdom,” in that it guides people to do the right thing whether or not they know why – what Plato calls “right

opinion.” The loss of the embodied wisdom of culture is sad when it happens to traditional peoples, and it is especially sad in the case of the culture of the West, which was nurtured by the Greek heroes, expanded by the Roman patricians, and reborn among the Renaissance and Enlightenment nobility.

Because this work is premised on our living in a severely degenerated culture, it takes a different approach from most contemporary child rearing books. Most modern recommendations are like band-aids on a dying patient, relying on low quality evidence to promote some modern intervention that holds little promise. Some do a little better in that they revive a lost aspect of healthy child rearing. But no prior work has, as far as I know, attempted to piece together all of the aspects of human culture generally that at one time combined to produce excellent humans. That is the aim of the present work. Luckily for us – and this is a crucial point – we neither have to recommend any modern intervention, nor create a culture from scratch (if even such a thing were possible). The cultural shards and splinters of the past have been preserved – they are not truly lost – although they are tucked away in moldy pigeon holes in some old professor’s office, far from popular consciousness. The “educated” myopic nerd sub-specialist of today clings to his tiny pretty piece or two, but (unless he is a classicist) doesn’t dream of what the completed puzzle shows.

Living in the midst of ignorance

wise in their own eyes, thinking themselves scholars,

fools go round and round, running here and there,

like the blind led by the blind.

Katha Upanishad, circa 400 BC ?

On the contrary, traditional uncontacted peoples have an intact cultural puzzle, which afford them many protections to poor outcomes relevant to child rearing. In the West these intact cultures have become hard to find, and in America are almost completely gone. If they exist in the West today, they are maintained to some degree in the most isolated fringes especially in Norway, Iceland, or Siberia – and indeed one finds a relative abundance of beautiful and well developed bodies and faces in these areas.

A final key to the puzzle of our un-civilization is to remember, as Europeans have been taught for thousands of years, that our forbearers the ancient Greeks lived in a culture of exceptional beauty and human flourishing.

Whose excellence he saw

Transcend his own so far

Paradise Lost, Milton, 1667

Their native intelligence combined with their balmy, forgiving climate and beautiful surroundings allowed a culture to grow up in Greece that contained within it the most comprehensive formula for developing human excellence. Among the nobility, their bony frames were well developed, with beautiful overlying musculature. Their teeth were straight and their faces well proportioned. And in their artistic and intellectual achievements they were even more prodigious, with the wealthy sons of the Hellenes being so well trained that they perfected poetry (800 BC), sculpture (500 BC), laid

the foundations of Western architecture, and essentially *invented* medicine, drama, opera, and philosophy itself. Ancient Greece can be thought of as a very smart, but still primitive society – one of the only primitive societies to achieve civilization. The individuals of the society are unique therefore in that they have the corporeal benefits of primitive societies (they are ripped and have beautiful faces), with the intellectual and artistic benefits of a proper civilization.

Europe has since surpassed the achievements of classical antiquity in many respects – with architecture (perfected around AD 1400), painting (perfected around 1500), drama (perfected around 1600), music and opera (perfected around AD 1800), and with further achievements in philosophy, and some aspects of medicine. But in the mean time, the average physical condition of the individual has not improved relative to that of Ancient Greece.

The history of Greek culture... actually begins in the aristocratic world of early Greece, with the creation of a definite ideal of human perfection, and ideal toward which the élite of the race was constantly trained.

Paideia: The Ideals of Greek Culture, Jaeger, 1944

If “Greece” today has become a dried husk of the civilization of the Hellenes, It does not detract from the lessons we can learn from the past. At any rate, I hope the reader can see through the common “if they were so great, how come they are dead?” argument.

From primitive cultures we can learn the benefits of old and humane diet and parenting practices that are in touch with nature, such as traditional foods, traditional gender roles, attachment parenting, living close to family and friends, and many others.

It is urgent therefore that the data presented in this chapter be looked upon as an important key to the progressive degeneration that is taking place in many parts of the world under the influence of our so-called modern civilization. It is a matter of profound significance that the most primitive races were originally able to avoid the physical degeneration so general in many communities today. It is also a matter of importance that the primitives recognized not only these dangers but were conscious of and practiced adequate means for preventing them. They had sufficient character to achieve the ends which they deemed essential. Weakness in character may constitute the greatest barrier in the reorganization and conservation of our modern civilization.

Nutrition and Physical Degeneration, Price, 1939

From refined and civilized cultures we can learn art, literature, connoisseurship, and excellent education itself. As we said, this once unified culture of the West has been shattered, but the individual shards of culture still exist largely intact. With proper planning, recollecting the cultural fragments required to optimize diet, nursing, child rearing, and education is possible – and is essentially the only way to consistently produce excellent men and women in the fullest sense.

I am trained as a doctor and a dentist, and you may find it hard to believe that the medical community doesn't already promote the behaviors which might lead to good corporeal growth, beauty, and health. In truth doctors as a group know very little about health (although we may have memorized a lot about the branches of the maxillary artery, or the GLUT-1 transporter protein). We

are trained to diagnose and treat disease, and unfortunately the health-promotion education that is taught in medical schools misses the mark.

Medicine's inability to help us grow healthy beautiful people stems from two follies; first medicine has a philosophical arrogance and over-confidence about our their knowledge (they never read Montaigne), second they have a lack of understanding of the complex nature of reality (they spent too many years in school answering multiple choice questions, not enough time going on dates). For these reasons, we shall see that this book is more philosophical and traditional than other books on health and child rearing.

Let us become thoroughly sensible of the weakness, blindness, and narrow limits of human reason: Let us duly consider its uncertainty and endless contrarities, even in subjects of common life and practice:

Dialogues Concerning Natural Religion, Hume, 1776

However, there is one emerging academic field in particular that can guide us toward our goal of excellent, beautiful, fully grown children – the science of complexity itself. Complexity theory is new as far as theories go, but it has always been implicitly understood by great people who actually have to make decisions in real life – generals, architects, farmers, businessmen, playboys, and even a few good doctors. The behavior of complex systems is beginning to be formalized, with the famous fractals of (((Benoit Mandelbrot))) as a mathematical underpinning. In principle, multiple iterations of self-generating phenomena repeat themselves at different scales: a single stone looks like a mountain, a single tributary looks like a river, the coast of a continent looks the same as a the shore of a single bay. Indeed nature in general follows this sort of complex dynamics, as described by Per Bak in his book *How Nature Works*, and these dynamics are present not just in the physical structure of our surroundings but in natural processes such as evolution and organismal development as well.

The living philosopher Nassim Taleb introduced complexity theory to the business world with his books which consider financial markets as a special case that magnifies the effects of complexity. The fractal nature of market behavior stares analysts and traders in the face all day long, and yet most never realize what they are looking at, mistaking minute-to-minute or week-to-week noise as the signal and leaving their “low risk” investments exposed to massive risk. By decreasing the sampling frequency of the data, we can minimize the noise and see the true signal. In the below 40 year chart of the Dow Jones, we can see both the signal, a 50 year bubble, and the fractal nature of this signal, the numerous super-imposed bubbles-within-a-bigger-bubble of 1987, 2001, 2008 – all of which are dwarfed by the latest. Each of these bubbles has the same geometry, just on a different scale.



Dow Jones Industrial Average 2 Minute (INDEXDJX:.DJI)

[Add to portfolio](#)

18,308.15 +164.70 (0.91%)

Sep 30 - Close
INDEXDJX real-time data - Disclaimer

Range 18,181.80 - 18,369.62
52 week 15,450.56 - 18,668.44
Open 18,181.80
Vol. 135.45M

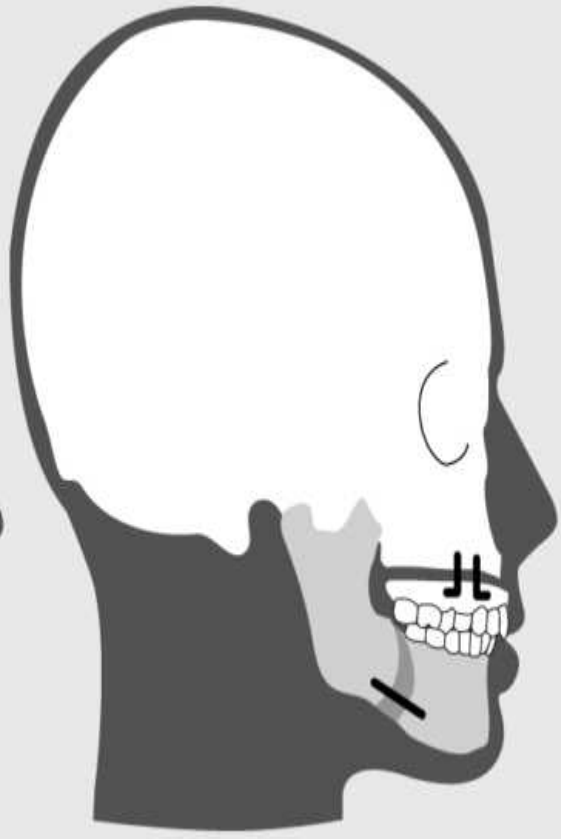
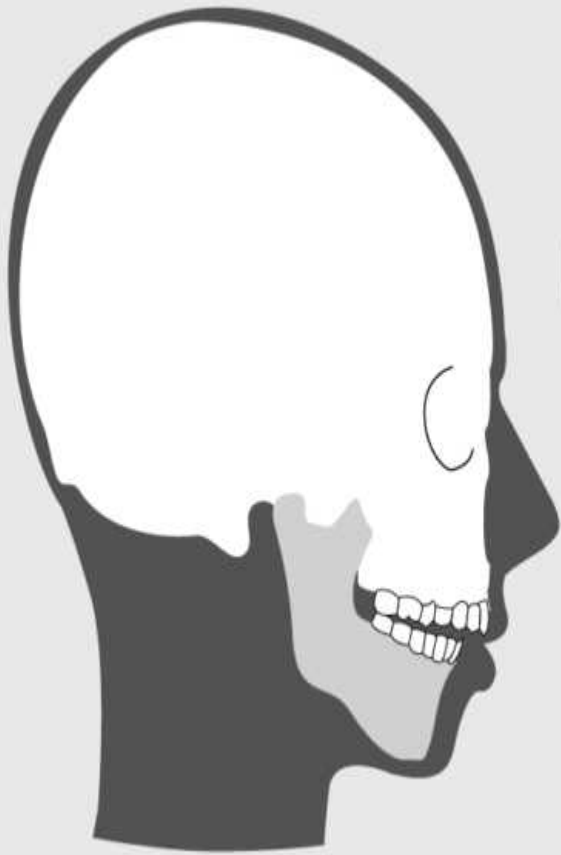
G+1 3.4k



Taleb's interest in complexity led to his meeting Art de Vany, a professor of economics who is still ripped in his 80s, and who had used his research in "power-law" dynamics (another way of talking about complexity) to create a diet and exercise program that is actually appropriate for our complex living bodies. The importance of zooming out in time to see the signal instead of the noise underlies his use of traditional foods suitable to human's evolved bodies.

We will see that the same lessons learned from familiarity with complexity theory apply to art, architecture, literature, real education, and medicine. All of these aspects of complexity theory will

be explored on our way to understanding viriculture. Of course we know that the birthrates in the West are well below replacement today. If this is our fate, we might at least make the few children we have as excellent as possible.



I'd rather not have to cut your face bones with the reciprocating saw and screw them into the right place – but I will if you sign this consent form.

Posted on [admin](#) Posted in [Book](#)

Physical beauty especially of the face has been a goal of mankind from time immemorial.

The Art of Alloplastic Facial Contouring, Terino, 2000

Summertime is a busy season for jaw surgeons. During school recess and especially in the months before freshman year of college, 17, 18, and 19 year olds across the country prepare to have their faces fixed. Among maxillofacial surgeons, ugliness is a disease, which we politely euphamize as “dentofacial deformity,” “hypoplasia,” “hyperplasia,” “asymmetry,” and various other cold clinical diagnoses. Just as surgeons are trained to identify these stigmata of dentofacial deformity, we are trained to correct them. With an arsenal of chisels, saws, drills, and titanium hardware, we crack (it's really more of a crunch) the bones of our patient's face and fix them into a more beautiful position – thus defying nature and the will of the gods.

Let's explore a typical jaw surgery, one called “bimaxillary advancement with genio.” Maxilla is Latin for jaw, which we use to mean the tooth-bearing segments of the face. Geneion is Greek for chin, genio here is short for genioplasty. The suffix -plasty means to mold or shape. Advancement implies a movement anteriorly, or in the direction of one's gaze when looking straight ahead. The bi- in bimaxillary refers to both the upper and lower jaw. This type of surgery is known as orthognathic, from the Greek orthos, straight or correct, and gnathos, jaw. In plain English, we are moving both of the jaws forward, and reshaping the chin, to create a correct facial profile.^o_b

Maxillofacial surgeons have gotten very good at this orthognathic surgery, however most of them have little understanding of the ultimate origins and ontology of the disease they treat. Indeed, we don't really need to know the cause of facial deformity to provide a satisfactory surgical treatment. If we asked an experienced surgeon “why does our patient have this facial deformity to begin with?” the answers might include:

“Maladaptive oral-functional habits”

“Some combination of genetic and environmental influences.”

“A genetic predisposition.”

Or if the surgeon is being honest:

“Who knows”

“It doesn't matter”

“We have no way of knowing.”

This type of answer is not insolence on the part of a busy surgeon – when it comes to dentofacial abnormalities requiring surgery and orthodontics, our standard textbooks state that the vast majority

of cases are without a known cause. And besides, face surgeons and orthodontists are concerned with How can I fix this? – a question which they are experts at answering.

In maxillofacial surgery, patients ask us to change their face to make them beautiful. But I don't really want to have to cut your children's facial bones, move them around and screw them into a new location to make them beautiful. It would be better for everyone for children to be beautiful "naturally." I want to address the question How could we have prevented this problem in the first place? This is a question suited not for surgeons, but for parents. As we will see, the solution does not rely on medical interventions of any kind, but rather on parenting practices. This work must therefore make prescriptions for the readers. Through my research I myself have been convinced to follow these prescriptions, and I invite the reader to learn why he ought to follow them as well.

The reader will learn why unaesthetic and maladaptive conditions, such as crooked teeth and facial deformities are so common. He will then learn how best to avoid these problems – without doctors or dentists. But our discussion of dentofacial conditions is only scratching the surface of our ability to control the outcomes of human development. Myopia, adult height, IQ, asthma, allergies and many other physical conditions are at least in part influenced by environmental factors – and therefore can be shaped by proper parenting. And of course, the control parents have over education and the development of children's valuable skills and abilities is tremendous. This work is therefore really about optimizing the development of our children.

Luckily, my prescriptions are not risky. Mainly it amounts to tried-and-true practices in education, diet, child care practices, adjusting the thermostat, and maybe a little change to our exercise routines. No surgeries, no medications, no medical treatments. Relative to an American hospital bill, my recommendation to optimize child physical development are cheap. Furthermore, my recommendations may also prevent chronic diseases of adulthood, and slow our mental and physical decline. If I'm wrong, you may suffer a minor inconvenience, but if I'm right, your children will reap major benefits for a lifetime.

For some readers, this may be a sad and painful story – as from it we learn the details of how our bodies and minds have been irreparably damaged by the ignorance of others. But despite our own developmental shortcomings, the selfless and far-sighted reader will see this as a story of hope – as once we have learned the principles of Viriculture, we will not repeat the same mistakes in the next generation.



Cultivating Excellence in Our Children

Posted on [admin](#) Posted in [Book](#)

Few readers ask themselves how these men grew up, and how the far seeing wisdom of their parents and instructors guided them from boyhood towards their mighty deeds and heroic maturity.

Paideia: The Ideals of Greek Culture, Werner Jaeger, 1944

How to develop children into the best men and women possible, is what I call *viriculture*. It is what I wish my parents had known before I was born, and a guide for the mother of my own children. Viriculture is not about *knowing* how best to develop children, but rather about *doubting* the superiority of modern interventions as compared to the practices of traditional peoples.

It was remarked by a man of genius that “ignorance lies at the two ends of knowledge.”

Democracy in America, De Tocqueville, 1835

This is my main point; the rest of the text is my biased narrative explanation. I hope you find the story interesting. My conclusions, expressed in “viriculture prescriptions” in chapters fifteen and sixteen are my humble attempt to grasp at the sorts of interventions that are most consequential to viriculture. In forming these prescriptions, I have borrowed from others smarter and more dedicated than myself, adding a little original thought here and there. Ultimately, this book is a synthesis of others’ ideas, to which I provide commentary.

In my casual presentation of the ideas contained in this book both to professionals and lay people, I have been met with a general disbelief. Most people these days simply do not care much about viriculture – or don’t believe it would work. I do, however, hope to affect the decision-making of some of my readers. I expect that most have never thought much about human development, and this book will explain why this topic is so consequential, and what we ought to do about it. This work is not at all for academic or theoretical use, but rather a practical guide for use in real life.

Of course *to me* the development of children into the best men and women possible seems like the most important topic of parenting. And yet this discussion has been neglected in our contemporary world. The academic discipline of “Child Development” is concerned with observing the stages and changes associated with human growth. I was excited when I spotted a book titled *Cross Cultural Child Development*, hoping to learn something of practical value. Instead, it was a timeline of patterns of emotional development.

Outside of psychology, the discipline of “development” addresses topics of organismal growth and morphogenesis. For example, a great amount of information is known about the microscopic flatworm *C. elegans*. This worm is studied as a model organism of development. Many things about human development can be inferred from this little creature. Today, the story of each of the female worm’s 959 body cells can be traced from “birth” to death. Similarly, academics have meticulously documented every step of human development, timed the periods of growth, and even elucidated the underlying cellular and molecular pathways. But they have not provided useful practical advice for how best to develop our children. The observations of academics studying human development are interesting, but they are not our primary concern in this book. I want to discuss how we can *influence* our children’s development into the best men and women possible.

Now the days of the Giukings bloomed fair, and chiefly because of those children, so far before the sons of men.

Volsung Saga, circa AD 1200

The Viriculture notion of maximizing human “value” is a classical one. Throughout the Western canon, we see frequent references to quality human mental and physical development being reckoned in gold equivalents:

Make your mind easy on this score. Those who took me from my father, and who always intended, sooner or later, to sell me again to my original proprietor, as they have now done, calculated that, in order to make the most of their bargain, it would be politic to leave me in possession of all my personal and hereditary worth, and even to increase the value, if possible. I have, therefore, received a very good education, and have been treated by these kidnappers very much as the slaves were treated in Asia Minor, whose masters made them grammarians, doctors, and philosophers, in order that they might fetch a higher price in the Roman market.

The Count of Monte Cristo, Dumas, 1844

The idea of “hereditary value” or “noble blood” was commonly understood, but so too was the *viriculture* idea of increasing human value regardless of the genetic starting point – through conscious child care and education.

Naturally, “best” is a matter of opinion. Personal preference and cultural norms affect our view of what exactly is an “optimal” man or woman. In many ways this diversity of opinion is a desirable quality in our societies. That said, there are human traits which are overwhelmingly preferred.

Let us account as good the persons usually considered so.

On Friendship, Cicero, 44 BC

I describe these preferred traits, such as health and beauty, as “better” than their opposites. Modern scholars have by now nearly abandoned all efforts at objectively ranking human quality, seeing any attempt at doing so as offensive, unscientific, and often as “Eurocentric.” But the sovereignty of cultural relativism in academia, which has held sway since the fall of the European Fascism, and has placed, for example, the cultural achievements of the Australian aborigines on par with those of the 18th century Viennese, may be losing its authority in the face of an internet to freely share the evidence.

While contemporary academics may quibble about the impropriety of sorting human qualities into “better” and “worse,” this was rarely a conflict in the past. The ancient Greeks for instance *knew* that they and their culture were better than “the barbarians.” The Greeks understood that certain human qualities, especially beauty, were better than their opposites.

Is not the good also the beautiful?

Symposium, Plato, circa 380 BC

Beautiful people were openly and objectively better among the Greeks – and they attributed this gift to divine grace. The opposite was true as well, as the Greeks believed ugly people were intrinsically bad...

His figure such as might his soul proclaim;

One eye was blinking, and one leg was lame:
His mountain shoulders half his breast o'erspread,
Thin hairs bestrew'd his long misshapen head.
Spleen to mankind his envious heart possess'd,
And much he hated all, but most the best

Iliad, Homer/ Pope, circa 800 BC

...and Homer's sentiment echoes throughout the Western canon.

He ghest his nature by his countenance

The Faerie Queene, Spencer, 1590

Indeed philosophers have generally considered ugliness as incompatible with full happiness.

For the man who is very ugly in appearance... is not very likely to be happy.

Nicomachean Ethics, Aristotle, circa 340 BC

This preference for human beauty is hardly unique to the Greeks or literature or philosophers – it is an extension of our biologic instincts and is enshrined in all human cultures. The contempt for the ugly is universal as well.

And the blots of Nature's hand
Shall not in their issue stand;
Never mole, hare-lip nor scar,
Nor mark prodigious, such as are
Despised in nativity,
Shall upon their children be.

A Midsummer Night's Dream, Shakespeare, 1597

While the condemnation of the ugly and glorification of the beautiful seems wrong to our modern sensibilities, it was quite normal in the past. Yet in the privacy of our minds we still behave this way today – despite our pretensions to the contrary. The value that we place on traits like health or beauty may be unfair – this I do not debate. But the distribution of these traits was never seen as “fair,” rather it was believed to stem from the biased machinations of the gods. Despite this “unfairness,” the world affords benefits to healthy and beautiful individuals even if they are undeserving of that preference.

It is hardly just to treat ugly men and women worse than their beautiful counterparts – surely they aren't responsible for their fate. Yet this bias has deep biologic roots. Even with the best intentions, it is difficult for us to favor the ugly over the beautiful – despite our modern enlightened notion that outer appearance is separate from the soul. Why do we abhor human ugliness? Simply because our human ancestors who did not abhor ugliness did not multiply as well as those who did. Most of us

treat ugly people unfairly, even if they are lovely in all other respects – it is a sad reality. As Quasimodo says...

Beauty alone has right to live;
Beauty can only beauty love,
April her back doth turn on January.
Beauty is perfect,
Beauty wins all,
Beauty alone is lord of all.

The Hunchback of Notre Dame, Hugo, 1831

...or Spencer,

I chaunst to see her in her proper hew,
Bathing her selfe in origane and thyme:
A filthy foule old woman I did vew,
That euer to haue toucht her, I did deadly rew.

The Faerie Queene, Spencer, 1590

Nature dictates this instinct in all of us. Our Greek forbearers refined this impulse into a culture that portrayed moral, intellectual, and corporeal beauty (or ugliness) as coincident in men.

And so Love set in order the empire of the gods-the love of beauty, as is evident, for with deformity Love has no concern... He wanders about seeking beauty that he may beget offspring-for in deformity he will beget nothing-and naturally embraces the beautiful rather than the deformed body; above all when he finds fair and noble and well-nurtured soul, he embraces the two in one person, and to such an one he is full of speech about virtue and the nature and pursuits of a good man; and he tries to educate him; and at the touch of the beautiful which is ever present to his memory, even when absent, he brings forth that which he had conceived long before, and in company with him tends that which he brings forth; and they are married by a far nearer tie and have a closer friendship than those who beget mortal children, for the children who are their common offspring are fairer and more immortal.

Symposium, Plato, circa 380 BC

We inherit this biological and cultural legacy, and only rarely does a saintly character rise above this instinct.

I was alone, deformed, poor,
and she loved me out of compassion.

Rigoletto, Verdi / Piave, 1851

While I sympathize with the ugly, we should still work to benefit our children who must live within the confines of this reality.

While beauty holds a high place among the human traits, it alone is by no means the only or even the first objective trait that comprises human excellence. Strength, courage, chastity, piety, honesty, wit, virtuoso skill, intelligence, judgement, honor, etc. have been valued in various degrees throughout history. In the modern sense, being a “good person” means being a nice person – in the more civilized past, the nuanced composition of human excellence was more sophisticated. For example, the Greek concept of ideal human excellence is contained in the term “areté.”

We can find a more natural clue to the history of Greek culture in the history of the idea of *areté*... There is no complete equivalent for the word *areté* in modern English: its oldest meaning is a combination of proud and courtly morality with warlike valour. But the idea of *areté* is the quintessence of early Greek aristocratic education.

Paideia: The Ideals of Greek Culture, Werner Jaeger, 1944

Like the Greek influenced Latin concept of “virtus,” the meaning of *areté* had its origin in manliness and martial courage – but by the Classical Age (~450 BC) had expanded to embrace excellence in general. In *areté* we can see the relevance to viriculture of studying western Classical ideals – they had the most accurate and fully realized vision of what it means to be the “best” man or woman.

The Greeks [had]...probably the finest physical and intellectual nature that has yet appeared upon the earth.

Failure of Natural Selection in the Case of Man, Greg, 1868

From *areté*, comes our word *aristocracy* – rule by “the best.” This definition may surprise some readers who may have assumed aristocracy was simply rule by old money.

Areté is the real attribute of the nobleman... Aristocracy, in all ages and all nations, is marked by *discipline*, the deliberate formation of human character through wise direction and constant advice. It is the only class which can claim to produce the complete man – a claim which cannot be justified without cultivating all the fundamental human qualities toward that perfect end. It is not enough for the young to grow ‘as gently as a tree’ into the social and moral code of their ancestors. The superior rank and worth of the aristocracy imply an obligation to shape its members during their malleable youth into the accepted ideal of nobility.

Paideia: The Ideals of Greek Culture, Werner Jaeger, 1944

The American notion of aristocracy and nobility as a corrupt plutocracy belies the original meaning. Were it truly possible to have such a society – ruled by the smartest, strongest, most judicious, most beautiful people, surely it would be a meritorious option.

Best Society abroad is always the oldest aristocracy; composed not so much of persons of title, which may be new, as of those families and communities which have for the longest period of time known highest cultivation. Our own Best Society is represented by social groups which have had, since this is America, widest rather than longest

association with old world cultivation. Cultivation is always the basic attribute of Best Society,

Etiquette, Emily Post, 1922

Ancient aristocrats had recourse to three methods for human improvement: breeding, physical development, and education. In *Viriculture* we use only the latter two. Over time and space, the original concept of areté has been modified and expanded, and the optimal human ideal characteristics vary between societies.

Society	Concept	Embodiment	Example
Heroic Greek	Areté	Warrior-Nobleman	Achilles
Regal Rome	Virtus	Eques	Aeneas Romulus
Classical Greek	Areté	Citizen, Philosopher, Artist	Percles Plato Phidias
Republican Rome	Virtus	Orator	Cato
Degenerate Imperial Rome	?	?	Catullus Martial
Medieval Western	Virtue, Courtesy, Chivalry	Knight Errant	Arthur Roland Siegfried Ruggiero Guyon Rinaldo Don Quixote
Modern Western	Virtue, Gallantry, Social Grace	Gentleman	Mister Darcy Edmond Dantes Jean Valjean Prince Andrei Sir James Chettam
Degenerate Contemporary Western/Globalist	Money Sex Appeal	Crime Fighting Billionaire Playboy	Bruce Wayne James Bond

Notably, there is a remarkable degree of overlap in which aspects of human are “good” and which are “bad” – certainly enough to form a comprehensive system of child rearing. But the Greek commentary on the relationship between areté and human value – and indeed even the summation of all of the historical concepts of human excellence, represents only one of many paths that converge into a comprehensive ideal for human development. For a *full* understanding, we must look beyond philosophy to science (evolutionary psychology, social psychology, sociology and economics) and religion as well.

Let us note that in every one of us there are two guiding and ruling principles which lead us whither they will; one is the natural desire of pleasure, the other is an acquired opinion which aspires after the best.

Phaedrus, Plato, circa 380 BC

In other words, a summation of the the traits from historicocultural human excellence plus those of evolutionary fitness will yield an imprecise but accurate human areté.

Evolutionary fitness + Historicocultural excellence = Optimal Human Excellence

or in Plato’s words

“Natural desire of pleasure” + “Acquired opinion aspiring after the best” = Optimal Human Excellence

OR

Base excellence + Noble excellence = Optimal Human Excellence

These diverse notions of human excellence are outlined in the Table of the Constitution of Human Excellence below.

Domain	Field	Concept	Ideal Traits	Example Thinkers
Instinctual and Popular (Base)	Evolutionary Fitness	Honest Signals	Men: Resource control, Self-sacrifice, Strength, Wit, Beauty, Artistry, Health, Masculinity Women: Beauty, Youth, Chastity, Fidelity, Maternity, Intelligence, Kindness, Artistry, Health Femininity	Geoffrey Miller Denis Dutton
	Economics	Conspicuous Consumption and Conspicuous Leisure	Men: Wealth displays, Quasi-artistic and intellectual achievements (artistry), Etiquette Women: Beauty, Youth, Quasi-artistic and intellectual achievements (artistry), Etiquette, Politeness	Thorstein Veblen
	Social Psychology	Status	Men: Social dominance Women: Social grace, Charm, Politeness	Michael Marmot Alain de Botton Vance Packard
Philosophical (Noble)	Aesthetics and Ethics (Classical)	Areté Virtus	Men: Courage, Honor, Strength, Wit, Judgement, Self-Sacrifice, Beauty, Artistry, Etiquette, Health, Manliness, Stoicism Women: Beauty, Youth, Chastity, Fidelity, Maternity, Kindness, Artistry, Etiquette, Health, Femininity, Grace	Homer Hesiod Aeschylus Plato Aristotle Cicero Virgil Seneca
	Ethics (Christian)	Moral Virtue	Holiness, Temperance, Justice, Chastity, Fidelity, Piety, Kindness, Humility, Industry	Jesus Augustine Aquinas Spencer Milton

These different fields of knowledge offer varying opinions, but many of these tributaries flow into a river of universally valued human traits. The reinforcement of similar traits from different source should make us confident that we have arrived at an accurate ideal for human excellence. The precise traits of the ideal man and woman are explored in depth in later chapters, however a short summary may be useful here.

Universally Preferred Traits of Men and Women

Men	Courage/Bravery Honor Wealth Physical and Emotional Strength Social Dominance Artistic Achievement and Connoisseurship Charm/Quick Wit Intellectual Achievement Self-Sacrifice Physical Beauty Intelligence Good Judgement Justice Etiquette Health Masculinity/Manliness
Women	Chastity Fidelity Physical Beauty Youth Kindness Artistic Achievement and Connoisseurship Intelligence Etiquette Politeness Health Femininity/Maternity Grace

Whether health, beauty, judgement,, strength, etc. can be said to be “good” in an ultimate sense is an age-old debate that we will not resolve. It is enough to recognize that people have long valued certain human traits. All things being equal, most parents would prefer to have a stronger, smarter, more beautiful child. If we succeed in identifying and developing these valuable traits, we will bestow a great gift upon our progeny.

But even if we can manage to agree on which human traits are generally considered desirable, how exactly can we influence them? Remember, this book is my prescription, in practical terms, of *how we can benefit* from this information. The chart below is my assessment of which components of universal human excellence are influenced by viriculture – the rest of the book will provide the explanation.

Socially Valued Trait	Environmentally Influenced?
Courage/Bravery	Somewhat
Honor	Somewhat
Wealth	Somewhat
Physical and Emotional Strength	Greatly
Social Dominance	Greatly
Artistic Achievement and Connoisseurship	Greatly
Charm/Quick Wit	Somewhat
Intellectual Achievement	Somewhat
Self-Sacrifice	Somewhat
Physical Beauty	Greatly
Good Judgement	Somewhat
Youth	-
Justice	Somewhat
Chastity/Fidelity	Somewhat
Grace	Greatly
Intelligence	Somewhat
Etiquette/Politeness	Greatly
Health	Greatly
Masculinity/Manliness Femininity/Maternity	Greatly

As you can see, essentially all components of human excellence subject to optimization through viriculture. A major theme of this work is that beauty and other valuable traits are not distributed simply by chance. Our biology finds certain traits valuable for particular reasons. My thesis is that we can control the development of these traits.

Is it worth following my prescriptions? Let's consider physical beauty alone. While our opinions about beauty differ, the general consensus is that it is valuable. Americans spend approximately ten billion dollars annually on cosmetic surgery. You may think that cosmetic surgery is only for the vain and insecure, but additional billions are spent on orthodontics annually, and few parents deny the value of braces for their own children. Further billions are spent on cosmetics such as makeup and hair products, mostly by women. Men are the primary consumers of the cosmetic niches in baldness solutions, and height augmentation. Diet and exercise products make up an enormous industry as well. If how much we spend is any indication, the value of beauty cannot be denied. With planning and effort, we can maximize potential beauty, and – as we shall see – most other desirable traits as well in our children.

While I am interested in the physical, mental and emotional development of children, I am not interested in controlling future generations' personality, beliefs, or opinions. Diversity in these traits is largely uncontrollable. This authentic type of diversity (unlike the college admission variety) is also desirable, as it creates a rich and interesting society. Even if we could control these traits, it might be to our detriment. Instead, I am claiming that we have the choice to make our children "better" in certain widely acknowledged positive traits, such as health, beauty, and happiness.

I want to make it clear from the outset that Viriculture should not be confused with selective breeding. The difference in these concepts is essential, and will be discussed *ad nauseam*. If we were to write instructions on how to have the best children *full stop*, then we would have to devote a discussion to mating with the best people. That may very well be effective, and even the goal of some bachelor readers – but it is not a practical solution for those already in committed relationships planning to have children, current pregnant women, or children who have already been born. Mate selection is not the focus of this work. Viriculture is concerned with:

optimizing the development of our children *in spite of* their genetic "fate"

Furthermore, I am not claiming that following these prescriptions will necessarily yield beautiful, socially dominant children! It is rather that we can choose whether or not we develop our children to their genetic potential.

Be natural—but improve your natural gifts until you have approached the ideal, for we must strive after idealized nature.

The Art of Public Speaking, Esenwein and Carnegie, 1915

This message is intended to be accessible to a lay reader. The early philosophical and scientific chapters are meant as a background for the main message – a prescription for maximizing the development of children. A number of details are discussed which make use of jargon. Feel free to skip the details. The overall message here is what's important. The details are present only because I want this work to be a stand-alone complete treatment of the subject – and to spur the interest of future research. I hope to give sufficient background to explain the relevant scientific or philosophical concepts under consideration, even for someone with no prior knowledge.

Our biology has given young women a disproportionate share in the responsibility of development of future generations. Ultimately, this information will only serve its goal if it is imbued into the cultural norms of our young parents-to-be. I alone could never achieve this goal, and I invite others to make viriculture, the means of development of human excellence, universally accessible.

For what we do to the gods and the most godlike of men is to call them blessed and happy.

Nicomachean Ethics, Aristotle, circa 340 BC



Status without Anxiety

Posted on [admin](#) Posted in [Book](#)

An important aspect of human excellence is social status. I do not believe that social status is, philosophically speaking, a “good trait,” but rather it is a component of human excellence only when we take a broad, interdisciplinary view

Social status refers to interpersonal rank or hierarchy within a group. Status is context dependent, but it is undoubtedly real and consequential in human life. In fact, given the primacy of human interactions in our lives, social status is one of the most important determinants of our happiness and health – mental and physical. Although status is fluid and situational, there are certain traits, skills, and behaviors that tend to be associated with high status. The quest to communicate high

status to others is a major impetus for human effort in societies where the basic necessities for life are met. However, because of the objective inability for the majority of individuals to outrank others, and the increasingly strict comparisons we subject ourselves to as our status increases, the pursuit of social status in the modern context is fraught with anxiety and a lack of satisfaction.

Modern consumption is not for survival or comfort but is rather a status seeking endeavor, mediated by the supposed signaling power of what we buy. Goods and services are marketed with the subliminal message that the buyer will win social favor because the product conveys or augments certain socially desirable qualities, such as beauty, intelligence, charisma, muscularity, height, etc.

This marketing trick never actually works the way we hope, and most thoughtful people recognize the futility of trying to purchase social power with consumer goods. Besides from wealthy big-spenders, conspicuous consumption cannot meaningfully help us in our quest for status. However, with the right strategy, social status can certainly be developed. Independent of brands, products, and marketing, ancestral humans established social hierarchies on the basis of nothing more than their neighbors' naked bodies and minds. The natural human traits displayed by our minds and bodies, such as beauty, intelligence, charisma, muscularity, height, etc. are the real deal. They are the traits that our mind have been selected for over millennia to care deeply about, which makes them much better signals than any product.

Without consumables as a proxy, we evolved important social preferences. These socially important traits are partially heritable (tall parents have tall children), and they are also much less plastic by adulthood (you don't grow taller after you're 20).

But when my youth was spent, my hope was vain.

Jerusalem Delivered, Tasso, 1581

Any reader of this book has already been dealt her developmental hand. But for our young or unborn children the story is very different. Socially valuable traits are, of course, dependent on both genetic and environment factors. But the large degree to which these important characteristics can be influenced in the course of development is a neglected discussion. Although the variance of any one socially valuable human trait is only partly due to environmental factors (~30% for height), the aggregate impact of environment on these traits as a whole is immense. The reality is that as parents we can influence the outcome of unborn children's critical traits so dramatically that we can predictably control their adult social status.

Although many human traits are helpful in establishing social status, ultimately status is communicated to others through waste. This waste can be either in time – through conspicuous leisure, or through money, with conspicuous consumption. Both essentially tell others the same story – that the individual in question is powerful enough to not concern himself with the drudgery of industrious tasks. The greater the waste, the greater the status. While the physical manifestations of conspicuous *consumption* are easy to understand, the manifestations of conspicuous *leisure* are somewhat more subtle. These include “polite” etiquette, erudition, connoisseurship, artistic skill, skill at sports, religious devotion, scholarship, wit, etc. These traits communicate the status of the bearer, just as much as an expensive suit or car. As the size of a society increases, and the proportion of strangers we interact with daily increases (like in a city), the relative weight of conspicuous consumption vs conspicuous leisure increases, as consumable goods (clothes, shoes,

haircuts, jewelry, makeup, cars etc.) are more useful for communicating status instantly to people we have never met.

If we are to be philosophical about status, we can see that it is not such a worthy goal to quest for – as it requires waste in time or money to achieve. These resources could be put to a much better use, in terms of ending suffering, or working towards universal goals of human achievement. Some authors suggest an approach of using religious or personal narratives to ignore status and instead focus on introspection, self-actualization, nurturing relationships, and generally being a good person. I agree with this approach, and I do think that deep down there are more important things in life than social status. However, the majority of people we interact with *will* care about status. This is unavoidable; the reality is the quest for status has been and will be an important aspect of life for most humans – especially in societies which claim to allow social mobility. There is no doubt that status seeking today it has been corrupted into the painfully unaesthetic consumer culture of showing off branded crap. But the deeper drive to improve social standing in a group is an animal instinct. So while we should see the quest for status for what it is, vulgar, unaesthetic, and unphilosophical, we must also recognize that status truly is an important part of a happy and comfortable human existence.

What does social status have to do with viriculture? In developing a child with maximized human value, we are developing a child with high social status. Instead of burdening the child with additional concern or awareness of the role of status in human affairs, this sort of status-conscious child-rearing would minimize the “status anxiety” of the child. This is because, by the time the child begins to interact with others and establish a social rank, he would have already been instilled with the traits that are markers of conspicuous leisure (and in some cases conspicuous consumption as well). The child would therefore be ahead of his peers, and never develop the insecurities which attend low status.

Achieving status-without-anxiety for our children is *not at all* about buying them designer clothes, strollers, the newest video games, or any other of the standard American middle class consumption trends for children. The modern approach to status is getting a “high paying” job and then spend the majority of each paycheck consuming conspicuously. Compare that to the Spartan approach to status and leisure.

And indeed one of the greatest and highest blessings Lycurgus procured his people was the abundance of leisure which proceeded from his forbidding to them the exercise of any mean and mechanical trade. Of the money-making that depends on troublesome going about and seeing people and doing business, they had no need at all in a state where wealth obtained no honour or respect. The Helots tilled their ground for them, and paid them yearly in kind the appointed quantity, without any trouble of theirs. To this purpose there goes a story of a Lacedaemonian who, happening to be at Athens when the courts were sitting, was told of a citizen that had been fined for living an idle life, and was being escorted home in much distress of mind by his condoling friends; the Lacedaemonian was much surprised at it and desired his friend to show him the man who was condemned for living like a freeman. So much beneath them did they esteem the frivolous devotion of time and attention to the mechanical arts and to moneymaking.

Parallel Lives of Noble Grecians and Romans, Plutarch, circa AD 100

I am staunchly anti-consumerism. Instead, we should identify those skills and traits that the highest-status individuals (beautiful, virtuous people of hereditary wealth and leisure) develop in their abundant free time. These signals communicate high status without resorting to the poisonously unaesthetic conspicuous consumption of middle class “luxury” branded goods. We further must identify those human traits that we have been predisposed by nature to care deeply about (health, beauty, strength, etc.) and nurture these as well. By instilling these *qualities* in our children from a young age, they are given a cheat code to the game of status achievement. They never need to feel the anxiety of achieving high status, because the markers of high status will be an intrinsic part of their “soul” from a young age.

If this sort of training sounds too aristocratic, it is only because the hereditary leisure class refined the traits and characteristics that signal high status. As they were the group with the greatest resources to pursue status as an end in itself, the traits that they – and only they – established set the standard. We must therefore understand and develop these same traits in our own children, although we will certainly adapt them to our lifestyles and interests.

It is important to consider as well how we can achieve these expensive (but socially valuable) human traits without bankrupting ourselves, as I expect most readers are not of the hereditary leisure class. Modern middle class consumerism is not helpful for viriculture. We must instead instill in our children the honest signals of high status – achieved as early and efficiently as possible.

There is no question that developing high status signals has a cost. For reasons we will explore, good development, human beauty, virtuosos skill, connoisseurship etc. are *natively* expensive. Their expensiveness (in terms of both leisure time invested, and financial cost to attain) is ultimately responsible for their honesty as a signal.

Refined tastes, manners, habits of life are a useful evidence of gentility, because good breeding requires time, application and expense, and can therefore not be compassed by those whose time and energy are taken up with work. A knowledge of good form is *prima facie* evidence that that portion of the well-bred person’s life which is not spent under the observation of the spectator has been worthily spent in acquiring accomplishments that are of no lucrative effect. In the last analysis the value of manners lies in the fact that they are the voucher of a life of leisure. Therefore, conversely, since leisure is the conventional means of pecuniary repute, the acquisition of some proficiency in decorum is incumbent on all who aspire to a modicum of pecuniary decency.

The Theory of the Leisure Class, Veblen, 1899

However, with thoughtful strategy we can minimize the costs while maximizing the honesty and potency of the signals. It is far cheaper and more effective to ensure the social status of a child with good physical and mental development, and desirable skills, than by trying to achieve status with conspicuous consumption of goods.

To maximize many of these honest signals, we must employ an aristocratic sort of education. As opposed to modern factory child rearing + public schooling, which in spite of years of discomfort and busywork leave a child without any real human excellence, Viriculture affords the child

intrinsic social superiority. In the quest for status, mindless drudgery and even “hard work” are of dubious value. The excellent child wins the social competitions of life effortlessly. With viriculture we spare our child the painful and unaesthetic sequelae of native inferiority.

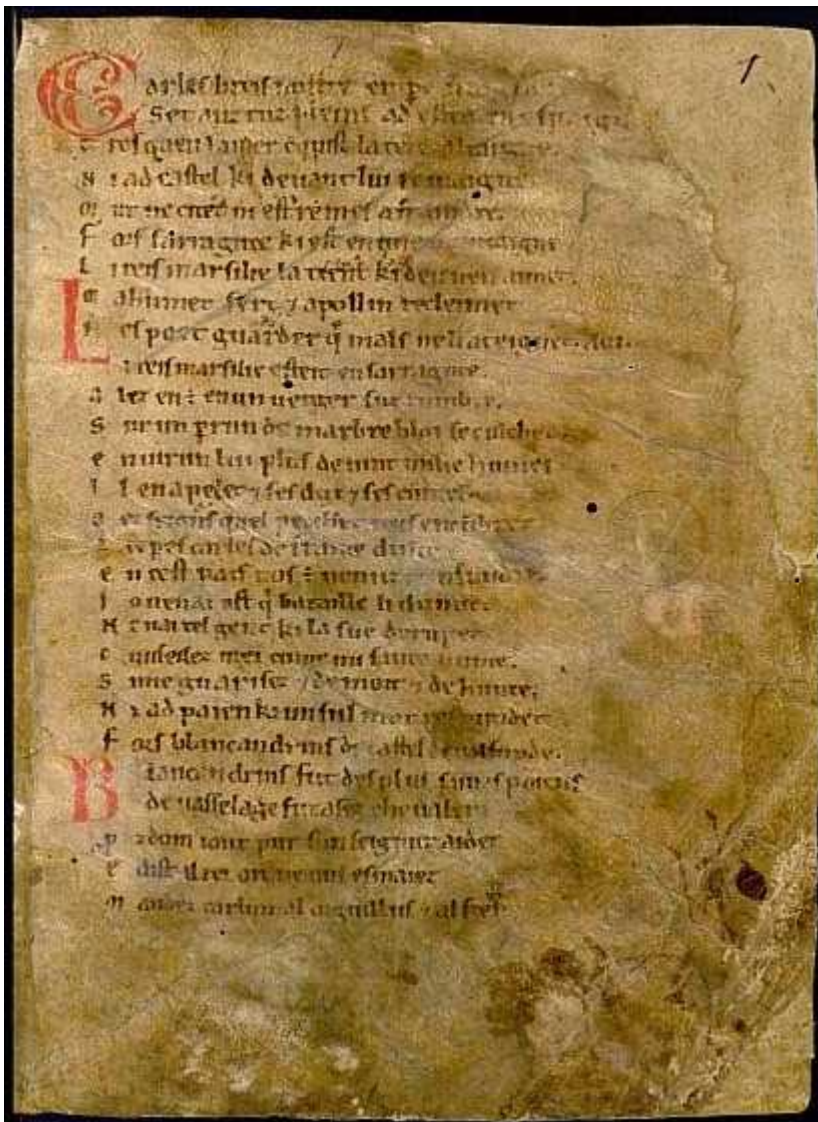
For anxiety-free status the child should be able to relax as much as possible – free to pursue their own interests, entertainments, or nothing at all with out concern. This is antithetical to the packed schedules of Ivy-bound “good students.” whose AP classes and resume-stuffing extracurriculars impose on ease and leisure.

From the days of the Greek philosophers to the present, a degree of leisure and of exemption from contact with such industrial processes as serve the immediate everyday purposes of human life has ever been recognised by thoughtful men as a prerequisite to a worthy or beautiful, or even a blameless, human life. In itself and in its consequences the life of leisure is beautiful and ennobling in all civilised men’s eyes.

The Theory of the Leisure Class, Veblen, 1899

Viriculture achieves this relaxed pace partly by instilling valuable skills very early in life, so that others attribute to the child a native superiority. Insofar as crude, repetitive practice is necessary to develop rare but desirable human skills, this should be gotten out of the way at as early an age as possible. Finally, it is worth noting that high status itself may improve physical and mental development in a child, creating a positive feedback loop.

While striving for social status is an unphilosophical and unaesthetic pursuit, actually having social status is an important aspect of a happy healthy life. Viriculture removes the burden of status anxiety from our child, while providing all the benefits of genuine high status.



Defense of Traditional Wisdom

Posted on [admin](#) Posted in [Book](#)

Those who enter a little into study and inquiry, finding many appearances of evidence in doctrines the newest and most extraordinary, think nothing too difficult for human reason; and, presumptuously breaking through all fences, profane the inmost sanctuaries of the temple.

Dialogues Concerning Natural Religion, Hume, 1776

Before we can understand viriculture, we must cultivate a healthy humility in the face of the wisdom of the past, as we moderns are not so smart as we think we are.

Many today subscribe to the general notion of universal human progress, that our practices and institutions have improved over time. Opposed to this idea of progress is the classical notion of descent, characterized by the stories of the *Golden Age* in the Greek and *Expulsion from Eden* in the Abrahamic traditions.

Thereafter, would that I were not among the men of the fifth generation, but either had died before or been born afterwards. For now truly is a race of iron, and men never rest from labor and sorrow by day, and from perishing by night; and the gods shall lay sore trouble upon them.

Works and Days, Hesiod, circa 800 BC

While old societies may not have been an Eden, they certainly contained a great deal of embodied wisdom which we moderns ignore at our peril.

Compared to many contemporary practices which seem normal to us, our children would benefit from the time-tested, accumulated wisdom of their more ancient counterparts. Modern scientific methods have given us the ability to actually check when the outcomes for a modern practice yield superior results. However, we find over and over the modern practices only rarely live up to the hype – especially in the development of human excellence. Indeed in real life very few practices are ever evaluated by rigorous science, and our decisions must be made in the absence of high quality evidence.

This a good time to remind the reader that viriculture relies on philosophy to determine how we can be as safe as possible in the uncertainties of life. The question of how best to develop our children does not lend itself to scientific measurement because it is unethical to deliberately subject children to presumably adverse environments. We therefore lack controlled data on this topic. However, every day children are being conceived, and they will continue to develop whether or not we have scientific studies. We must still make decisions about how best to develop our children in the absence of evidence. As we said, nearly all important decisions we make are in the absence of high quality evidence. When was the last time you consulted the results of a randomized controlled trial to make a decision?

Evidence-based decision making is “so hot right now,” especially in medicine. To people not familiar with the term, it may seem strange. What kind of decision making are doctors using if it’s not evidence based? At its best, “evidence-based” takes blinded, randomized controlled trial data acquired about a valid topic, and uses that to make clinical decisions which have a practical impact. Unfortunately, high quality evidence is hard to get. The vast majority of decisions in the real world, even clinical decisions by doctors, must still be made in the absence of such evidence. In fact many of the most interesting and consequential questions about health and medicine are not amenable to study by randomized controlled trials. This is especially true about the treatment of chronic conditions with lifestyle changes. Professional experience and medical trends usually guide doctors in their decision making. Similarly, instinct, tradition, experience, and folk wisdom guide all of our decisions day-to-day.

We are walking archives of ancestral wisdom. Our bodies and minds are live monuments to our forbearers’ rare successes.

Helena Cronin, *The Ant and the Peacock*, 1991

Folk wisdom is a element of culture, and cultural units are propagated through time and space under the influence of a selection process. A unit of culture that is overtly harmful to its users is not

transmitted as well as that which is not harmful. For this reason, the more ancient a practice, the less likely it is to be harmful.

Certain practices can become old embedded traditions without a true net benefit. An example of this would be a rain-dance. However, these behaviors can only stand the test of time if they are not harmful. Very old practices are almost certainly not harmful, while moderately old practices may have survived if they are only slightly harmful. New practices may be either harmful or safe – unless we have scientifically tested the practice, we don't yet know. This creates a useful asymmetry in the harm-benefit exposure when following ancient traditions. Whereas a modern invention or practice may be very beneficial or very harmful, no ancient practice could have survived if it were harmful. By following ancient practices, we remove the risk of overt harm, leaving us exposed to upside only. If we were to follow untested modern practices, we would be susceptible to both overt harm, and overt benefit.

The underlying reason that the oldness of a practice correlates with its safety has to do with the way human practices spread. This concept has similarities to genetic traits being selected for in evolution. In this model, the “meme” is the unit of cultural selection – analogous to the gene in the biological world. Memes have a high “fitness” when they spread themselves widely. Memes that spread universally among humans, such as fire, bows and arrows, clothing, etc. are very useful. Others, such as the tendency for families to raise their children in their own religion, are self-perpetuating. Memes that are net detrimental exist, but they are likely to extinguish themselves. Societies which embrace a detrimental meme may be outcompeted by others which do not. Some universal and ancient memes may appear to be detrimental, (the use of alcohol, or valorous self-sacrifice) but may have subtle or hidden benefits. If a group of people were to embrace an overtly harmful meme, they likely would have impaired survival and reproduction rates. Relative to groups with safer memes, a population embracing a harmful meme would multiply less quickly. Over very long times, memes causing even slight survival or reproduction disadvantages relative to neighbors would lead to the end of that population, or abandonment of the detrimental meme. This is why very old memes are unlikely to harm us.

Detrimental memes are selected against in the same way that detrimental genes are selected against. Novel genetic mutations which are overtly harmful do not usually survive long in a population. Many of the genetic diseases common in humans have been around for a long time. These almost all have a hidden benefit, in addition to the overt risk. A classic example of this hidden benefit occurs in the “heterozygote advantage” of certain genes. Humans have two copies of most genes. Some gene mutations which cause overt disease in a double dose (such as sickle cell disease), confer a benefit to the majority of the population who have only a single dose (such as sickle cell trait, which confers resistance to malaria). In the same way memes may have hidden benefits. It is unlikely, however, than an old meme would be *net* detrimental.

Interestingly, even neutral memes would not be expected to be old and universal among all human cultures. This is because neutral memes tend to be diluted by neighboring competing memes. Without a clear superiority in a meme's ability to duplicate itself (through human survival and reproduction, or duplication of the meme itself), it will tend to be outcompeted by other memes over long periods.

By following ancient practices we remove the risk of overt harm, leaving us exposed to upside only. If we were to follow modern practices, we would be susceptible to both overt harm, and overt benefit. This general principle is confirmed by the heuristics of many real-world practitioners in different domains. In *Worst Pills, Best Pills*, both doctors and patients are warned to avoid new drug therapies until they are at least seven years old. This is because very new medications often have harms that are only discovered years later. Using older drugs decreases the risk of overt harm. A similar heuristic is used by those who delay in using new technology. By waiting they let “early-adopters” function as the guinea pigs, and they avoid the inherent risks, problems, and high costs associated with immature technology. In both cases, the prudent wait-ers miss out on the supposed “benefits” of the new drug or technology, but often these benefits are exaggerated – especially in our world where everyone is trying to sell something.

Read nothing from the past one hundred years; eat no fruits from the past one thousand years; drink nothing from the past four thousand years (just wine and water).

The Bed of Procrustes, Taleb, 2010

The principle that ancient memes which are still in practice are less likely to harm us than new memes leads us to the fundamental guiding philosophy of this work:

In the absence of high quality evidence, if you want to be safe, be as conservative as possible.

By conservative I mean holding to traditional attitudes and values, respecting ancient laws and customs, and maintaining caution about change or innovation. This is a classical attitude, and the sort of conservatism that Montaigne describes in reference to Plato:

Plato in his *Laws*, considers no plague in the world more harmful to his city than this: to let the young change at will from one fashion to another in dress, gestures, dances, exercises, and songs, shifting their judgement now to this position, now to that, running after novelties and honoring their inventors; whereby morals are corrupted and all ancient institutions come into disdain and contempt. In all things except those that are simply bad, change is to be feared: change of seasons, winds, food, and humors. And no laws are held in their true honor except those to which God has given some ancient duration, so that no one knows their origin or that they were ever different.

Essays, Montaigne, 1580

This is excellent practical advice, assuming you want to be safe. If we want to be picky we could add “In all things except those that are simply bad, *and those about which you have high quality evidence of safety and efficacy*, change is to be feared.” Of course, randomized controlled trials didn’t exist in Montaigne’s day. A couple centuries later, Hume reaffirmed the value of the “test of time” applied to literature.

The same Homer who pleased at Athens and Rome two thousand years ago, is still admired at Paris and at London. All the changes of climate, government, religion, and language, have not been able to obscure his glory. Authority or prejudice may give a temporary vogue to a bad poet or orator, but his reputation will never be durable or general. When his compositions are examined by posterity or by foreigners, the enchantment is dissipated, and his faults appear in their true colours. On the contrary, a

real genius, the longer his works endure, and the more wide they are spread, the more sincere is the admiration which he meets with. Envy and jealousy have too much place in a narrow circle; and even familiar acquaintance with his person may diminish the applause due to his performances. But when these obstructions are removed, the beauties, which are naturally fitted to excite agreeable sentiments, immediately display their energy and while the world endures, they maintain their authority over the minds of men.

On the Standard of Taste, Hume, circa 1750

To avoid confusion – our guiding principle should not be misinterpreted as advice to follow political “conservatism” in the American sense. This often has nothing to do with actually being conservative, although occasionally the two intersect:

Much of the social history of the Western world over the past three decades has involved replacing what worked with what sounded good... the situation has gotten worse after the bright new theories were put into operation.

Thomas Sowell, 1993

Our principle simply springs from the notion that time filters out detrimental practices. We can expect that those practices that survive over long periods of time have on average more merit than those that have not yet stood that test. Of course this does not mean that all new things or changes are bad. Only that, in the absence of high quality evidence we should be conservative.

The guiding principle is also the justification for the claim that, while we ought to demand high quality evidence before trusting a modern intervention to be safe, *we do not need evidence to say that a lack of intervention, or a very ancient traditional practice is safe* – that is the default assumption. This is because the ancient practice has proven its safety by the test of time, while the modern intervention has not. When discussing these ideas with friends and other medical professionals, I have found that this point is very difficult to communicate. They tend to overestimate the value of modern interventions. They also think that I am being hypocritical in only demanding evidence for modern interventions, while the corresponding ancient practice is exempt from this requirement. Not so. This is due to memetic selection against net detrimental memes leading to asymmetry in risk exposure when following ancient memes.

This book relies on this philosophy to support its recommendations. Any research presented in defense of the thesis is supplemental, rather than being the foundation of the argument. The argument is based on folk wisdom and philosophy rather than science. We would have to rely on future research to determine if the claims made here are evidence-based. Until we have randomized controlled trial data on how best to develop our future children, we will lack the necessary evidence. However, high quality data on this topic will likely never be gathered, due to the ethical problems with experimenting on children. That said, a lack of evidence does not mean that we cannot give prescriptions that will benefit us and our posterity. To address the question of how to make decisions when we have incomplete knowledge, we must fall back on philosophy.

Even if no randomized controlled trials about optimizing human development exist, there does exist some data on which we could base a decision. As Loisel Hutz says:

Well, Your Honor, We've plenty of hearsay and conjecture. Those are *kinds* of evidence.

The Simpsons

Perhaps the reader is wondering why we shouldn't use this data, instead of relying solely on our guiding philosophy. The reason why this would be a mistake is because bad evidence (*i.e.* anything that isn't a double-blind, controlled experiment) can be worse than no evidence, and the evidence we have on the present topic is bad. Imagine trying to find your way using a faulty map. Your reliance on the map would help you be precisely wrong about where you are going. Of course, navigating without a map does not mean blindly walking off a cliff. Rather you would be vaguely accurate (rather than precisely wrong) using your intuition, asking for directions, using the sun, etc. The reason that bad evidence is worse than no evidence has to do with the way the data is interpreted to make decisions. After all, data is just data – it is what we do with the information that can help or hurt us. Good evidence increases both our knowledge and our confidence about that knowledge. Bad evidence may slightly increase our knowledge, but it disproportionately increases our confidence about our knowledge, to our detriment. We jump to conclusions when further research is needed. When it comes to the safety of children, jumping to conclusions is dangerous.

For we must not only acquire wisdom, but profit by it.

Cicero quoted by Montaigne

Because all of the evidence about optimally developing children is bad, it should only be considered if it is in accord with our guiding principle. If we hear an argument that contradicts our guiding principle (such as support of a modern intervention to replace a traditional practice), then we must demand high quality evidence of its safety and efficacy. These valuable modern interventions will be rare, and will take a long time to prove their worth. For day-to-day purposes, it is safest to ignore modern interventions in most cases.

We cannot put our faith in the weak evidence that may exist on how best to develop children. The abundant corroborative evidence in this book is used only to provide illustrations and to demonstrate interesting observations that others have made. The examples used in this book do sometimes come from scientific domains, but the underlying argument of the book is, as I said before, not scientific. The examples I present in this book are not high quality evidence, and should only be taken seriously if they are in line with our guiding philosophy of being conservative – since we don't need evidence for such a recommendation.

Traditional “wisdom” lies between wisdom and ignorance in that it has “right opinion” without knowing why. It is therefore not as wise as good philosophy, but it can certainly perform better in the real world than the ignorance, even if the ignorance is vested in all the regalia of “academic” or “scientific” authority.

“Hush,” she cried; “must that be foul which is not fair?” “Certainly,” I said. “And is that which is not wise, ignorant? do you not see that there is a mean between wisdom and ignorance?” “And what may that be?” I said. “Right opinion,” she replied; “which, as you know, being incapable of giving a reason, is not knowledge (for how can knowledge be devoid of reason? nor again, ignorance, for neither can ignorance attain

the truth), but is clearly something which is a mean between ignorance and wisdom.”
“Quite true,” I replied.

Symposium, Plato, circa 380 BC

The vulgar, indeed, we may remark, who are unacquainted with science and profound inquiry, observing the endless disputes of the learned, have commonly a thorough contempt for philosophy; and rivet themselves the faster, by that means, in the great points of theology which have been taught them. Those who enter a little into study and inquiry, finding many appearances of evidence in doctrines the newest and most extraordinary, think nothing too difficult for human reason; and, presumptuously breaking through all fences, profane the inmost sanctuaries of the temple.

Dialogues Concerning Natural Religion, Hume, 1776

Since my recommendations are not evidence-based, they would be the right choices to make in the absence of *any* evidence, and they are the right choices to make in the presence of the bad evidence we do have. Only high quality, randomized control trials on child development (which will likely never be performed), could meaningfully contradict my recommendations.

Another way of looking at our guiding philosophy is through recognizing that the wisdom accumulated in ancient culture is better at making decisions than even our most thoughtful attempts. When we “improve” on traditions or make “progress” in society, we are often toying with things that we do not fully understand.

Culture has complex implications, and unintended consequences arise from changes we make. If we are to make a change to traditional culture, it should not be done lightly. This is a common theme in old philosophical works, consider Montaigne’s view:

And when some articles of their religion have been set in doubt and upon the balance they soon after cast easily into like uncertainty all the other parts of their belief, which had no more authority or foundation in them than those that have been shaken; and they shake off as a tyrannical yoke all the impressions they had once received from the authority of the laws or reverence of ancient usage – *for eagerly is trampled what one was too much feared* [Lucretius] – determined from then on to accept nothing to which they have not applied their judgment and granted their personal consent.

The plea is fair [Terence]. But even the best pretext for innovation is very dangerous: *so true it is that no change from the ancient ways is to be approved* [Livy]. Thus it seems to me, to speak frankly, that it takes a lot of self-love and presumption to have such esteem for one’s own opinions that to establish them one must overthrow the public peace and introduce so many inevitable evils, and such a horrible corruption of morals, as civil wars and political changes bring with them in a matter of such weight – and introduce them into one’s own country.

Essays, Montaigne, 1580

And Spencer’s too is in line with the spirit of this work:

Such heav’nly Justice doth among them reign,

That every one do know their certain Bound,
In which they do these many Years remain;
And 'mongst them all no Change hath yet been found.
But if thou now should'st weigh them new in Pound,
We are not sure they would so long remain:
All Change is perilous, and all Chaunce unsound.
Therefore leave off to weigh them all again,
Till we may be assur'd they shall their Course retain.

The Faerie Queene, Spencer, 1590

The ancients had a much greater respect for the embodied wisdom of traditional practice and law.

[Women] are worth more than [Men], as I shall prove. First of all they wash all their wool in warm water, according to the ancient practice; you will never see them changing their method. Ah! if Athens only acted thus, if it did not take delight in ceaseless innovations, would not its happiness be assured?

Ecclesiazusae, Aristophanes, 391 BC

And as Aristotle discusses in his *Politics*, the ancients were far more conscious about making changes to the laws:

Hence we infer that sometimes and in certain cases laws may be changed; but when we look at the matter from another point of view, great caution would seem to be required. For the habit of lightly changing the laws is an evil, and, when the advantage is small, some errors both of lawgivers and rulers had better be left; the citizen will not gain so much by making the change as he will lose by the habit of disobedience. The analogy of the arts is false; a change in a law is a very different thing from a change in an art. For the law has no power to command obedience except that of habit, which can only be given by time, so that a readiness to change from old to new laws enfeebles the power of the law.

Indeed the ancients often saw blind obedience to laws and customs as a positive virtue:

...that unlearned loyalty is more serviceable than quick-witted insubordination; and that ordinary men usually manage public affairs better than their more gifted fellows. The latter are always wanting to appear wiser than the laws, and to overrule every proposition brought forward, thinking that they cannot show their wit in more important matters, and by such behaviour too often ruin their country; while those who mistrust their own cleverness are content to be less learned than the laws, and less able to pick holes in the speech of a good speaker; and being fair judges rather than rival athletes, generally conduct affairs successfully.

Cleon's Speech from *History of the Peloponnesian War*, Thucydides, circa 400 BC

This reverence for and immutability of ancient law differs greatly from the practice in contemporary democratic states, such as the US. It is no surprise that our classically educated founders predicted the shortcomings of such a system:

The facility and excess of law-making seem to be the diseases to which our governments are most liable... The mischievous effects of the mutability in the public councils arising from a rapid succession of new members would fill a volume: every new election in the States is found to change one-half of the representatives. From this change of men must proceed a change of opinions and of measures, which forfeits the respect and confidence of other nations, poisons the blessings of liberty itself, and diminishes the attachment and reverence of the people toward a political system which betrays so many marks of infirmity.

Federalist #62, 1788

It is interesting to note that successful civilizations have nearly all enforced adherence to traditions. It may be that respect-for-tradition is itself a meme that has been selected for on the basis of its stabilizing influence of societies. Of course, tradition is not always best. But tradition often does better than what Taleb calls “naive interventionism.”

Sadly, the people foisting the interventions are often “experts,” sometimes scientists. This lends perceived credibility to the push for change. However, a thoughtful scientist would respect the difficulty in obtaining accurate results about cause and effect – especially outside the realm of physics.

Today we take for granted the idea that “change” is beneficial. But the opposite argument has historically held more merit, as we can see in the reasoning on a pamphlet issued by the National Association Opposed to Woman Suffrage:

Vote NO on woman suffrage because

it is unwise to risk the good we already have for the evil which may occur.

Indeed even laws which seem antiquated today, such as the Medieval European strict prohibitions on vagrancy (that is “moving”) or usury formed part of a cultural ecosystem, in which too many changes lead to sociality instability. Just like in biological ecosystems, the loss of a key “species” of culture can lead to unintended consequences. Consider the strategy of the Athenian statesman Solon:

For where it was well before, he applied no remedy, nor altered anything, for fear lest- “Overthrowing altogether and disordering the state,” he should be too weak to new-model and recompose it to a tolerable condition.

Parallel Lives of Noble Grecians and Romans, Plutarch, circa AD 100

And Plutarch also tells us that Numa, the second king of Rome, used this same justification when he initially refused the monarchy:

Every alteration of a man’s life is dangerous to him; but madness only could induce one who needs nothing, and is satisfied with everything, to quit a life he is accustomed to;

which, whatever else it is deficient in, at any rate has the advantage of certainty over one wholly doubtful and unknown.

Parallel Lives of Noble Grecians and Romans, Plutarch, circa AD 100

A healthy skepticism of the new and unknown, at least until the high quality evidence vindication, is the safe approach for life. Unfortunately, modernity has abandoned valuable old cultural wisdom wholesale and injudiciously, and the results are often unpleasant.

The Industrial Revolution and its consequences have been a disaster for the human race. They have greatly increased the life-expectancy of those of us who live in “advanced” countries, but they have destabilized society, have made life unfulfilling, have subjected human beings to indignities, have led to widespread psychological suffering (in the Third World to physical suffering as well) and have inflicted severe damage on the natural world. The continued development of technology will worsen the situation. It will certainly subject human beings to greater indignities and inflict greater damage on the natural world, it will probably lead to greater social disruption and psychological suffering, and it may lead to increased physical suffering even in “advanced” countries.

The Unabomber Manifesto: Industrial Society and Its Future, 1995

A rule of thumb – aggressively resist the ubiquitous “science based” attempts to sell you things to improve your health. Most “scientific research” is less-than-worthless Loniel Hutz brand hearsay and conjecture. We are often only exposed to the *opinions* of scientists, rather than the actual outcomes of the rigorous practice of ideal science. Be especially wary of the science-y narratives describing *how* a product will benefit you. Playing up the *how* is a classic strategy of TV pitchmen trying to sell you something. For example Billy Mays describes *how* Zorbeez soaks up so much water,

The secret is in the X27 fiber technology, making Zorbeez
over 27 times more absorbent than cotton!

Who cares about the X27 fiber technology if the product doesn’t work? Remember that *how* is not important – but rather whether or not the product is actually useful. When it comes to viriculture, it is more important to be correct and not know why, than to be wrong and but able to explain the “mechanism” of the intervention. Mechanisms are simply narratives. Some are closer to reality than others, but it is very dangerous to base decisions on mechanisms (outside of physics). A popular drug called Tamiflu is said to help decrease the length of duration of the flu. Medical students are taught the molecular details of how this drug selectively inhibits influenza viral neuraminidase, but they are not taught that empirical studies have found that the drug does not work. We must therefore focus our attention on empirical phenomena, rather than theoretical narrative. In this book, mechanistic narratives are thrown in simply because they are memorable.

In medicine, real breakthroughs that cure the sick are rare, and they often are discovered accidentally, without understanding how they work. Furthermore, if you are healthy, there is pretty much no chance that modern interventions can help you. As Taleb says:

Consider that Mother Nature had to have tinkered through selection in inverse proportion to the rarity of the condition. Of the hundred and twenty thousand drugs available today, I can hardly find a *via positiva* one that makes a healthy person unconditionally “better” (and if someone shows me one, I will be skeptical of yet-unseen side effects). Once in a while we come up with drugs that enhance performance, such as, say, steroids, only to discover what people in finance have known for a while: in a “mature” market there is no free lunch anymore, and what appears as a free lunch has a hidden risk. When you think you have found a free lunch, say, steroids or trans fat, something that helps the healthy without visible downside, it is most likely that there is a concealed trap somewhere.

Antifragile, Taleb, 2014

When it comes to optimal human development, it is a good rule not trust anyone who is trying to sell you something. I hope that this book offers readers additional means to defend their family’s health from the profiteering of big food, big medicine, and government cronies.

Was the government to prescribe to us our medicine and diet, our bodies would be in such keeping as our souls are now.

Notes on the State of Virginia, Jefferson, 1785

We would be better off saving our money and considering the wisdom of the Bible, great grandma, Darwin, the !Kung, the Greeks, and Mother Nature. As u/HankyPankyHank posted on reddit.com:

Traditionalism FTW.

Turns out our ancestors weren’t just a bunch of yokels.

The once unified culture of the West has been shattered, but the individual shards of culture still exist largely intact. With proper planning, recollecting the cultural fragments, and combining them with the superior aspects of primitive culture required to optimize diet, nursing, child rearing, and education is possible – and in many ways this recollection is the goal of the study of viriculture.



Weston Price

Posted on [admin](#) Posted in [Book](#)

The notion that widespread, low-grade physical deformities are attributable to modernity was greatly advanced by the work of Weston Price. Price was a dentist who made observations and recommendations to improve human development. His research was summarized in his book *Nutrition and Physical Degeneration*, published in 1939. Since then many authors have rehashed his message, and a discussion of viriculture would be incomplete without a consideration of his work. Essentially, Price tells stories about his experience observing traditional peoples, and discusses his hypotheses about the consequences of diet on development.

Price did not engage in rigorous science. He simply visited different groups and made observations. At the time of publication his book was the subject of controversy, and today is often considered quackery on account of his strong recommendations and weak data. Additionally, his speculations about the moral superiority of the “savage races” is often interpreted as crackpot pseudoscience, or at least “racism.” But despite the criticism leveled against Dr Price’s work it contains an excellent argument about traditionalism and health.

In an attempt to present an honest picture of Price, I will examine critical reviews of his work. While his critics are correct in certain details, they do not offer a basis for rejection of Price’s thesis. Furthermore, they misunderstand essential aspects of his arguments. Since Price is an influence on Viriculture, it is worth addressing these criticisms from the outset.

We begin with a contemporary review of *Nutrition and Physical Degeneration* published in the *Journal of the American Medical Association* in 1940:

The author’s major interest is oral degeneration and oral disease. His approach to the problem is evangelistic rather than scientific. He is first appalled by “the progressive decline of modern civilization” because of the “physical, mental, and moral deterioration of the modernized peoples.” In the second place he is amazed and inspired by the revelation of the fund of wisdom, especially nutrition, in the culture and customs of primitive people and by their physical fitness. And in the third place he proposed as the remedy for this progressive decline that “We too, like the successful primitive stocks, can make, as a first requisite, provision for adequate nutrition for generation and growth,” and second, for the regulation of overloads such as pregnancy. His dietary program for the control of dental caries differs but little from that recommended by other more conventional nutritionists, namely one rich in vitamins, in minerals, in fresh fruits, and in fresh vegetables and one low in highly refined cereals and cereal products. It is composed of “a menu that is low in starches and sugars, together with the use of bread and cereal grains freshly ground to retain their full content of the embryo or germ, with milk for growing children and for many adults, and the liberal use of sea foods and organs of animals.” To this he recommends the addition of a very high vitamin butter and a very high vitamin cod liver oil. There is little reason to accept the verdict of the writer of the forward this this is an “epochal piece of research.” Above all it is the story of an observant, but not wholly unbiased, traveler who relates entertainingly what he discovered during vacation trips to primitive peoples

in Switzerland, the Hebrides, North America, Melanesia, Polynesia, Africa and South America. Purposed detailed scientific data are not included although there is considerable information concerning native trade and customs. But lay and professional readers will no doubt enjoy it whether or not they agree with any or all of the author's conclusions.

This critical review in the points out that Price's work is "evangelistic rather than scientific." This is true of course – just like the present work. This chapter contains the explanation of why it is too difficult to perform real science on the subject of human development. If we understand that *Nutrition and Physical Degeneration* is a philosophical rather than scientific work, this is not weighty criticism. *JAMA* further implies that his work is entertaining, but his recommendations are trivial. But they are certainly not trivial compared to modern dietary recommendations – especially the minimization of starchy foods and the use of high saturated fat animal products. It is interesting to note that, according to *JAMA* in the 1940s, the high animal fat diet low in processed foods and starch "differs little from that recommended by other more conventional nutritionists." Another contemporary review was published in *Scientific Monthly* in 1940:

Dr. Price's thesis may be summarized in a few words. Tooth decay is a result of civilization and is due to the fact that civilized man has, discontinued using, in their native states, those foods which savage man had long ago established as requisite to normal body development. Modern methods of food purveyance have robbed us in great measure of two very important food elements, vitamins and minerals. Modern nutritionists must compensate for this loss by food additions in concentrated form, but this replacement does not adequately take the place of those original foods which were provided by nature. To those who are versed in dietetics this may sound prosaic and self-evident. But the charm of Dr. Price's book is found not in the proving of his thesis so much as in the description of his method...

Although the volume may be read with profit there are points which are subject to criticism. Dr. Price has carefully studied the oral cavities of the inhabitants of those remote regions. He is a dean among American dentists, and none would question his findings. But in his conclusions he goes much farther than the observations warrant, attributing both physical and moral deterioration and demoralization of the white man to present-day dietary deficiencies. At a time when a Lombroso 's stigmata of degeneracy are passing into the discard, he presents a new series of stigmata, summarized in under-development and mal-development of the bones of the middle part of the face. He presents confirmatory evidence in his study of modern criminals, but very little in the way of comparison with non-criminals or normal controls. Although reason tells us that there may be much to what he says, his conclusions are not justified by the evidence presented. Unfortunately, Dr. Price presents his conclusions, as generalizations, in the introductory chapters. As a consequence a critical reader is apt to become slightly dubious after the first few pages. One who starts his reading at chapter three will discover a most interesting travelogue with a discussion of the effect of the modern dietary on tooth decay and certain facial deformities, which should be provocative of

real concern. In the concluding chapters one will find generalizations which are at least food for thought.

In line with previous critics, this review criticizes Price's prescriptions as "prosaic and self-evident" Though his stories are praised as charming, his conclusions "go further than the observations warrant." The reviewer fixates his criticism on a minor point that Dr Price addresses in his work – the speculation that individuals who have experienced poor physical development may be predisposed to engage in crime. The Lombroso described in the review was a 19th century "criminologist," who believed that criminality could be anatomically identified by such items as a sloping forehead, ears of unusual size, asymmetry of the face, prognathism, excessive length of arms, asymmetry of the cranium, and other "physical stigmata."

Grohmann, as early as 1820, had "often been impressed in criminals, especially in those of defective development, by the prominent ears, the shape of the cranium, the projecting cheek-bones, the large lower jaws, the deeply placed eyes, the shifty, animal-like gaze."

Degeneracy: Its Causes, Signs, and Results, Talbot, 1898

As to the prevailing attitudes at the time, even the reviewer states that "reason tells us that there may be much to [this idea]." The idea that criminality or moral deficiency is related to physical stigmata, which certainly does merit skepticism, is *not* the main point of Price's work. The *Scientific Monthly* reviewer's response to the main ideas of *Nutrition and Physical Degeneration* are actually quite favorable.

One who starts his reading at chapter three will discover a most interesting travelogue with a discussion of the effect of modern dietary on tooth decay and certain facial deformities, which should be provocative of real concern.

The noted "effect of modern dietary on tooth decay and certain facial deformities" is the aspect of Price's work with which we will be primarily concerned in the present work.

In 1981, *Nutrition Today*, featured an interesting article titled *The Myth of the Healthy Savage* by a William Jarvis. Jarvis makes a good point about how a survivorship bias skews which individuals of traditional populations are available to assess. In a modern society, unhealthy people are kept alive who might have died in a traditional society, leaving the average less healthy. He blames "overindulgence" for the negative consequences faced by natives who adopt a modern lifestyle. He also states that reports of healthy native populations did not hold up to rigorous study.

He makes a point that "nature-children" who have "taken to the woods" suffer from malnutrition, but this is a *straw man*. Jarvis ignores the evidence of physical anthropology that civilization correlates with a decrease in skeletal markers of health such as height and dental decay.

Jarvis also analyzes *Nutrition and Physical Degeneration*. He states that it is important because, despite being old, it is "still widely quoted today by nutrition-oriented dentists." Jarvis states that Price's belief that we should seek wisdom in traditional practice reveals his bias toward the "healthy savage myth." In reality, Price has simply identified that human practices which have stood the test of time are more likely to be safe. Price is criticized for not engaging in quantitative analysis, but as we know, his is not a work of rigorous science and therefore quantitative analysis is not necessary.

Jarvis goes on to state that the decreased rate of dental caries among traditional populations may be due to malnutrition, which is quite absurd given the entire context of Price's work.

Another criticism of *Nutrition and Physical Degeneration* comes from an article on quackwatch.org, and organization with the laudable mission statement:

Quackwatch is an international network of people who are concerned about health-related frauds, myths, fads, fallacies, and misconduct.

This first paragraph in the article *Stay Away from "Holistic" and "Biological" Dentists* does make good suggestions about avoiding modern interventions which lack an evidence base for use.

However the *Historical Perspective* section makes a number of invalid criticisms of Price's work. Firstly, it exaggerates the speculations that Price made about physical development being tied to mental and moral development. This idea was by no means the central point of his work! Barrett repeats arguments about traditional societies possibly being malnourished. He states that it is not modern food that is unhealthy, but rather "overindulgence," not "balancing their diets" and eating "too much fatty and salty food:"

Much of "holistic dentistry" is rooted in the activities of Weston A. Price, D.D.S. (1870-1948), a dentist who maintained that sugar causes not only tooth decay but physical, mental, moral, and social decay as well. Price made a whirlwind tour of primitive areas, examined the natives superficially, and jumped to simplistic conclusions. While extolling their health, he ignored their short life expectancy and high rates of infant mortality, endemic diseases, and malnutrition. While praising their diets for not producing cavities, he ignored the fact that malnourished people don't usually get many cavities.

Price knew that when primitive people were exposed to "modern" civilization they developed dental trouble and higher rates of various diseases, but he failed to realize why. Most were used to "feast or famine" eating. When large amounts of sweets were suddenly made available, they overindulged. Ignorant of the value of balancing their diets, they also ingested too much fatty and salty food. Their problems were not caused by eating "civilized" food but by abusing it. In addition to dietary excesses, the increased disease rates were due to: (a) exposure to unfamiliar germs, to which they were not resistant; (b) the drastic change in their way of life as they gave up strenuous physical activities such as hunting; and (c) alcohol abuse.

He goes on to criticize practices and organizations which are never mentioned in *Nutrition and Physical Degeneration*, and didn't exist at the time of writing, but apparently have become associated with Weston Price. Many of these ideas really *are* bogus, but it is not even worth bringing them up because they are completely outside of our discussion and never defended in Price's work. Obviously if *any* medico (doctor, dentists, chiropractor, herbalist, acupuncturist) offers any intervention to you, demand high quality evidence that it is safe and effective – unless you are very sick.

While this quackwatch.org article does make legitimate points about certain worthless fringe dental practices, it offers no basis to reject the thesis of *Nutrition and Physical Degeneration*.

Further critical analysis of the Weston Price Foundation's recommendations comes from diet guru Joel Fuhrman in an article titled *Deadly Dietary Myths*. I agree with Fuhrman that many of the recommendations made currently by the Weston Price *foundation* are worthy of criticism. However, once Fuhrman begins to discuss Price's actual work, his conclusions are misguided. He seems to believe that Price "was not aware of [traditional people's] short life expectancy and high rates of infant mortality, endemic diseases, and infection:"

It can be argued that few scientific researchers in the 1930s would have understood the complexity of multi factorial causation of health, disease, and longevity, and Price should not be held to today's higher standards. But the same cannot be said for his followers today. To advocate eating a diet high in saturated fat is to ignore all of the nutritional research—especially of the past 40 years—that links this diet to shorter life spans and higher rates of heart disease and cancer is unconscionable.

Here Fuhrman confuses health and longevity. Price is talking about improving human physical development and vigor, not making us live longer. It is theoretically possible that the same lifestyle that leads to superior physical development in children *could* be decrease longevity in the elderly. Furthermore, the short life expectancy, infant mortality, endemic disease, and infection common in traditional people is well known to be the result of trauma, poor hygiene, and lack of technology to combat infectious disease. These are factors under control today, and well apart from diet. His dismissal of past scientific researchers ability to understand the complexity of disease is arrogant and misleading. Ultimately, Fuhrman's main criticism of about Price's actual recommendations is that eating saturated fat is dangerous. It turns out Fuhrman is wrong here too, and this issue is discussed in detail elsewhere

((John Robbins))), the author of a popular book on diet and longevity, leveled his own criticisms against Weston Price's work. As with the aforementioned articles, there are certain aspects of his review, I am in complete agreement:

Regrettably, those currently running the Weston A. Price Foundation seem to be oblivious to the spirit of compassion which motivated the work of the man under whose name they act. Sadly, they are not just intolerant of people who eat or think differently than the way they advocate; they frequently demean and condemn those with whom they disagree. There is a nastiness, a mean-spiritedness, to their activities that is not worthy of the man in whose footsteps they presume to follow.

In fact, the more I've gotten to know the Weston A. Price Foundation, the less I've felt that it is actually carrying on the spirit or the work of the man in whose name it purports to function. For one example, Price never once mentioned the words "soy," "soybean," "tofu," or "soy milk" in his 500 page opus, and spoke quite positively about lentils and other legumes, yet the foundation has taken it upon itself to be vehemently and aggressively anti-soy, calling soy foods "more insidious than hemlock."

For another example, Price discovered many native cultures that were extremely healthy while eating lacto-vegetarian or pisco-vegan diets. Describing one lacto-vegetarian people, for example, he called them, "The most physically perfect people in northern India... the people are very tall and are free of tooth decay." Yet the foundation that

operates under his name is strikingly hostile to vegetarians. Sally Fallon, the foundation's president, denounces vegetarianism as "a kind of spiritual pride that seeks ...to shirk the earthly duties for which the physical body is created." She further insults vegetarians by saying they frequently suffer from zinc deficiency, but think it is spiritual enlightenment.

In 1934, Price wrote a moving letter to his nieces and nephews, instructing them in the diet he hoped they would eat. "The basic foods should be the entire grains such as whole wheat, rye or oats, whole wheat and rye breads, wheat and oat cereals, oat-cake, dairy products, including milk and cheese, which should be used liberally, and marine foods." Yet the Weston A. Price Foundation aggressively promotes the consumption of beef, pork and other high-fat meats, while condemning people who base their diets on whole grains.

Robbins uses this last point to show as an indication that Price advocates whole grains for health. This makes Price's recommendation seems more in line with the conventional advice of modern medicos than it really is. The dairy he is recommending to "use liberally" is huge pieces of butter or fatty cheese:

This cheese contains the natural butter fat and minerals of the splendid milk and is a virtual storehouse of life for the coming winter... The nutrition of the people of the Loetschental Valley, particularly that of the growing boys and girls, consists largely of a slice of whole rye bread and a piece of the summer-made cheese (about as large as the slice of bread), which are eaten with fresh milk of goats or cows.

Nutrition and Physical Degeneration, Price, 1939

Robbins further falls for the invalid dogma that high dietary or total blood cholesterol is associated with death or disease:

One last example of the discrepancy between Price's actual work and those who today purport to represent it: Price never once mentioned the word "cholesterol," yet the foundation presuming to forward his work has declared war on the idea that high cholesterol levels are associated with higher rates of heart disease. "The truth is that cholesterol is your best friend," they write. "There is no greater risk of heart disease at cholesterol levels of 300 than 180." They might as well say there is no greater risk of lung cancer for heavy smokers, or that the Earth is flat.

But in reality the dangers of dietary cholesterol are questionable at most, as we shall see.

Robbins gives an adequate assessment of our topic, duly criticizing certain untrue claims peddled by the Weston Price *foundation*. Unfortunately ancillary sources pollute Price's original work with pseudo-scientific "alternative" approaches to health. But Robbins' criticism of Price's actual thesis is unsubstantial. Furthermore, he falls into the same trap as others, confusing longevity with healthy development. Robbins may want to live to be 100, but one might reasonably prefer to live to 70 with a beautifully developed body and face. Luckily for us, even this choice may not be necessary.

In our search for criticisms of the main message of *Nutrition and Physical Degeneration*, we finally turn to amazon.com reviews:

Probably my mistake but I thought this was a book on Nutrition. What it ended up being is a book written by a dentist about how eating affects your teeth. Very big book, way too much information for the average person. I returned it.

I'm a public health professional, and one of my colleagues recommended this book to me. She said it was important for me to know some of the common misinformation the US public believes. This is an example of anecdotal medicine (mostly dentistry) with no experimental design or controls. Don't believe a word of it.

No. Anecdotal evidence is not scientific writing.

No. This man has no credibly published in the scientific or the medical community.

No. This man will not cure what ails you.

No. 'Googling' is not research.

No. This book does not offer you any truly beneficial advice, though some can indeed be harmful.

Want my advice? Don't be an idiot. Read something else, don't take advice from this quack.

Among these three one star review of his book, one reviewer says the book contains "way too much information for the average person." The other two sound like they come from reviewers who spent too many years in school. Of course Price's work doesn't have an experimental design! What did they expect the man to do? His research team was just him and his wife. The required experiment to address his thesis would be unethical, take 20 years, and be prohibitively expensive. As we have discussed, human development is an incredibly difficult topic to gather high quality data on. Price isn't even claiming that his work is scientific – if anything he is looking forward to when science can be performed to test his hypothesis.

It will be most fortunate if in the interest of science and human betterment such a program as this will be carried out in order to permit these Indians to live in accordance with the accumulated wisdom of their various tribes.

Nutrition and Physical Degeneration, Price, 1939

The worst that these most critical reviews say about *Nutrition and Physical Degeneration* is that it is not scientific. With this I agree, and I expect Price would agree as well. The reviews listed under amazon.com's "most helpful" tab provide more insightful criticism:

The book is excellent basis for understanding the antecedents to the current writers in nutrition and health. In his day (1939) the Dentist-author was ahead of his time and put forth his many conclusions on causes and protection against human degeneration. He compares the status of American health against that of other nations (especially in less developed areas) and presents, for his day, forward looking recommendations for maintaining health. For those who are not put off by the many photographs of people around the world showing the health of their teeth, the book is an interesting valuable read for those who want support for health views.

Bought this book to see if anything in there would help the aging process. I think it might be a little out dated. With all the new data, realization that oils(vitamin E, Krill, Cod Liver) and omega 3's really help the body. I didn't find a lot of help for me. Maybe it would fit your needs but I would not recommend.

Well researched information but too much detail for me, personally. Extremely interesting to see our nutritional evolution and the impact it has on our teeth. who would have thought it? But would like more advice than research.

An interesting read but there is more to good health than just proper nutrition.

Interesting stuff, but not as relevant to the modern reader as it might seem. There's a world of difference between being raised on whole foods in pre-industrial environment with plenty of exercise VS. being raised on processed foods and switching to whole foods. The latter can actually be harmful, depending on the circumstances. Overall, this book is an interesting source of information, but somewhat poor source of dietary guidance. I recommend the research of (((Matt Stone))) instead (or in addition); it's much more relevant.

I had to speed read this book to get through it all without losing interest. Has some interesting ideas and certainly an oddity for your reading collection.

The first review offers no criticism unless "you are put off by many photographs of people around the world showing the health of their teeth." Another says "there is more to good health than just proper nutrition." These reviews are scraping the bottom of the criticism barrel, but even they, when taken as a whole, these offer no legitimate criticism of Price's main point.

I have made an effort to seek out and respond to criticism of *Nutrition and Physical Degeneration*, since it is an important part of this book's central message. I have found two main criticisms of his work. First, his prescriptions are commonplace knowledge. Second, that his methods are not scientific. It is my opinion that his prescriptions are *not* commonplace knowledge. Price himself says this in his first chapter:

It will be easy for the reader to be prejudiced since many of the applications suggested are not orthodox... The writer is fully aware that his message is not orthodox; but since our orthodox theories have not saved us we may have to read just them to bring them into harmony with Nature's laws. Nature must be obeyed, not orthodoxy. Apparently many primitive races have understood her language better than have our modernized groups. Even the primitive races share our blights when they adopt our conception of nutrition.

Nutrition and Physical Degeneration, Price, 1939

My own summary of the main point of this work is:

The replacement of a traditional diet with a modern diet has a negative effect physical and mental development, especially evident in dental and facial deformities. Adoption of certain practices common in traditional societies can prevent this poor development in us moderns.

That said, there is a third line of criticism that I have found that addresses Price's main point, is true, and contradicts Price's conclusions. This comes from the work of British dentist Professor John Mew, quoted below:

I too am a great supporter of Weston Price but I think that the reductions in the size of the jaws [dentofacial deformities] are more likely to be the result of changes in the consistency in the diet rather than their content, because very similar reductions occur if the muscles of mastication are paralysed.

This criticism is reasonable and potentially damning to the conclusions of *Nutrition and Physical Degeneration*. In other posts we will explore in detail both sides of this debate.

In the last 75 years, there has been only one legitimate argument that may potentially refute Price's thesis. His work was, of course, not scientific. But that does not invalidate it. We simply must interpret this low-quality evidence in the context of our guiding philosophy:

In the absence of high quality evidence, if you want to be safe be as conservative as possible.

For comparisons' sake, I've included a favorable review of *Nutrition and Physical Degeneration* published in *The Laryngoscope* in 1950:

Looking backward, we come to realize more and more the value of the life work of Weston A Price, DDS... Dr Price might well be called "The Charles Darwin of Nutrition..."

Primitive peoples, no matter where located, who were successfully maintaining their tribal pattern [of robust physical development] from one generation to another were found to be living on highly nutritious foods. While tribal foods varied as to source and kind, each tribe had learned the foods essential to vitality and reproduction. Laboratory analysis of these foods showed them to exceed high in proteins, vitamins, minerals and fat-soluble factors. In cranial and dental development contrasts are striking between primitive individuals and their modern counterparts living on "civilized" foods. Dr Price noted changes in pattern – elongated facial structure, deformed dental arch and various other malformations. Well established racial patterns changed with the introduction of refined commercial food; increasing impairments were observed in succeeding generations. The importance of nutrition during pregnancy has long been recognized, but Dr Price's investigations showed that primitives understood and practiced preconception nutritional programs for both parents. Many tribes required a period of pre-marital nutrition, and children were spaced to permit the mother to maintain full health and strength – thus fostering offspring of physical excellence. Foods of special value were rationed among the pregnant and lactating women, as well as the maturing boys and girls in preparation for future parenthood... This great contribution from a life's work has been available for many years – and yet its full meaning is only beginning to be appreciated.

This review praises *Nutrition and Physical Degeneration* because the reviewer, unlike many others, is actually discussing his central point; that the replacement of a traditional diet with a modern diet

has a negative effect physical development. It is this central point that the present book will be referring to when discussing Price.

Weston Price understood the value of traditional wisdom. The first chapter of *Nutrition and Physical Degeneration* is titled “Why seek wisdom from traditional peoples?” We know from our guiding philosophy that in the absence of high quality evidence traditional wisdom will tend to be safer than modern interventions. Price explains the value of this approach in his opening lines:

Some of the primitive races have avoided certain of the life problems faced by modernized groups and the methods and knowledge used by the primitive peoples are available to assist modernized individuals in solving their problems. Many primitive races have made habitual use of certain preventive measures in meeting crucial life problems.

Price shares our guiding philosophy. He mentions a number of times the value of the “accumulated wisdom” of traditional societies. This wisdom is a collection of memes which have proved their safety through the test of time. Modern dietary memes have no such track record, and can be assumed to be inferior – pending randomized controlled trials. Price asks:

Whence this wisdom? Was there in the distant past a world civilization that was better attuned to Nature’s laws and have these remnants retained that knowledge? If this is not the explanation, it must be that these various primitive racial stocks have been able through a superior skill in interpreting cause and effect, to determine for themselves what foods in their environment are best for producing human bodies with a maximum of physical fitness and resistance to degeneration.

Thanks to our understanding of memetic selection, we can now provide the answer. Both of Price’s potential explanations to his above question are wrong. Past societies were not consciously better attuned to Nature’s laws. Neither are “various primitives” better able to determine cause and effect. It is simply that those societies which happened to accumulate detrimental practices tended to be outcompeted and replaced by others with less detrimental practices. Older practices have withstood competition more effectively. Memes that are safe have a survival advantage, and even small survival advantages add up over long periods. In a pre-technological period, excellent physical development was of utmost importance for survival and reproduction. The “primitives” inherited these safe ancient memes. Moderns have used our Reason as a basis to abandon our ancient memes (since we “know better”), but our new replacement memes are less safe. Over time, societies which survive effectively manage to converge on a set of memes which can be considered “attuned to Nature’s laws.” This is not by any means achieved by conscious participation of the individuals themselves.

It is unfortunate that as the white man has come into contact with the primitives in various parts of the world he has failed to appreciate the accumulated wisdom of the primitive racial stocks. Much valuable wisdom has been lost by this means. I have referred to the skill of the Indians in preventing scurvy and to the many drugs that we use which the white man has learned of from the primitives.

It will be most fortunate if in the interest of science and human betterment such a program as this will be carried out in order to permit these Indians to live in accordance

with the accumulated wisdom of their various tribes. Their preservation in isolation would preserve their culture. The greatest heritage of the white man today is the accumulated wisdom of the human race.

In my studies of these several racial stocks I find that it is not accident but accumulated wisdom regarding foods that lies behind their physical excellence and freedom from our modern degenerative processes, and, further, that on various sides of our world the primitive people know many of the things that are essential for life-things that our modern civilizations apparently do not know. These are the fundamental truths of life that have put them in harmony with Nature through obeying her nutritional laws.

Nutrition and Physical Degeneration, Price, 1939

In these quotes, we can see the value Price attributes to the “accumulated wisdom of the primitive racial stocks.”

In addition I have been conscious of an opportunity for helpfulness to the members of the various primitive races that I have studied and who are so rapidly declining in health and numbers at their point of contact with our modern civilization. Since they have so much accumulated wisdom that is passing with them, it has seemed important that the elements in the modern contacts that are so destructive to them should be discovered and removed.

This is a great example of a “via negativa” health recommendation. As opposed to interventionists whose priority is to sell us something, Price instead suggests that we “discover and remove” the “destructive” aspects of modernity.

We ought to cultivate a persistent doubt about our understanding of health – at least until the randomized control trial data comes in. In the absence of high quality evidence, we should trust in the superiority of ancient accumulated wisdom over our own intelligence. By eliminating those modern interventions harmful to human development, we can achieve superior viriculture for our children.



Viriculture is not Eugenics

Posted on [admin](#) Posted in [Book](#)

Warning to Sensitive Readers:

Viriculture does not advocate eugenics, selective breeding, or any other genetic manipulation of any kind.

Despite the personal failings of some scientists, science as a knowledge-generating system does tend to correct itself, though often only after considerable delay. It is during those delays periods that great harm can be caused by those who use uncorrect scientific findings to propagate injurious policies. Scientists' attempts to classify human races and to understand the proper scope of eugenics were both hijacked before the two fields could be fully corrected.

The Tyranny of Experts, Easterly, 2014

In America today there is little public concern for the optimal development of children. But our modern disinterest in this topic is an historical aberration. As humans began to establish civilization, instinctive and traditional practices with the intent of growing children into healthy and strong adults were codified in religion and law. Our cultural forbearers in Ancient Greece, Rome, and the Abrahamic societies all had laws influencing the development of children. These practices shared similarities with many cultures throughout human history. In the 19th century, Darwin's work added a theoretical framework for understanding one mechanism of our influence over future generations. Within fifty years of the publication of *Origin of Species*, nearly all Western nations had instituted policies to promote children they decided were "better." Despite these policies being commonly

accepted by educated people until the mid twentieth century, these same ideas are completely taboo today.

What happened to cause the subject of the optimization-of-child-development, which is so fundamental to good parenting, to be abandoned in modern discourse? Today we are living through a reaction to the State eugenics policies of the mid-twentieth century, and this severely hampers any related discussion. “How best to develop our children” comes too close to eugenics to be politically correct for contemporary public discourse, despite it’s importance.

In order to pre-empt criticism from those who may not fully read the book, let me emphasize that this work in no way prescribes eugenic practices as a method of “improving” one’s children. However, we can expect that the *Reductio ad Hitlerum*, will be employed by critics to obfuscate the true message here. Good human development is a concept close enough to eugenics that we need to give some background on the topic of eugenics, but mainly to clarify the distinction between eugenics and viticulture. Here I summarize eugenics, its historical practice, and how we threw the baby (developing beautiful and strong children) out with the bathwater (coercive sterilization and genocide) when the Western world villainized eugenics half a century ago.

Positive vs Negative Eugenics

People differ. The frequency of certain traits in a population can be changed by influencing the survival or reproduction of individuals. The goal of eugenics is to increase “desirable” human traits by controlling these factors.

The term “eugenics” conjures up notions of genocide and forced sterilization. It is true that these methods were used to reach eugenic goals. However, eugenic goals can be achieved in a variety of ways, not all of which are outright evil.

“Negative eugenics” is any means that decreases the rate that “undesirable” people reproduce or survive. This includes forced sterilization or murder of the mentally ill, criminals, or people that the governing body does not want to reproduce. Obviously, these measures can be immoral, but negative eugenics can also be more benign. Birth control is an example of this. Because of the association between birth control and eugenics, some people believe Planned Parenthood is covertly bent on a mission of genocide. Maybe it is, but is it really so evil to encourage birth control for women who are unable to support more children? Or as a more extreme example: Should society encourage a dependent drug addict who has no interest in having a child and cannot take care of one to use birth control? As we can see, sometimes negative eugenics is not *motivated* by evil – although the outcome may still be evil. Distinguishing between the goals of reducing human suffering, or decreasing the number of undesirables is not easy in practice. Negative eugenics differs from biological natural selection in that men, not Nature, determine the selection criteria.

“Positive eugenics” avoids many of the problems of negative eugenics, since it does not punish “undesirables.” Positive eugenics simply encourages the “best stock” to have more children. In the twentieth century this was done with legal, social, and financial incentives provided to fecund “desirables.” Of course, the ultimate problem with any eugenic policy is deciding who gets to define the criteria for “desirability,” and governments seem inclined to abuse this power.

Race

Repeat Warning to Sensitive Readers:

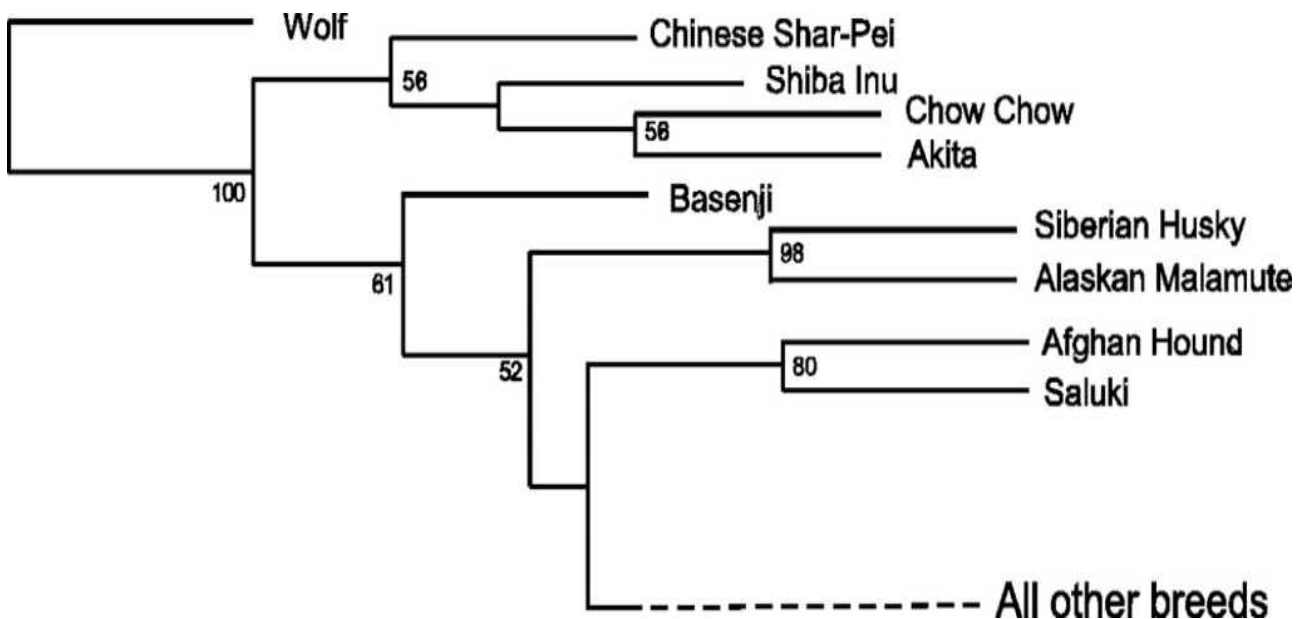
Viriculture does not advocate eugenics, selective breeding, or any other genetic manipulation of any kind.

Viriculture is about using *environmental influences* to optimize human development, and viriculture *excludes* any attempts at optimization of genetics or race. However, in the interest of honesty and completeness I want to devote a brief discussion about race, and why it has in the past factored so heavily into schemes of eugenics and human improvement. Much of the issue rests with a modern denial, for social and political ends, of 1) the existence of human race itself, and if not that extreme, 2) any meaningful or consequential difference in the human races.

Let's first consider animal breeding. Dogs are a ready example of our ability to select for extremely varied physical and mental (and even spiritual) traits through deliberate breeding programs. This selection effect is so powerful that new breeds can be perfected in only a couple centuries. This is how we today have such varied dog breeds, from the wolf-like husky to the rat-like chihuahua.

Different breeds are genetically distinct, and individuals can be readily assigned to breeds on the basis of their genotypes. This level of divergence is surprising given the short time since the origin of most breeds from mixed ancestral stocks...

These researchers used molecular genetic evidence to illustrate a type of clade diagram, which are used in biology to illustrate relatedness among living groups.



As we can see, there is some justification in the use that some breeders and trainers make of the terms “primitive” and “ancient” dog breeds, as these terms simply denote that certain breeds have a

more ancient divergence from the ancestral wolf stock, and tend to be more closely related to the wolf.

While the word “breed” is used in dogs, the word “race” has traditionally implied the equivalent relationship in humans. In our modern world, with the breakdown of social and geographic boundaries, races have blended together, and the word has a much blunter meaning than it once did, however throughout literature, we see that concept of race used in a much more precise way.

Consider that in Homeric Age a single great hero might contribute disproportionately to the genetic stock of a new city, as at this time he would almost certainly take multiple wives. Priam alone had the better half of one hundred children, so we can see how a king, by the third generation, might live to see a whole city populated with his direct descendants. This principle is the basis for race differences among human groups. Just as isolated dog breeds evolved different characteristics, so do human races. In the Iliad, we can see heroes explicitly attributing their personal moral traits to their family heredity, that is, their race. Diomedes, for instance, vaunts the bravery of his race:

οὐ γάρ μοι γενναῖον ἄλυσκάζοντι μάχεσθαι οὐδὲ καταπιώσσειν

Certainly not is it suited to my race, fleeing or shunning to fight, in any wise to cower.

And Achilles extols the race of his homeland :

To Phthia’s realms no hostile troops they led:

Safe in her vales my warlike coursers fed;

Far hence removed, the hoarse-resounding main,

And walls of rocks, secure my native reign,

Whose fruitful soil luxuriant harvests grace,

Rich in her fruits, and in her martial race.

Iliad, Homer / Pope, circa 800 BC

The Greek γενναῖον (“suited to my race/lineage/birth”) is related to the word γενεά, genea, meaning race, kin, or family. The similarity of this word to its cognates “generate” and “germinate” imply an origin, and to “genuine” and “ingenuity” imply an association of one’s race with superiority or nobility.

Did they not know that I am a god and descended from gods?

Cyclops, Euripides, 408 BC

Who would presume to call me slave who am on both sides sprung from the stem of the Gods?

Helen of Theodectes quoted by Aristotle, *Politics*, circa 350 BC

Likewise, Homer states that some of his heroes are a “branch of Ares” (ἄραχος Ἄρηος), that they descend from the god of bloodlust and destruction, implicitly expressing the heritability of the god’s martial spirit. Pindar implies that a victor’s achievement in the Nemean games was due to his excellent race.

Come, Muse, give a straight course to the glorious wind of song for this man. For when men pass away songs and stories preserve their fine deeds for them, and there is no shortage of these in the house of the Bassids. Their race has long been famous, carrying a cargo of their own victory songs; for those who plough the field of the Pierian Muses, they are able to provide a rich supply of songs, because of their proud achievements.

Nemean 6, Pindar, circa 475 BC

By the Classical Age, the notion of a unified Greek race was well established.

And may I not observe with equal propriety that the Hellenic race is all united together by ties of blood and friendship, and alien and strange to the barbarians?

Republic, Plato, circa 380 BC

But even within Greek territory, race differences played a major role in class determination, notably in the enslavement of the Helot race by the Spartans. In spite of the wide differences in cultures within the Hellene race, for example between Sparta and Athens, the notion of racial unity, beyond simply sharing a language, was maintained. Consider Aristotle’s assessment of the character of the race:

Having spoken of the number of the citizens, we will proceed to speak of what should be their character. This is a subject which can be easily understood by any one who casts his eye on the more celebrated states of Hellas, and generally on the distribution of races in the habitable world. Those who live in a cold climate and in Europe are full of spirit, but wanting in intelligence and skill; and therefore they retain comparative freedom, but have no political organization, and are incapable of ruling over others. Whereas the natives of Asia are intelligent and inventive, but they are wanting in spirit, and therefore they are always in a state of subjection and slavery. But the Hellenic race, which is situated between them, is likewise intermediate in character, being high-spirited and also intelligent. Hence it continues free, and is the best-governed of any nation, and, if it could be formed into one state, would be able to rule the world.

Politics, Aristotle, circa 350 BC

The greatness of the Hellenic race, with their cultural brilliance, along with the tragedy of its self-destruction, has been used as a warning to encourage racial consciousness in the West prior to the 1940s – although after World War II, such assertions have become publicly unmentionable.

The Peloponnesian War was the suicide of Greek civilization. It is the saddest page of history... On the eve of its self-immolation the Greek race, far from being exhausted, was bubbling over with exuberant vitality and creative genius... For a generation Hellas tore itself to pieces in a delirium of fratricidal strife... Having lost its soul, the Greek race soon lost its body as well... Drained of its best strains, the diminished remnant bowed to foreign masters and bastardized its blood with the hordes of inferior aliens who swarmed into the land. By the time of the Roman conquest the Greeks were degenerate, and the Roman epithet “Græculus” was a term of deserved contempt. Thus

perished the Greeks—the fairest slip that ever budded on the tree of life. They perished by their own hands, in the flower of their youth, carrying with them to the grave, unborn, potencies which might have blessed and brightened the world for ages.

Stoddard, 1921

Of course, the Hellenes were not the only race that the Romans subjugated. Ceasar, in his commentaries, makes references to the differing racial character of local European “barbarian” groups.

Some were influenced by avarice, others by anger and the recklessness which is specially characteristic of their race [quae maxime illi hominum generi est innata], treating frivolous hearsay as assured fact.

The Gallic Wars, Cesar, 49 BC

The Latin word “genus,” approximately the same as the Greek γένεά, had by Ceasar’s time come to encompass the meanings of race, origin, descent, house, stock, ancestry, and family. This constellation gives us the approximate idea of the ancients were implying in their notion of “race.”

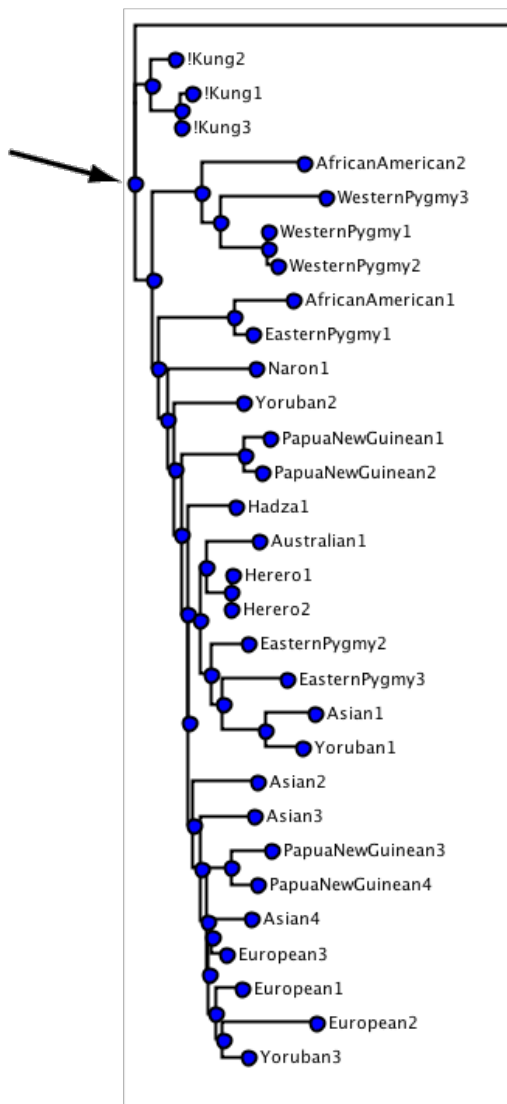
In their imperial expansion, the Romans encountered many races of the Old World, even contacting the civilizations of East Asia. However it was not until after the Age of Exploration that Europeans came across essentially all of the various races present in the on Earth. While notions of racial superiority had always been an aspect of the identity of nobility, the gulf in cultural achievements between Europeans and the “barbarous” or “savage” peoples of the Australia, America, and Sub-Saharan Africa greatly exaggerated the differences between the races of the world in the European public consciousness at this time. Keep in mind that the European nobility of the sixteenth century were far more culturally refined and civilized than we are in the modern world.



Laughing Cavalier, Hals, 1624

As early scientists assembled all known animals into a biological tree of life, some sought to sort the various races of humanity as well. Of course, due to social and political consequences, human racial classification proved controversial. By the time of Darwin, it was taken for granted that the human races constituted various sub-species. Indeed, Darwin devotes some pages to in *The Descent of Man* to discussing whether or not the various human races ought to be designated as outright distinct species – although he leaves the matter unresolved.

Of course, all such nominal distinctions in relatedness are arbitrary. Modern molecular genetics allows us to take a more objective view of relatedness among human groups. Just as the various dog breeds can be charted into a clade diagram, so too can the races of humanity.



And just as dog breeders use the term “ancient” in referring to the close relatedness of the Husky or Malamute to the ancestral wolf, so too does that term get applied (if a little technically imprecise) to the those races which diverged from the common ancestor of *all-other-humans* furthest in the past.

The San people of southern Africa, who have lived as hunter-gatherers for thousands of years, are likely to be the oldest population of humans on Earth, according to the biggest and most detailed analysis of African DNA. The San, also known as bushmen, are directly descended from the original population of early human ancestors who gave rise to all other groups of Africans and, eventually, to the people who left the continent to populate other parts of the world.

World’s most ancient race traced in DNA study, Steve Connor, 2009, The Independent

Consider that if the origin of the above clade diagram were moved further back in time, it would come to include first apes, then all primates, then all mammals, then all animals, etc. Some thoughtful persons have seen the modern trend of expanding political inclusion, and have sought to expand civil rights to their nature conclusion, beyond humans altogether, and include our animal relatives the Great Apes.

Considering these facts, the exploitation of great primates in laboratories, circus, entertainment shows and zoos can be considered a kind of slavery, reminding what men used to do with others of his own kind who were considered to be inferior a little bit more than one century ago.

Great Ape Project Mission statement

Indeed, the logical conclusion to the progressive expansion of political rights applied to all race and sexes is to include all conscious organisms as well. The opposing view, that certain groups ought to be excluded from the political process since their participation will cause net damage to society, is hardly a popular view in the modern world.

This unpopular view, however, has already defined the major political struggles of the twentieth century, and, as technology has allowed the swelling global population to travel freely, will inevitably define politics of the twenty-first as well.

The key to understanding the role of race in matters of war and politics is recognizing why some societies are poor and others are rich. Many theories exist to explain global wealth inequality, or why it is that Europeans came to dominate the world politically and financially, but they can be generally grouped into three main theories.

1. Geographic Determinism (((Jared Diamond))) – The natural unequal distribution of valuable domesticatable plants and animals in Eurasia gave this region an unfair head-start or advantage in the gradual climb toward sophisticated civilizations and military technology.

2. Social / Political Institutions (Daron Acemoglu / James Robinson / Nial Ferguson) – The inclusive / democratic nature of the political systems, as well as certain social norms of the West, especially after the Magna Carta and the Reformation, gave Europe the intellectual freedom to explore the world and develop science, leading to military dominance.

3. Race/IQ (Aristotle / Madison Grant / Lothrop Stoddard / Richard Lynn) – The racial character of certain European groups, with a unique combination of intelligence and martial valor, naturally places them in the ruling class when met with people of other races. Alternatively, the relatively high IQ of the East Asians, Northern Europeans, and Ashkenazim impart them with disproportionate political power.

The first two theories are popular and appear in NYT Bestseller books without controversy. The third theory is unmentionable in contemporary society. This is because, as we shall see, the policies of Nazi Germany were premised on this theory. Given its potential power to move the will of a nation to a fight-to-the-death World War, it has since been suppressed. However, in reality all three theories persist because they all have at least a grain of truth.

Since the close of World War II, politics has further blurred reality when it comes to race. A famous UNESCO document titled *The Race Question* and dated 1950 sought officially to deny the significance of race differences, and has set the tenor of the discussion ever since. Of course this document is simply internationalist propaganda, written as a reaction to German National Socialism. Interesting, a minority report in this document by an eminent biologist treats the matter with more justice:

Sir Ronald Fisher has one fundamental objection to the Statement, which, as he himself says, destroys the very spirit of the whole document. He believes that human groups differ profoundly “in their innate capacity for intellectual and emotional development” and concludes from this that the “practical international problem is that of learning to share the resources of this planet amicably with persons of materially different nature, and that this problem is being obscured by entirely well intentioned efforts to minimize the real differences that exist.”

As we shall see, eugenics has been used in evil ways. However, in seeking to remedy past wrongs, contemporary politically correct society has bent over backward to deny any differences between human races. The tide may be turning, however, as long as the specified race differences show groups in a favorable light. A recent book *A Troublesome Inheritance* by Nicholas Wade, achieved mass marketability while exploring certain racial differences.

Eugenics before Darwin

Discussions of eugenics typically begin with Francis Galton, who today is introduced as Darwin’s “even eviler” cousin. Galton formalized the discussion in his 1869 book *Hereditary Genius*. Galton wanted to promote the relative rate of increase of “desirable” people. Criminals, the mentally ill, mentally retarded, and physically deformed he considered to be a net loss to society as a whole. According to Galton, these “degenerate” groups should not receive the same encouragement to procreate as sane, intelligent, strong, upstanding citizens. He coined the term in the following paragraph:

That is, with questions bearing on what is termed in Greek, *eugenes* namely, good in stock, hereditarily endowed with noble qualities. This, and the allied words *eugenia*, etc., are equally applicable to men, brutes, and plants. We greatly want a brief word to express the science of improving stock, which is by no means confined to questions of judicious mating, but which, especially in the case of man, takes cognisance of all influence that tend in however remote a degree to give to the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable than they otherwise would have had. The word *eugenics* would sufficiently express the idea.

While “eugenics” dates from 1869, the practice of eugenics is really inseparable from mating itself. All sexual organisms prefer certain traits in mates, and this selection process causes differentials in the relative rate of increase of these traits. As we saw above, dog breeding illustrates the potential power of eugenics. Within hundreds of years, dog breeds can be altered to be almost unrecognizable compared to the original stock.

If we limit our discussion to humans, we find that our eugenic tendencies can be influenced at three different levels: human biology, cultural norms, and written law.

Our **biology** tends to cause people to avoid mating with partners who have obvious mental abnormalities or physical deformities. At the same time, we will often go to great lengths to secure mating privileges with individuals who are especially strong, smart, or well-formed. These preferences are seated deep in our psyche, and are outside of our control. But there is no question that these innate preferences have an outcome on the type of people that will be present in future generations. Biology also acts outside of mate selection in another way to influence eugenics.

Developing fetuses are naturally screened by the mother's body during gestation for congenital defects. If the defects are severe enough, the mother will spontaneously abort.

Cultural norms also influence relative reproduction frequencies. For example, a family may successfully exert pressure on a daughter not to have children with a man with history of violent crime, even though he rides a motorcycle and has neck tatoos. It was said that Elizabeth I would interview and inspect noble ladies prior to their marriage. Today, some mothers investigate the genes of their fetus during gestation, and will opt for an abortion if the child is found to have a genetic disorder. In certain populations, partners are encouraged to enagage in genetic screening to avoid having children with genetic diseases, such as sickle cell disease.

While selective abortion has been made possible to Western mothers through modern technology, selective infanticide, a very similar behavior, is a cultural norm in many traditional societies:

At the scene of the birth, usually before the baby is named and certainly before bringing the baby back to the village, it is the mother's responsibility to examine the baby carefully for birth defects. If it is deformed, it is the mother's duty to smother it. Many !Kung informants told me that this examination and decision is a regular and necessary part of the process of giving birth. !Kung infanticide is not equivalent to murder in their eyes, since they do not consider birth to be the beginning of life of a zun/wa. Life begins with giving a name and the acceptance of the baby as a social person back in the village after the birth. Before that time, infanticide is part of the mother's prerogatives and responsibility, culturally prescribed for birth defects and for one of each set of twins born.

Demography of the Dobe Kung, Howell, 1979

Considered as a condition hurtful to the type, the conception of degeneracy may be said to appear even in the precursors of man, since animals destroy soon after birth offspring which, to them, appear peculiar. With that stage of development of the religious sense marked by assigning malign occult powers to natural objects and forces, this view of degeneracy became systematised, and exposed weakly or deformed offspring, charged to evil powers, to death...

The quaint old "Anatomist of Melancholy," Burton, seems but to paraphrase modern curers of degeneracy when, at the end of his chapter on the inheritance of defects, he remarks concerning this fetichistic notion: "So many several ways are we plagued and published for our father's defaults; in so much that as Fernelius truly saith: 'It is the greatest part of our felicity to be well born, and it were happy for human kind, if only such parents as are sound of body and mind should be suffered to marry.' An husbandman will sow none but the best and choicest seed upon his land, he will not rear a bull or an horse, except he be right shapen in all parts, or permit him to cover a mare, except he be well assured of his breed; we make choice of the best rams for our sheep, rear the neatest kine, and keep the best dogs, quanto id diligentius in procreandis liberis observandum! And how careful, then, should we be in begetting of our children! In former times some countries have been so chary in this behalf, so stern, that if a child were crooked or deformed in body or mind, they made him away; so did the Indians of old by the relation of Curtius, and many other well-governed commonwealths according to the discipline of those times. 'Heretofore in Scotland,' saith Hect Boethius, 'if any were visited with the falling sickness, madness, gout, leprosy, or any such dangerous disease which was likely to be propagated from the father to the son, he was instantly gelded; a woman kept from all company of men; and if by chance having some such

disease she were found to be with child, she with her brood were buried alive'; and this was done for the common good, lest the whole nation should be injured or corrupted. A severe doom, you will say, and not to be used amongst Christians, yet more to be looked into than it is. For now by our too much facility in this kind, in giving way for all to marry that will, too much liberty and indulgence in tolerating all sorts, there is a vast confusion of hereditary diseases, no family secure, no man almost free, from some grievous infirmity or other, when no choice is had, but still the eldest must marry, as so many stallions of the race; or if rich, be they fools or dizzards, lame or maimed, unable, intemperate, dissolute, exhaust through riot, as he said, they must be wise and able by inheritance. It comes to pass that our generation is corrupt, we have many weak persons both in body and mind, many feral diseases raging among us, crazed families; our fathers bad, and we are like to be worse."

Degeneracy: Its Causes, Signs, and Results, Talbot, 1898

Finally, **written law** can mediate eugenics. In ancient times, this included laws for infanticide of deformed babies. In the early twentieth century this included certification processes for potential parents, and sterilizing "unfit" individuals. Eugenics laws have been common aspects in political organization since as long as we have been writing things down. Plato's Republic, *the* classic work of political design, recommends selective mating to maintain a virtuous populace:

And do you breed from them all indifferently, or do you take care to breed from the best only?

From the best.

And do you take the oldest or the youngest, or only those of ripe age?

I choose only those of ripe age.

And if care was not taken in the breeding, your dogs and birds would greatly deteriorate?

Certainly.

And the same of horses and animals in general?

Undoubtedly.

Good heavens! my dear friend, I said, what consummate skill will our rulers need if the same principle holds of the human species!

Republic, Plato, circa 380 BC

Indeed in the same dialogue Plato goes even further, advocating the very principles upheld in the twentieth century by the German National Socialists, and which our society has come to derided today:

And God proclaims as a first principle to the rulers, and above all else, that there is nothing which should so anxiously guard, or of which they are to be such good guardians, as of the purity of the race.

Republic, Plato, circa 380 BC

And the exact same sentiment is alive in the Hindu holy texts as well:

But we should know better, Krishna: clearly seeing the harm caused by the destruction of the family, we should turn back from this evil. When the family is destroyed, the ancient laws of family duty cease; when the law ceases, lawlessness overwhelms the family; when lawlessness overwhelms the women of the family, they become corrupted; when women are corrupted, the intermixture of castes is the inevitable result. Intermixture of castes drags down to hell both those who destroy the family and the family itself; the spirits of the ancestors fall, deprived of their offerings of rice and water. Such are the evils caused by those who destroy the family; because of the intermixture of castes, caste duties are obliterated and the permanent duties of the family as well.

Bhagavad Gita, circa 400 BC

We learned from the popular 2007 feature-length historical documentary *300*, that Spartan children were routinely discarded if they were “small, or puny, or sickly, or misshapen” This portrayal is based on Plutarch’s descriptions of the policies of the legendary lawgiver of the Lacedaemonians, Lycurgus.

And indeed, Lycurgus was of a persuasion that children were not so much the property of their parents as of the whole commonwealth, and, therefore, would not have his citizens begot by the first-comers, but by the best men that could be found; the laws of other nations seemed to him very absurd and inconsistent, where people would be so solicitous for their dogs and horses as to exert interest and to pay money to procure fine breeding, and yet kept their wives shut up, to be made mothers only by themselves, who might be foolish, infirm, or diseased; as if it were not apparent that children of a bad breed would prove their bad qualities first upon those who kept and were rearing them, and well-born children, in like manner, their good qualities...

Nor was it in the power of the father to dispose of the child as he thought fit; he was obliged to carry it before certain triers at a place called Lesche; these were some of the elders of the tribe to which the child belonged; their business it was carefully to view the infant, and, if they found it stout and well made, they gave order for its rearing, and allotted to it one of the nine thousand shares of land above mentioned for its maintenance, but, if they found it puny and ill-shaped, ordered it to be taken to what was called the Apothetae, a sort of chasm under Taygetus; as thinking it neither for the good of the child itself, nor for the public interest, that it should be brought up, if it did not, from the very outset, appear made to be healthy and vigorous.

Parallel Lives of Noble Grecians and Romans, Plutarch, circa AD 100

To save our present, and our future race.

Illiad, Homer / Pope, circa 800 BC

The practice of selective infanticide was carried on in Rome as well, immortalized in no less than the Twelve Tables of Roman law. The original text of the law has been lost to history, but is reconstructed from a reference to it in Cicero’s *De Legibus*:

If we look back to the origin of the tribunate, we find that it originally sprung from a hubbub of civil disturbances, and that in process of time, a mutinous populace gave it the ascendancy over all magisterial authorities of Rome. After this, **being stifled, as one of those monstrous abortions which, by a law of the Twelve Tables, are not suffered to live**, it again recovered its existence in a very inexplicable manner, only to become baser and viler than ever.

De Legibus, Cicero, circa 70 BC

Seneca, in his essay *De Ira*, defends as rational the infanticide of the “weak or deformed.” In this context infanticide is described as if it was widely acknowledged to be an obvious social good.

We put down mad dogs; we kill the wild, untamed ox; we use the knife on sick sheep to stop their infecting the flock; we destroy abnormal offspring at birth; children, too, if they are born weak or deformed, we drown. Yet this is not the work of anger, but of reason – to separate the sound from the worthless.

De Ira, Seneca, circa AD 40

It is perhaps better to begin with their parentage first; and I should advise those desirous of becoming fathers of notable offspring to abstain from random cohabitation with women; I mean with such women as courtesans and concubines. For those who are not well-born, whether on the father’s or the mother’s side, have an indelible disgrace in their low birth, which accompanies them throughout their lives, and offers to anyone desiring to use it a ready subject of reproach and insult. Wise was the poet who declares:

The home’s foundation being wrongly laid,

The offspring needs must be unfortunate.

A goodly treasure, then, is honourable birth, and such a man may speak his mind freely, a thing which should be held of the highest account by those who wish to have issue lawfully begotten. In the nature of things, the spirits of those whose blood is base or counterfeit are constantly being brought down and humbled, and quite rightly does the poet declare:

A man, though bold, is made a slave whene’er

He learns his mother’s or his sire’s disgrace.

Children of distinguished parents are, of course, correspondingly full of exultation and pride.

Education of Children, Plutarch, circa AD 100

Even if we disregard these ancient Greek and Roman laws as pagan immorality, similar eugenic practices are also found in the laws of the Abrahamic religions:

The attempt to limit the multiplication of the undesirable elements in the Jewish race, resulted in three kinds of prohibitions. First, prohibition against the marriage of defectives by reason of heredity (*pesul yocytesin*); secondly, the prohibition against the marriage of personal defectives (*debar shebagufon*); thirdly, the prohibition against

consanguineous marriages (ervah). Besides the prohibition against defective marriages mentioned in the Mosaic code, the Talmud forbade one to marry into a confirmed leprous or epileptic family, or to marry a woman who had buried three husbands. The union between an old man and a young girl was condemned in unequivocal terms. Persons or families manifesting continuous antagonism to each other were advised not to intermarry. Great, in the eyes of the Rabbis, was the offense of him who married a woman from an element classed among the unfit. His act was as reprehensible as if he had dug up every fertile field in existence and sown it with salt. A quintuple transgression was his, for which he will be bound hand and foot by Elijah, the great purifier, and flogged by God himself. "Woe unto him who deteriorates the quality of his children and defiles the purity of his family," is the verdict of Elijah endorsed by God. On the other hand, the mating of two persons possessing unique and noble traits cannot but result in the establishment of superior and influential families. When God will cause his Shechinah to dwell in Israel, only such which scrupulously preserved the purity of their families, will be privileged to witness the manifestation of the Holy Spirit.

Jewish Eugenics, Rabbi Max Reichler

Using these practices, Jews have the genetic unity of their people well for thousands of years. But there should be no doubt that the spirit of eugenics was alive in modern Christian civilization as well.

These are the product

Of those ill mated Marriages thou saw'st:

Where good with bad were matcht

Paradise Lost, Milton, 1667

Eugenics after Darwin

All else is secondary to that which will produce healthy German stock.

Myth of the Twentieth Century, Rosenberg, 1930

Modern and traditional cultural practices, as well as written laws show that the notion of eugenics has always been a part of humanity. But the idea gained scientific gravity once Darwin provided a theoretical framework for understanding how we can control the traits of human populations.

In the Twentieth century, Western nations enacted policies which gave the state power to decide who was fit for reproduction. The rise of academic eugenics led to the widespread implementation of its prescriptions by the time of Second World War. These policies encouraged citizens of "sound body and mind" to procreate, and they also resulted in the forced sterilization and even outright murder of "degenerates."

Repeat Warning to Sensitive Readers:

Viriculture does not advocate eugenics, selective breeding, or any other genetic manipulation of any kind.

Modern technologies allowed murder in the name of eugenics to be carried out on an unprecedented scale. However, the underlying goal of the policies would likely be seen as virtuous by Plato or Lycurgus.

The result is different when man begins to limit his own number. He is not carved from the granite of Nature but wants to be “humane”. He believes he knows better than the cruel Queen of all wisdom. He limits reproduction itself, not the survival of the individual. He always sees himself as an individual and never as the race. He believes this road is more humane and better justified.

Unfortunately, the results are also reversed. Nature puts a severe test upon survival while allowing free reproduction, then chooses the best among a lot of individual creatures to remain alive and propagate their species. Man, on the other hand, restricts breeding, but takes frantic care that every creature that is born will survive at any cost. This correction of divine purpose seems wise and humane to him, and he is delighted to have outwitted Nature and proven her inadequacy. The Heavenly Father’s pet ape hates to acknowledge the fact that the individual’s value is reduced when their numbers are restricted.

The moment reproduction is restricted and the number of births reduced, we have a craving at any cost to “save” even the weakest and most sickly instead of allowing the strongest and healthiest to survive naturally. These seeds of a new generation are bound to become more and more pitiful the longer this mockery of Nature and her will continues. If this policy continues, the nation will eventually terminate its own existence on this earth. Man may defy the eternal laws of Nature’s procreation for a short time but vengeance will follow sooner or later. A stronger race will push aside the one which has grown weak. The divine will shatters all the absurd chains of this so-called humane consideration for the individual and replaces it with the humanity of Nature. She has no hesitation and wipes out what is weak in order to give a rightful place to the strong. Anyone who attempts to assure a people’s existence by limiting birth rates is simply robbing the nation of its future...

The person who is not physically sound and unworthy in mind must not extend the line of his suffering by inflicting it into the body of his child. The racial state must do an amazing amount of improvement in the area of education. Someday this work will emerge as a greater deed than the most successful wars of our present privileged-class age.

Mien Kampf, Hitler, 1924

So far his prediction has not come true. Hitler himself must have gotten an advance screening to 300, since he famously went on to praise their practice.

Sparta must be regarded as the first Folkish state. The exposure of the sick, weak, deformed children, in short, their destruction, was more decent and in truth a thousand times more humane than the wretched insanity of our day which preserves the most pathological subject, and indeed at any price, and yet takes the life of a hundred thousand healthy children in consequence of birth control or through abortions, in order subsequently to breed a race of degenerates burdened with illnesses.

This race-preserving eugenics program was not isolated to genetic influences. The national socialist program for societal development included genetic and environmental factors:

Pre-requisite “racial” (genetic) capacity



Physical development



Character and moral development



Higher learning (if capable)

This theoretical framework was not so different from Plutarch’s soil, seed, and farmer model. In my terminology, the last three of these aspects constitute Viriculture, while “racial development” is a eugenics concept outside the scope of Viriculture. I am certainly not endorsing these practices. However it must be admitted that German National Socialism included comprehensive schemes for Viriculture – and this is partly why the topics are neglected today.

If we recognize that the first task of the State is in working for the welfare of this nationality and for the preservation and development of its best racial elements, it is natural that this concern **goes beyond the birth of the little new member of our people. This concern must extend to training** the young descendants into valuable members of our society who can subsequently propagate the race further. The racial quality is the first essential for intellectual capability, and following that, education must begin by promoting physical health. A sound, energetic mind is only found in a sound and energetic body...

Realizing this, the race-based state must direct its primary educational effort toward training sound and healthy bodies and not just pumping in knowledge. Development of the intellectual abilities takes second place. The development of character and especially strength of will and determination, comes first. Together with this we must teach the joy that comes from readily accepting responsibility. Scientific education comes last.

The race-based Nationalist state must operate from the belief that a man with little academic schooling, but who is physically sound and has a good, solid character, who is filled with determination and strong will is more valuable to the people’s community than a brilliant weakling...What makes the Greek the ideal of immortal beauty is the marvelous pairing of magnificent physical beauty with a brilliant mind and noble soul... The state must arrange its educational work so that the bodies of youngest children are suitably tempered and toughened so they can meet the demands they will face in later life.

In order to meet these viriculture demands on a state-wide scale, the German National Social government instituted a system of propaganda and financial incentives to encourage Aryan mothers to have as many children as possible, and to make those children strong and healthy. Women were encouraged to abandon work out of home in favor of traditional gender roles.



The job of care and training must begin by teaching the young mother. It was possible through decades of careful work to achieve antiseptic cleanliness during childbirth and to reduce birth related fevers to just a few cases. In the same manner, it must and will be possible by thorough training of nurses and mothers to introduce a training system for the child in his earliest years that will be an excellent basis for later development... The state ideal is not the honest lowbrow or the virtuous old maid, but the defiant individual representing manly strength and women who can bring strong men into the world.

Mien Kampf, Hitler, 1924

The new approach to education has the goal to lead our female youth to motherhood, to womanhood. Mother and child, with all their related questions, are now more the center of education. Thank god, eugenics and a concern with healthy offspring has also entered our schoolrooms.

The Jewish Question in Education, Fink, 1937

A similar government program was enacted in Italy under Mussolini, whose famous quote,

War is to man what motherhood is to a woman.

summarizes the prevailing attitude of the time. Even in the United States, these same National Socialist principles had public exponents on the national stage until nearly 1970:

If a man is to be honored for making cigars or building bridges or making beer, as our great business men are, then surely we ought to honor those who make our people! But the trouble is that our insane “liberal” attitude toward motherhood and homemaking has given women an impossible inferiority complex and frustration about their possible real achievements in life. We train our girls by the millions to be anything but successful wives and mothers, lead them to believe they are to be an “equal” part of a “man’s” world, when the truth is that it is only nature’s world, and man’s share in it is no greater or more glorious than that of a female-oriented woman who produces, brings up, and gives to society a family of happy PEOPLE... If a lawyer or a doctor attempted to practice as soon as he had purchased a few medicine or law books, the way our women plunge into the business of making human beings... they would be arrested...

Finally, and most important, we must HONOR them, as we now honor doctors and lawyers. We must establish professional women’s schools and universities dedicated not to “home economics”, but the exalted profession of Family Science, We must get rid of the disgusting connection of “home-making” with the dust-mop, dishpan and dirty diapers, and make it clear to our people that these tasks are no more the essence of Family Science than sweeping out the office is the essence of being a lawyer, even though a lawyer has to do this himself.

When our whole people have been given this new understanding of the real “equality” of women, and they are HONORED by professional degrees in their especial science of the organization, care, and management of a plan for the intelligent production of decent HUMAN BEINGS there will be less of the misery which lies deep in so many of our girls who wind up in a dishpan or diaper pall after a Cinderella dream of “better things” all their younger days.

This Time the World, Rockwell, 1963

Indeed the “Cult of Motherhood,” so derided by modern feminists today, is consistent with classical teachings. While we may consider it right for every society to honor their mothers, many of the more controversial aspects of Nazi eugenics were also wholeheartedly supported by Allied countries prior to 1945:

The unnatural and increasingly rapid growth of the feeble-minded and insane classes, coupled as it is with steady restriction among all the thrifty, energetic and superior stocks constitutes a national and race danger which is impossible to exaggerate. I feel that the source from which the stream of madness is fed should be cut off and sealed before another year has passed.

(Home Secretary) Churchill to Prime Minister Asquith

on compulsory sterilization of ‘the feeble-minded and insane’;

cited, as follows (excerpted from longer note):

It is worth noting that eugenics was not a fringe movement of obscure scientists but often led and supported, in Britain and America, by some of the most prominent public figures of the day, across the political divide, such as Julian Huxley, Aldous Huxley, D.H. Lawrence, John Maynard Keynes and Theodore Roosevelt.

Indeed, none other than Winston Churchill, whilst Home Secretary in 1910, made the following observation: [text of quote] (quoted in Jones, 1994: 9), in 'Race', sport, and British society (2001), Carrington & McDonald, Routledge, Introduction, Note 4, p. 20

'I propose that 100,000 degenerate Britons should be forcibly sterilized and others put in labour camps to halt the decline of the British race.'

As Home Secretary in a 1910 Departmental Paper.

The original document is in the collection of Asquith's papers
at the Bodleian Library in Oxford.

In fact the prevailing attitude of educated liberal thinkers in the early twentieth century was that eugenics policies were desirable. The fact that this theme was present in the American public consciousness of the early twentieth century is evident in the text from the 1915 silent film, in which, as a result of the racial intermingling of post-Civil War society, the protagonist is,

In agony of soul over the degradation and ruin of his people.

And is visible in Fitzgerald's 1925 *The Great Gatsby*:

'Civilization's going to pieces,' broke out Tom violently. 'I've gotten to be a terrible pessimist about things. Have you read 'The Rise of the Coloured Empires' by this man Goddard?' 'Why, no,' I answered, rather surprised by his tone. 'Well, it's a fine book, and everybody ought to read it. The idea is if we don't look out the white race will be—will be utterly submerged. It's all scientific stuff; it's been proved.'

These attitudes were instituted into government policy on a wide scale in wealthy nations during these years.

The intricacies of maintenance of the species and in particular the freedom loving peoples of the human race are revolutionizing the thought and action of the world. Motherhood demands to be raised to its rightful position of pre-eminence in affairs of State...

From time to time, pestilence and war sweep through nations, robbing them of much that is best in their stock. If we are to survive as a people, and as an Empire, we must constantly be alert to improve our stock. The structure of society can only be erected upon the foundations of biological facts. The Law of Survival must remain the cornerstone of the Temple of Culture, however immense its scale or elaborate its external decoration. That law embodies only two principles: reproduction and maintenance.

Childbirth without Fear, Dick-Read, 1942

But this political viability of government backed eugenics policies did not last. Partly as a consequence of being tied to Nazism, eugenics quickly lost its political and academic viability after the 1940s. In the post war years, the academic interest in eugenics declined dramatically. However, ancient memes like eugenics do not disappear so easily. One major development in the latter half of the twentieth century that revived eugenics policies was the development of hormonal birth control.

I think the greatest sin in the world is bringing children into the world that have disease from their parents, that have no chance in the world to be a human being practically. Delinquents, prisoners, all sorts of things just marked when they're born. That to me is the greatest sin that people can commit.

Margaret Sanger

In the post war years, eugenics concepts such as the “strengthening of the race” were traded for more humanitarian notions such as minimizing the suffering of poor unborn children who would not be taken care of. The issue of government funding for birth control for the poorest and least educated segments of the population became complicated by the increase in social welfare programs.

By 1965, however, Eisenhower was willing to support family planning abroad as well as within the United States. He specifically recommended that if welfare were not tied to family planning, “then history will rightly condemn us.” We find ourselves, he wrote in a “curious position of spending money with one hand to slow up population growth among responsible families and with the other providing financial incentive for increase production by the ignorant, feeble-minded or lazy.”

With Us Always: A History of Private Charity and Public Welfare, Critchlow, 1998

While public support for “family planning” has survived intact, proposals for eugenic selection for particular human traits are now considered politically incorrect. In the 1970s William Shockley, winner of the Nobel prize for his role in the invention of the transistor, became a controversial public figure due to his advocating eugenics on the basis of IQ. He was concerned because people with higher IQ tend to have relatively fewer children in the modern world. Today, these concerns are unmentionable publicly, and are well outside the mainstream. They do however still come up in the brutal honesty of comedy. The 2006 film *Idiocracy* takes the trend to it's logical conclusion. Set 500 years in the future, it portrays:

a dystopian society wherein advertising, commercialism, and cultural anti-intellectualism have run rampant and dysgenic pressure has resulted in a uniformly unthinking society devoid of intellectual curiosity, social responsibility, and coherent notions of justice and human rights.

Wikipedia

Commentators have suggested that, unless eugenics policies like those in traditional societies are re-instituted, *Idiocracy* seems a realistic fate for humanity.

The year 2100 will see eugenics universally established. In past ages, the law governing the survival of the fittest roughly weeded out the less desirable strains. Then man's new sense of pity began to interfere with the ruthless workings of nature. As a result, we continue to keep alive and to breed the unfit. The only method compatible with our notions of civilization and the race is to prevent the breeding of the unfit by sterilization and the deliberate guidance of the mating instinct.

Nikola Tesla

In contemporary America eugenics is politically incorrect, but it lives on in a watered down version through “family planning,” such as in the government funding of Planned Parenthood. However, changes may be inevitable. Birth rates in Europe among the native populations are far below replacement levels, and partly as a result of the rapid demographic changes we see a reactionary nationalism with mild race-based undertones today.

Eugenics is a powerful tool, and theoretically it could be a source of positive change. But it may never be possible to trust a minority of rulers with the power to make the decisions about which human traits are desirable. This power seems to be difficult not to abuse. Furthermore, we have seen how eugenics has been misused as a justification for murder and forced sterilization. Today ethical and social restrictions make it extremely unlikely for widespread eugenic policies to gain traction in the current political environment.

Luckily for our purposes, *Viriculture has nothing to do with “improving” genetics of our progeny.* We are functioning with the assumption that the die of genetics has been cast.

Viriculture

Child-rearing requires the greatest attention and will have the greatest payoff.

De Ira, Seneca, circa AD 40

Many great evils have been performed in name of eugenics. Whether or not eugenics policies are exclusively bad is outside the scope of this book. We simply have to understand eugenics so that we know what we are *not* talking about. We discuss eugenics in this book because, although its name suggests a strict focus on heredity, it also offers suggestions for how best to *develop* (as opposed to *breed*) the human stock. As Galton said,

“[Eugenics is] by no means confined to questions of judicious mating, but... **all influences.**”

Authors seemed to lump together how to “improve” offspring using selective breeding with how to “improve” them using environmental factors. After the mid-twentieth century, eugenics was dropped as an academic discipline, and became a political taboo. However, an unfortunate side-effect of this was the abandonment of the study of how best to grow children regardless of their genes. Before the mid-twentieth century, many recommendations were made about how to grow children to their physical and mental potential. These were sometimes catalogued in books which claimed to be about eugenics. One famous example is *Searchlights on Health*, published in 1920. This book has the subtitle *The Science of Eugenics*, but is filled mostly with folk wisdom about establishing good character and healthy habits. Here I have selected two examples of their attempts to identify environmental factors that influence child development:

Thus we see that prenatal influences greatly modify, if they do not wholly control, inherited tendencies. Is it common sense to suppose that a child, begotten when the parents are exhausted from mental or physical overwork, can be as perfect as when the parents are overflowing with the buoyancy of life and health? The practical farmer would not allow a domestic animal to come into his flock or herd under imperfect physical conditions. He understands that while “blood will tell,” the temporary

conditions of the animals will also tell in the perfections or imperfections of the offspring.

The [expectant] mother should read suitable articles in newspapers or good books, to keep her mind occupied. If she cultivates a desire for intellectual improvement, the same desire will be more or less manifested in the growth and development of the child.

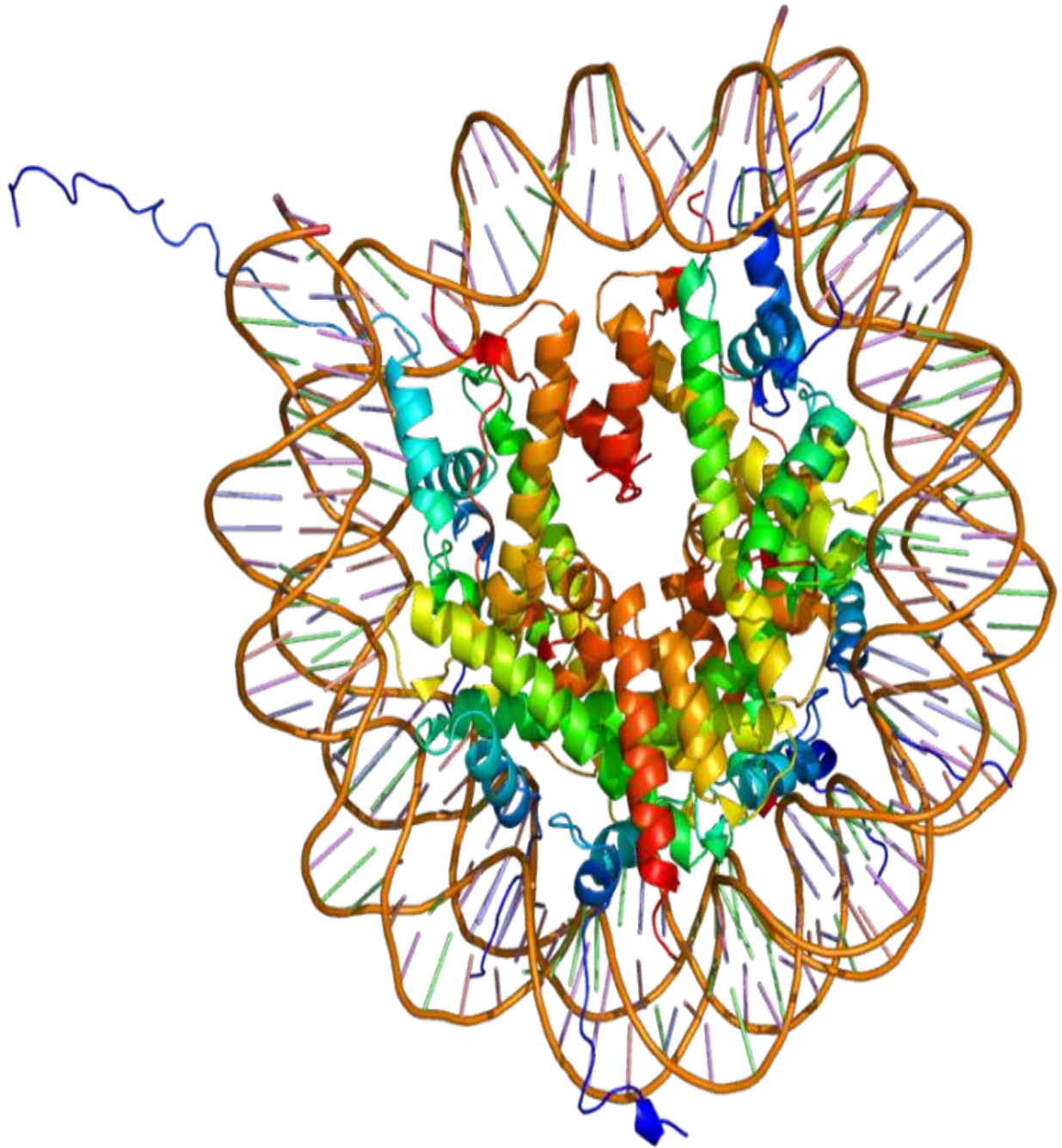
These attempts are laudable, if ineffective, since they are trying to refine wisdom on how best to develop children. They are making an effort to identify the important environmental factors. Unfortunately this line of inquiry was more or less abandoned with the rest of “eugenics.”

It is important here to reinforce the distinction between selective breeding, and environmental influences that optimally develop our children irrespective of their genes. This book focuses on the latter. In order to clarify, and due to the negative connotation of the word “eugenics,” I hope to revive the old term viriculture (vir –man, cultura – grow), which to me seems more apt for this discussion. How best to grow a man or woman is what this work is addressing.

Viriculture – The use of environmental influences to optimally develop children into adults, irrespective of their genes.

Whether Viriculture can, in the timeframe of a single generation, be said to be more powerful than selective breeding, I don’t know for sure. But as we shall see, viriculture is powerful enough to be massively consequential to the lives of your children.

High quality science on the topic of Viriculture does not exist, largely due to the ethical prohibition of human experimentation. Since there is no experimental evidence on Viriculture, science can hardly weigh in. Philosophy and traditional wisdom must take over. How can it be that our children’s development can be altered without altering genetics? The next discussions explain how extra-genetic factors can have important consequences in Viriculture.



Nature and Nurture in Human Development – Part 1, Heritability

Posted on [admin](#) Posted in [Book](#)

Viriculture is the use of environmental influences to optimally develop children into adults, irrespective of their genes. Most parents intuitively understand the power of genetics and heredity. They also recognize the power of environmental factors in certain contexts. In practice however, few parents make the most of their potential power over their children's development. The

environmental factors that have the greatest potential for Viriculture are not well understood. Here I outline the factors of importance and provide a justification.

Some background on how we know how living things transmit heritable information

In order to understand viriculture, we must first understand what living things are, and how they transmit the instructions that coordinate growth and development.

Animals are able to make intuitive distinctions between living and non-living things. People have been interested in this distinction since the beginning, and have sought to understand why some things are alive and others are not.

For most of human history, the dominant theory of life was that living things differed from non-living things in that they possessed a “vital force.” This force was similar to a spirit or soul, and provided animation to living things. Today this theory is called “Vitalism.”

Vitalism was a popular belief because, until relatively recently, no one had a good understanding of *why* living things are animate. But ultimately, vitalism could never provide a full explanation. As Julian Huxley famously remarked, to say that a vital force animates living things is the equivalent to saying a “locomotive” force causes trains to run. It does not provide a satisfactory *mechanism* to understand life. Hume made the same point over a century earlier:

It was usual with the Peripatetics, you know, Cleanthes, when the cause of any phenomenon was demanded, to have recourse to their faculties or occult qualities; and to say, for instance, that bread, nourished by its nutritive faculty, and senna purged by its purgative. But it has been discovered, that this subterfuge was nothing but the disguise of ignorance; and that these philosophers, though less ingenuous, really said the same thing with the sceptics or the vulgar, who fairly confessed that they knew not the cause of these phenomena.

Dialogues Concerning Natural Religion, Hume, 1776

During the 19th century strong arguments accumulated against the notion of a vital force. In 1828, Friedrich Wöhler, without biologic starting materials, synthesized from chemicals, urea, a natural isolate from urine that had previously been found only in association with living things. In a classic letter to his friend and fellow researcher, he excitedly reported his findings.

I can no longer, so to speak, hold my chemical water and must tell you that I can make urea without the use of kidneys, either man or dog; the ammonium salt of cyanic acid is urea.

The significance of this finding is that the natural components of living things do not differ fundamentally from inorganic matter. The Wöhler’s synthesis is taught as the origin of the field of Organic Chemistry, originally named because of the association between “organic” chemicals and living things.

With the development of microscopes a few hundred years ago, investigators began to notice that living things were composed of small self-contained units. These units came to be called “cells.” By

the mid-19th century, the accumulated knowledge about cells was formalized into “Cell Theory,” the tenants of which are summarized below:

1. All living things are composed of cells
2. A cell is the fundamental unit of life
3. Cells arise from pre-existing cells

By the twentieth century, Cell Theory had become the dominant philosophy of life in biology. Today, Cell Theory is so ingrained in biologic studies, that it is generally taken as *the* definition of life. Of course, “life” and “living things” are just words, and others have attempted to define these terms. But Cell Theory still provides a useful working definition of life, even if it is imperfect.

Around the time of the development of Cell Theory, Darwin’s theory of evolution gave biologists a framework for studying heredity and selection in living systems. At the same time, Mendel’s work on patterns of inheritance was published, although it’s significance was not realized until after his death.

In the early 1900s, biologists began to recognize the incredible importance of three great theories:

1. Cell Theory
2. The Theory of Evolution
3. The Theory of Mendalian Inheritance

These theories were found to be mutually consistent; they reinforced each other as accurate descriptions of reality. Eventually, they were combined and formalized in what is known as the Modern Evolutionary Synthesis. The Synthesis has been the dominant paradigm in biology ever since, and it has proven invaluable in modern biologic discoveries.

By this time, microscopic observations had identified certain components of individual cells. Early work in genetics had established the *theoretical* notion of heritable information being carried somewhere in cells. Thomas Hunt Morgan’s work with fruit flies had identified the chromosome, a part of a cell sometimes visible under a microscope, as an important carrier of this information, but at this point, the notion of a gene was limited to “a locus on a chromosome.” No one knew what genes actually were. It was in this context that the material responsible for the transmission of heritable information was explored.

In 1928, a report by Frederick Griffith further established that *some component* within cells was a carrier of genetic information. Virulent bacteria that were subsequently destroyed by heat were found to be non-virulent. But when these destroyed bacterial components were mixed with intact non-virulent bacteria, the intact bacteria were found to be virulent. The destroyed components of virulent bacteria “transformed” the non-virulent bacteria. Griffith called this unknown factor responsible for bacterial transformation the “transforming principle.”

In 1944, a report by Avery, MacLeod, and McCarty established DNA, a chemical contained in the nucleus of cells, as the “transforming principle” described by Griffith. The nucleus was known to contain the chromosomes, which were composed of both DNA and proteins, as well as other

components. The Avery experiment *isolated* these cellular components, and then checked which component successfully “transformed” bacteria. Isolated DNA was found to transform, while the other isolates did not. This ultimately suggested DNA was the component of cells that carried the heritable information.

A 1952 report by Hershey and Chase further confirmed that DNA, and not protein, was the carrier of heritable information. The team knew that certain viruses infect bacteria, and altered their heritable information. They grew two different groups of these viruses, one group with specially labeled protein, and one group with specially labeled DNA. They found that, after viral infection, labels were only present in bacteria *if the DNA had been labeled* in the virus. If the protein had been labeled, no label was present in the bacteria after infection. This increased the confidence of biologists that DNA was in fact the carrier of heritable information in cells.

Subsequent experiments refined these findings, and today the mechanism of genetic heritability is understood in tremendous detail. Because of the profound implications of the identification of the information carrying component of living things, DNA and genetics have become revered in popular culture as a triumph of the human intellect over nature. And indeed the long-term potential power of genetic manipulation is astounding. But our ability to manipulate genetics is extremely clumsy today. Furthermore, using technology to enhance the traits most valuable to human existence is still outside of our reach. And as we discussed in the chapter about the problems with eugenics, government coercion to manipulate genetics through breeding can lead to great evils, and is not politically viable.

Experiments have confirmed that DNA contains heritable information that influences our growth and development. But it would be incorrect to assume that *all* information that influences growth and development is contained in the DNA code. It is even incorrect to assume that all *heritable* information is contained in the DNA code. Non-genetic factors, both heritable and non-heritable, play a major role in human development. Viriculture, through influencing environment rather than DNA code, offers a practical and viable alternative to improve developmental outcomes for our children.

Clarifying the Terminology of Development

The concepts of genes, heredity, and environment will recur, so we must clarify them.

“Development” here is concerned with the growth, morphogenesis, regeneration, and aging of tissues and anatomy.

“Gene” refers to a region of a chromosome, or a specific DNA code. In general, the genes of an organism do not change during its life. Genes work by storing information. This information is translated from its storage form in the DNA of genes, to its functional form in proteins. Some proteins act like little machines, and are responsible for many cellular processes. Others are used by organisms for structure or communication. Most of the essential functions of life at the cell level are carried out by proteins. Genes affect development because they provide instructions for making the

proteins. There is no doubt that genes ultimately influence human characteristics on a practical level.

“Environment” in this book refers to **all non-genetic factors**. Development of organisms cannot exist independently of either genes or environmental factors. As Dawkins says in *The Selfish Gene*:

However independent and free genes may be in their journey through the generations, they are very much not free and independent agents in their control of embryonic development. They collaborate and interact in inextricably complex ways, both with each other, and with their external environment. Expressions like ‘gene for long legs’ or ‘gene for altruistic behavior’ are convenient figures of speech, but it is important to understand what they mean. There is no gene which single-handedly builds a leg, long or short. Building a leg is a multigene cooperative enterprise. **Influences from the external environment too are indispensable: after all, legs are actually made of food!** But there may well be a single gene which, other things being equal, tends to make legs longer than they would have been under the influence of the gene’s allele.

The Selfish Gene, Dawkins, 1976

Environment affects development in a number of ways:

Firstly, as we see in the above quote, organisms are physically constructed out of components of their environment. Even the molecules that make up our DNA ultimately came from food we ate.

Secondly, the environment provides cells with information. This information comes in many forms, chemical, mechanical, light, temperature – cells have an astonishing array of sensory proteins that transduce environmental signals into information that affects cellular function, even without changing how genes are expressed.

Thirdly, the environment influences how genes themselves are expressed. Recall that genes simply store information in the form of DNA. This information can be translated into functional proteins. But how does a cell “know” when to translate which information, and at which rates? The answer is complicated, but ultimately expression of genes is regulated by information transduced from environmental signals. DNA itself is stored in the nucleus of the cell, intimately bound up with special structural proteins. These proteins not only package the DNA, but also regulate which genes are expressed, and which are suppressed. Environmental signals can be transduced so that the expression of certain genes is up- or down-regulated as a response.

Interestingly, some of the non-genetic changes that influence the growth and development of organisms turn out to be heritable. For example, the way that the DNA of a mother’s egg cell is packaged prior to conception can affect developmental outcomes for the child – even though the genes themselves are not changed. The study of *non-genetic heritable* factors is known as epigenetics.

“Heredity” here refers to a transmission of traits to one’s progeny. As we just described, **“genetic” is not synonymous with heritable**. Certain genetic changes are not heritable, and certain heritable influences are not genetic.

In high school, we are taught the Lamarckian theory of evolution, by which characteristics of individuals *acquired during their lifetime* are passed on to their offspring. According to this theory,

a man who lifts weights and becomes muscular during his lifetime will have more muscular children. This is taught as erroneous, and contrasted to Darwin’s theory of natural selection. In natural selection, random mutations lead to differences in survival and reproduction among offspring. The fittest individuals spread their genes more effectively. The acquired physical changes during one’s life are not transmitted.

Biologists today have a more nuanced understanding of this process than kids are taught in high school. While natural selection is a major mechanism for traits to be transmitted to progeny, it is now understood that certain acquired changes can have an impact on offspring.

There are two ways in which *acquired changes* of a parent can influence development of its progeny. The first is by means of an acquired change in the DNA code of the sex cells, where an organism’s environment influences its offspring’s DNA code. The second is by means of epigenetic changes, where an organism’s environment influences the way in which its offspring’s genes are expressed.

Additionally, there are at least three ways in which *acquired changes* can influence the development of a child himself. The first is epigenetic. The second is due to acquired changes in the somatic cells of the organism (see below). The third is due to *non-heritable extra-genetic influences* (NHEI), sometimes termed “developmental programming.” Developmental programming influences are most notable during gestation, and this is how they can be both non-heritable and acquired from the mother.

The chart below is designed to clarify the terminology.

<u>Terminology for Developmental Influences</u>	Due to the DNA Code (Genetic)	Not Due to the DNA Code (Extra-genetic)
Heritable	“Genetic” (gametic)	“Epigenetic”
Not heritable	“Genetic” (somatic)	“Developmental Programming” or NHEI

Gametes is the scientific word for sex cells, sperm and eggs. Gametic genetic influencers of development are heritable, since they occur in the sex cells, and they are also the result of changes to the DNA code. An example of a gametic genetic influence of development would be if a father’s sperm cell was exposed to x-ray radiation, changing DNA code in a region relevant to development, which was then passed on to his child. Acquired genetic changes are only transmitted when they occur in the gametes of the parent. Acquired genetic changes to other cells of the body can occur, but these cannot be transmitted to progeny.

“Somatic” is used in science in contrast to “gametic” to refer to the non-sex cells of the body. Somatic genetic influencers of development are not heritable, since they don’t occur in sex cells, but they *are* the result of changes in the DNA code. An example of a somatic genetic influence on

development would be if a child was exposed to x-ray radiation, changing his DNA code, which then led to cancer in the child. The DNA changes that occur in somatic cells have no means of being transmitted to offspring. They are therefore “genetic” but not “heritable.”

Influencers of development can also be non-genetic. Non-genetic influencers that are heritable are called epigenetic factors. Non-genetic influencers that are not heritable I call developmental programming.

Epigenetic influencers of development are heritable, but they are not a result of changes to the DNA code. In other words, the DNA code is maintained, but the way in which that DNA is expressed changes. In many ways, epigenetic inheritance is similar to the old Lamarckian theory.

Environmental influences can cause changes in the way that genes are expressed, and if these changes are heritable then they are termed epigenetic. One well known example of epigenetic influences in humans come from the unfortunate consequences of exposure of a chemical compound diethylstilbestrol (DES). DES was once used as medical treatment. Eventually it was discovered that children of mothers who were exposed to DES have a higher rate of cancer. An increased risk of cancer is still found *two generations later* in the maternal grandchildren. Animal experiments have been performed to investigate the mechanism of DES. Rather than having some effect on the DNA code, DES seems to alter the patterns of gene expression. These patterns are maintained trans-generationally, causing the observed inheritance, without genetic alteration. Interestingly, Weston Price recognized the importance of epigenetics before the term was even coined.

While it has been known that certain injuries were directly related to an inadequate nutrition of the mother during the formative period of the child, **my investigations are revealing evidence that the problem goes back still further to defects in the germ plasms** as contributed by the two parents. These injuries, therefore, are related directly to the physical condition of one or of both of these individuals **prior to the time that conception took place.**

The forces involved in heredity have in general been deemed to be so powerful as to be able to resist all impacts and changes in the environment. These data will indicate that much that we have interpreted as being due to heredity is really the result of **intercepted heredity.** While great emphasis has been placed on the influence of the environment on the character of the individual, the body pattern has generally been supposed to require a great number of impacts of a similar nature to alter the design.

Nutrition and Physical Degeneration, Price, 1939

His term “intercepted heredity” is impressive because it manages to capture the concept of epigenetics as the term is used today. We will see later how these concepts are related to Viriculture.

NHEI influence development, but are neither heritable or genetic. This category of influences may be the simplest to understand. If, for example, a developing woman engages in weight lifting, her muscles will become larger and stronger. Her bones will also experience concomitant adaptations. Her development will be affected, but these changes did not affect her genes, and they also will not be passed on to her children. Another example would be if a woman sunbathes frequently to tan. Her skin will develop increasing color, but this tan will not be transmitted to her offspring. An example of NHEI affecting a developing child might be a physical deformity of a newborn resulting

from a mechanical constraint in-utero. An existing definition of the term “developmental programming” comes close to my concept of NHEI, and helps expand our understanding:

Developmental programming refers to the programming of various bodily systems and processes by a stressor of the maternal system during pregnancy or during the neonatal period. Such stressors include nutritional stress, multiple pregnancy (i.e., increased numbers of fetuses in the gravid uterus), environmental stress (e.g., high environmental temperature, high altitude, prenatal steroid exposure), gynecological immaturity, and maternal or fetal genotype. Programming refers to impaired function of numerous bodily systems or processes, leading to poor growth, altered body composition, metabolic dysfunction, and poor productivity (e.g., poor growth, reproductive dysfunction) of the offspring throughout their lifespan.

Developmental programming, Reynolds et al, 2010

For the purposes of viriculture, it is the non-genetic influencers of development, epigenetics and NHEI, that are relevant. In practice, isolating exactly which factors are strictly epigenetic and which are NHEI is impossible. It may be that a young woman who lifts weights causes subtle changes in the way her genes are expressed, and these changes are subsequently passed on to her offspring. Luckily, making this distinction is not necessary for making prescriptions about viriculture.

To further complicate the issue of terminology, the term “epigenetic” is sometimes used by other authors to refer to *both* heritable (epigenetic) and non-heritable (NHEI) non-genetic influencers of development. In this text, I will replace this usage with my own term “extra-genetic” to refer to *all non-genetic influencers* of development.



Nature and Nature in Human Development – Part 2, Feedback, Complexity, and Development

Posted on [admin](#) Posted in [Book](#)

Feedback and Beautiful Development – Patterns and Processes

There's a process for it, you don't just suddenly wake up
and *snap* here it is, there's a process for it.

Clarence Thomas on developing judicial opinions.

Let us explore the idea of development more broadly. In disparate domains such as the development of buildings and towns (architecture), the development of nations (economics), of technology, of military strategy, of clothing, of writing, of wikis, and even in biological development, we can identify an underlying principle that is responsible for beauty and elegance in all cases. This principle is *feedback*. Feedback is a characteristic complex dynamics, and understanding it is crucial to understanding human growth and beauty.

To begin our discussion of feedback and beautiful development let's introduce the work of Professor Christopher Alexander on architecture – since architecture is so visible and tangible. For nearly half a century he has written on a practical and theoretical approach to improving construction. In the 1970s he collaborated on a book called *A Pattern Language*. This book presents 253 guiding principles of design in the form of “patterns.” These patterns are to be applied to the specific environment of a construction project to create a “living whole,” in other words, appealing architecture. Examples of these patterns include:

3 – City Country Fingers

41 – Work Community

60 – Accessible Green

159 – Light on Two Sides of Every Room

173 – Garden Wall

220 – Roof Vaults

In addition to the *patterns*, Alexander described the *process* required to create these “living structures.” This process is explained in his companion book, *The Timeless Way of Building*:

There is one timeless way of building.

It is thousands of years old, and the same today as it has always been.

The great traditional building of the past, the villages and tents and temples in which man feels at home, have always been made by people who were very close to the center of this way. It is not possible to make great building, or great towns, beautiful places where you feel yourself, places where you feel alive, except by following this way. And, as you will see, this way will lead anyone who looks for it to buildings which are themselves as ancient in their form, as the trees and hills, and as our faces are.

Since the publication of *The Timeless Way of Building* and *A Pattern Language*, Alexander has greatly fleshed out the theoretical basis of “life” and “creating life” in buildings. Although these terms may seem vague, Alexander devotes an entire book to his definition of “life.” After all, what is “alive” is subject to one's own definition. To diminish confusion, Alexander may have been better served by coining a new term. Instead he redefines “life” so that a beautiful teapot, carpet, or church may be accurately said to be alive. For our purposes, “living structure” can mean “a beautiful and appealing structure.”

Our interest is in development, and so the *process* of creating beautiful, appealing buildings is relevant. In *The Process of Creating Life*, Alexander explains why modern buildings fail to appeal aesthetically:

The history of architecture, especially in the period from 1600 to the present, and culminating in the thought of the 20th century, has been based on the idea that the architect's vision arises, almost spontaneously, and at all events suddenly, in the breast of the architect, from "thin air"— and that the quality, depth, and importance of the architect's vision comes from this mysterious moment. Contemporary students tremble as they try to attain this mystery.

Yet if the observations of this chapter are held to be true about the production of living structure and if, as I have suggested, **living structure always arises slowly, by successive transformations of what exists, gradually, gradually, and then decisively changes slowly until a new thing is born**, then the view of the unfettered architect-creator that has been fostered in the last four hundred years, must be completely wrong.

It is not the way that profound living structure can be created in buildings, it never was, and it never could be. Our idea of what it means to design a building, and to create a profound building form, must be changed for ever by this knowledge.

It seems the gradual, successive, slow but decisive transformation is key to appealing architecture. Alexander describes it as a "**smooth unfolding**." But what seems to Alexander as a "smooth unfolding" is anything but smooth. In his earlier *Timeless Way* he describes the same process in other words:

The process of unfolding goes step by step.

"Step by step" is critical. The beauty and appeal of the final result is derived from the interaction of signals between the building agent and the environment. It is a stepwise, iterative information exchange – the only way to make something complex beautiful. It is this feedback that leads to the satisfying outcome. These interactions in truth more jagged than smooth – but finely, not coarsely, so that it seems smooth. At each step, the builder adjusts his work to his surroundings, the building then takes on a new character, and the process repeats.

Traditional: The *process* is continuous or smooth, the *object* is not smooth

Modern: The *process* discontinuous or abrupt, the *object* is smooth

Consider Victor Hugo's poetic example of the emotional effect of architectural smoothness and regularity:

The place was incredibly bleak. On top of the gloomy thoughts that seized you there, you felt yourself caught between La Salpetriere, whose dome you could catch a glimpse of, and Bicetre, whose barriere you could practically touch – that is between the madness of women and the madness of men. As far as the eye could see there was nothing but abattoirs, the outer city wall, and a few rare factory fronts looking like barracks or monasteries; everywhere shanties and mounds of rubble, old walls as black as shrouds, new walls as white as winding sheets, parallel rows of trees, perfectly aligned houses, flat structures in long, cold lines, and the grim misery of right angles. Not a single uneven patch of ground, not a single architectural caprice, not a single wrinkle. It was a glacial, regular, and hideous array. Nothing is as harrowing as

symmetry. The reason is that symmetry spells boredom and boredom is the very essence of grief. Despair yawns. It is possible to conceive of something more terrible than a hell where one suffers and that is a hell where one is bored. If such a hell were to exist, this stretch of the boulevard de l'Hopital could well serve as its approach.

Les Miserables, Hugo, 1862

The post-Revolutionary French seem to have had a irrepressible penchant for “enlightened” top-down central planning. However, I would argue that *symmetry* is not so much the problem- even the Parthenon is symmetrical – but a lack of complexity or “living structure” caused by a lack of feedback.

The processes that create physical smoothness are abrupt, and the processes that create physical non-smoothness are smooth (or very finely jagged). Traditionally, before the days of blueprints, a master builder was in charge of directing the construction. The precise local details were left up to the discretion of the skilled workers. Buildings were carefully planned, but the local environmental cues were still interpreted by the builders, and incorporated to suit the design.

Today the process is very different. A single architect, far removed from the details of the site, will draft on computer the minutiae of the construction down to the centimeter. Many of the specifics are determined with the help of engineering codes or laws. These details are then set in blue ink. By the time construction begins, there is no autonomy for the builder to use information from the environment to improve the construction. He is simply following orders.

In the traditional way of building, the information rich local environment engages in feedback with the building. The semi-autonomous skilled builder is the mechanism of this feedback. The exchange of information with their environment might influence construction on the scale of an individual autonomous worker in various ways. Light, acoustics, temperature, and of course the aesthetic sense itself. By adapting each infinitesimal detail in an appropriate way, the entire structure becomes “alive.”

It is partly for this reason that old man made objects lack the “smoothness” of modern ones. Compare these two buildings, across the street from one another in Boston.



The building on the right is “nice” by the pitiful standards of modernity, but compared to a structure built with a feedback rich process, it is utterly lifeless.

In the early twentieth century, New York City still had a organically developed aesthetic. Just as Athens, Rome, and Paris/London had once been the seat of international power and authority of the West, New York represented the latest and greatest of what a Western city could be.



Iconic buildings from this era including Grand Central Terminal, New York Public Library, the Brooklyn Bridge, the Flatiron, the Plaza, and the Woolworth building are the surviving legacy of this pinnacle of greatness, just like the Pantheon in Rome, or Parliament in London. Today these noble structures are choked to death among the onslaught of smooth, feedback-free monstrosities, which ought to be seen as the architectural manifestation of modernity's loss of humanity.

The same *process* of feedback rich iterative development helps explain the beauty and appeal of old cities.

If we look at the evolution of traditional Amsterdam, we see how gradually the canals were formed, bridges were built to span (and thus enhance) the canals, edges were formed for the canals, houses were built one by one along the canals – all enhancing the canals – and slowly, over two or three hundred years, a wonderful living harmony was built... At every step, minute adaptation was occurring... Each board, window, step, was added in enough time for it to be fitted perfectly for use. Thus the whole governed the position and shape of each board as it was added. We can see and feel the underlying sequence of unfolding. Just to look at the resulting structure, we can feel the sequence of what it must have taken to make it.

The Nature of Order, Alexander, 2003

Contrast Alexander's description of Amsterdam with the top-down changes made to New York City in the twentieth century under the influence of (((Robert Moses))), or those made to Paris under Haussmann – changes which in both cases are regretted as tragic by anyone who considers what was lost. Even Pompeii is more alive in structure than the modern city.

What does it mean when a city destroyed by a volcano 1,932 years ago has more charm and beauty than the cities we build today?

It is important to note that architectural vivacity is quite independent of cost. Traditional country homes and even peasant hovels are actually more beautiful and humane than the average New York apartment circa 2016 – especially if you factor in the social isolation that one-size-fits-all modern international architecture imposes.



This kind of small scale traditional housing would certainly not have had blueprints laid ahead of time, but would have been constructed out of traditional patterns with semi-autonomous skilled builders exercising their judgment at each step. Alas, the feedback driven semi-autonomous construction worker is a relic of times gone by.

The modern world... breaks from smooth unfolding at almost every stage. As a result, the processes which we presently have make it very difficult to create life in the world. Yet traditional building almost universally contained processes which, like nature itself, depended on structure-preserving smooth unfolding at every state.

The absence of life we recognize as a familiar problem of the past century does not come about merely because modernistic design was ignorant of structural principles expressed in Book I. It comes about, far more profoundly, because the *processes* which create objects, artifacts, buildings, neighborhoods, agriculture, forests, towns, bridges – nearly all fail to have the character of unfolding wholeness.

Thus the issue of process is immense. In its impact on the quality of architecture, it is more important than the static structure of the design.

The Nature of Order, Alexander, 2003

Just like in the construction of buildings and growth of cities, a similar sort of *smooth unfolding* consisting of gradual alterations in structure with feedback between the environment and the building is described in the maintenance of buildings in *How Buildings Learn*:

Sullivan's form-follows-function misled a century of architects into believing that they could really anticipate function. Churchill's ringing and-then-they-shape-us truncated

the fuller cycle of reality. First we shape our buildings, then they shape us, then we shape them again – ad infinitum. Function reforms form, perpetually.

“Flow, continual flow, continual change, continual transformation” is how a Pueblo Indian architectural historian named Rina Swentzel describes her culture and her home village. That describes everyone’s culture and village.

How Buildings Learn, Brand, 2004

This “continual flow” is what Alexander calls “smooth unfolding” and what I am calling *feedback*—whatever you call it, it is essential for developing beautiful complexity. As we have noted, despite the terms “continual” and “smooth,” these processes actually consist of countless small changes, during which information is gathered, processed, and then used in some constructive way. In contrast the modern “correctly designed” building drafted by an architect unfamiliar with the build site, and constructed without regard to the discretion of the builder and without respect for the location or the needs of the future occupants.

To understand “progress:” all places we call ugly are both man-made and modern (Newark), never natural or historical (Rome).

The Bed of Procrustes, Taleb, 2010

These sorts of buildings and towns are no longer constructed. Why is that? Changes to both the patterns and the process. It is partly because the patterns used have *mutated* from traditional patterns.

Our fathers had a Paris of stone; our sons will have one of plaster.

The Hunchback of Notre Dame, Hugo, 1831

But it is more importantly due to a change in the *process* of construction, and the loss of the traditional feedback in building. As noted in *A Timeless Way of Building*, patterns implemented without the “timeless way” (a feedback rich iterative process) will not produce the desired results.

In the construction of buildings and towns, we compared two opposing processes of development, the traditional “smooth unfolding,” and the modern “imposed blueprint.” Interestingly, these two general methods appear in many domains in which things “develop.” In all cases, the top down imposition of a strictly planned outcome fails to produce elegant complexity, while the iterative process succeeds. Architecture is simply one example of a domain in which the importance of feedback in development can be understood – the principle is general.

What is the theory of change? These authors suggest that commercial interests outside of the royal circle were able to demand checks on the power of the rulers. These restraints on power protected their property and profits from confiscation and ended royal blockages of freedom of entry into the trade. These changes were resisted by the existing economic elite that benefited from royal power, of course. However, profits convey political power. The profits of the Atlantic trade were enough for the new traders to carry the day over the old interests. Then, free institutions create free values, and vice versa, for a virtuous feedback loop.

Development economics is the study of how to grow poor nations economically. A great deal of money and effort has been spent to try to alleviate the problems associated with wealth inequality worldwide. Recently, economic goals have been concocted by overconfident academics and bureaucrats. International aid money was then provided to the governments of poor countries in order to achieve the goals. This method of development typically fails, with the desperate poor receiving little benefit. This is the *imposed blueprint* method of economic development. This method is contrasted with the way that economies developed in the western world, prior to international aid – the *smooth unfolding* in which “free institutions create free values, and vice versa.”

One of the major factors that allowed the economies of Europe and its offspring to develop more thoroughly was the existence of political institutions that allowed individuals to coordinate economic goals for themselves. The exchange of ideas resulting from the feedback between local problems and problem solvers is a more successful method for developing economies than political fiat. The difference between these two methods, and their effects is explored in William Easterly’s *The Tyranny of Experts*. Easterly describes the “Technocratic Illusion,” the common misunderstanding of how to “address” global poverty. He suggests that this illusion leads to a detrimental naiveté of experts who believe they know best how to solve the problems of others. Authoritarian experts impose blueprints for economic development, at the expense of the rights of the poor themselves. These coarsely designed “solutions” rarely succeed. Technocrats ignore the historical lesson of how our own Western economies developed in the first place – through the bottom-up application of free individuals with political and economic rights. Easterly calls this method “free development,” by which a feedback loop between problem-havers and problem-solvers accomplishes “far more than...solutions provided by experts.”

Improvise, adapt and overcome.

Unofficial US Marine Corp Mantra

Military operations are another government domain by which feedback leads to good development. The local environment of a military operation is inextricably linked to proper development of the established goals. General *patterns* may be planned and co-ordinated, but like Alexander’s patterns, these are simply suggestive guidelines subject to customization. It would be impossible for a military strategist to create blueprints ahead of time which detailed the exact actions of every soldier. Even if it were possible, thousands of years of accumulated wisdom on strategic warfare has shown that it would only be a hindrance to goals.

I had to do everything at once – hoist the flag that was the signal for running to arms, sound the trumpet, recall the men from their work on the fortifications, bring back the men who had gone further afield in search of material for the rampart, get the troops into battle formation, address the men, then give the signal for attack. There was not time to do most of these things because the enemy was almost on us, but in this very difficult situation [something] helped us – the knowledge and experience of the soldiers; their training in earlier battles meant that they could decide for themselves what had to be done without waiting to be told.

In modern militaries, the autonomous decision-making by the combatants intra-op is considered essential for achieving goals. The environmental cues are sensed and processed by small teams or individuals *in media res*, who use that information to reassess strategies. This *process* repeats itself in an iterative fashion until the mission is complete. The need for feedback in order to attain military goals is underscored by the emphasis put on reconnaissance and communication technologies used during engagements. These tools simply help relay the local environmental cues back to headquarters.

Another example of the need for feedback for good development exists in seduction. There are many guides to male dating etiquette and behavior, but these simply provide men with dating patterns, which must then be subject to situational feedback. It is impossible to create a blueprint for a perfect date, or a blueprint to seduce women. Environmental factors such as weather, location, your date's outfit, the waiting time at a restaurant, and countless others must be sensed and processed by the man, and then he must alter his behavior or plans accordingly. A charming man will adjust in response to a woman's interests, body language, and mood – and this cannot be planned in advance. Scripted commentary would never seem charismatic. Ultimately, the *exchange* of a great many subtle hints and signals between the man and the woman, with appropriate adjustments in behavior being made at each step, are essential for a “smooth” seduction. The complex nature of a man's romantic forays will not develop well without an iterative process of escalation.

The aesthetic inferiority of a loss of feedback that we saw in architecture is also painfully obvious in our modern mass-produced clothing. Most clothes we buy today are “off-the-rack,” meaning that they are designed and constructed without any interaction between the garment and the wearer. The lack of feedback between the wearer and the garment is partially responsible for a general lack of elegance in contemporary dress. In the past, most clothing was designed and made at home by one's family, and according to local customs. Feedback was achievable through repeated measurement, try-ons, and remeasurements. Furthermore, articles were not discarded carelessly, but *altered* in response to patterns of wear, or the changing needs of the wearer – like how a soldier's strategy may be altered in response to an unexpected cue, or a master-builder's design may be adapted to the local environment.

Sadly, we don't make clothes at home anymore, since mother is too busy working in PR or marketing (at an international clothing corporation). Today, the closest we can get to well developed clothing is through bespoke tailoring. “Bespoke” refers to clothing that one “spoke” the order to create. Bespoke clothing cannot be made without an iterative process. The tailor or designer knows intuitively that it would be impossible to create a quality garment without feedback from the wearer. Let's illustrate this iterative process using an example of a bespoke suit. First the materials and design elements of the garment are discussed and agreed upon through an exchange between the tailor and client. These design elements correspond to Alexander's “patterns,” as they guide the process of design, but do not correspond a blueprint for the garment. These elements include the number of buttons, the type of lapel, the style of vents, the placement of the armholes, the amount of shoulder padding, etc. Once these choices have been made, detailed initial measurements are taken and a “paper pattern” is cut which incorporates both the design and measurements. The tailor

then begins construction of the suit. The client is called back for a first fitting, where the suit and the client are both remeasured, considering the drape and fit of the garment with the wearer's frame and posture. The suit is then taken apart, and further cutting and sewing is performed. A second fitting occurs in which the drape, comfort, and aesthetics of the garment are refined. The suit is "finished," and the details of construction are finalized. A final fitting is performed as a verification of the success of the process. The information about the materials used is recorded in case of future need. It is expected that future alterations and repairs will be necessary, as both the wearer and the garment age. No good tailor would attempt to make a well designed suit without feedback.

Book writing is another domain in which an iterative process is required to develop a elegant whole. Books cannot be completed without feedback between the author and the text. Ideas and motivation occur sporadically to an author. Sections must be adjusted, expanded, or purged. Additionally, the writing process itself exposes the author to new information, which must then be incorporated into the existing work. Consideration must be made of the intended audience, and the style and tone of the writing suitably adjusted to reflect this. Revisions often occur to such a degree that an early draft of a manuscript may seem a "puny and malformed" attempt compared to the final work.

Wikipedia is one of the greatest depositories of information ever achieved, but it could not have been designed top-down. Instead, we owe its existence to the feedback between autonomous editors and reviewers, each engaged in writing, refining, editing, and reviewing. Wikipedia's elegance could only have come about through an iterative process. The rules governing the accumulation and refinement of articles can be considered patterns. These patterns are then applied to the local environment of article stubs and drafts – this is the process. Eventually, popular articles reach a well developed equilibrium, to which only minor refinements and alterations occur.

Wikipedia is an example of technology that could only develop by an iterative process, but in fact *technological development itself* only progresses by feedback between the users and the technology. Our minds are no more sophisticated than the Ancient Greeks, but they never invented supercolliders or iPhones. Why is this? No one truly "invented" the iPhone, as it is a refinement and alteration of pre-existing cell phones and PDAs, adapted over and over to suit the local concerns of users. Only by gradually building on the earlier achievements of technology are modern developments possible. Some modern things like cars and planes may seem "well developed" despite being constructed in a factory without feedback from the end user. But the factory and design themselves are the product of many years of feedback and iterative refinement. An elegant iPhone may be built according to exact blueprints. However, these blueprints have been revised over and over in response to the desires and criticism of the end-users. Whether iteration occurs in the design phase or the construction phase is irrelevant. Furthermore mass produced airplanes and cars, constructed according to blueprints, rarely satisfy their end users fully, and most would not typically be described as "elegant," or even "complex." Most mass produced products are painfully un-aesthetic. Even today, after over one hundred years of refinement to the automobile design and assembly line, the finest cars are still handmade. If mankind does ever achieve elegance through mass production, I predict that it will be the result of some computer automated iterative process involving feedback.

Just like technology, an Old World city, or a fine suit, the presence of so many complex and beautiful living things could only have developed through an iterative process. Without knowing anything about science, we can recognize that the complexity of life cannot be achieved by top

down planning. In evolution, the laws of chemistry and physics provide the patterns, and the mechanisms of selection make up the process. The local environment is our physical world, which constantly pressures generations of organisms in one way or another. The elegance of life is apparent to us at a glance. What we don't see is the billions of years worth of refinements and gradual alterations that were necessary to achieve the sophistication we observe in living systems.

It is clear that an iterative feedback-rich *process* is required in order to consolidate the information necessary for things to develop well. This is true across all domains. Following a blueprint could never be responsible for developing *anything* (a house, a town, an encyclopedia, a military invasion, an economy) that is both complex and elegant. It is a practical impossibility to coordinate the sufficient information *a priori*. Feedback through an iterative process is at least as important as the underlying patterns in good development.

Every violin of Stradivari was a special study, modified in various details according to the nature of the wood which he happened to have, sometimes a trifle smaller, a trifle thicker in this place or the other, or some other slight change accounted for not by pre-established theory, but by adaptation to the peculiarities of the wood in hand.

Popular History of Music, Matthews, 1891

Why is it that iterative processes with feedback are essential for elegant development of so many diverse domains? As noted, the “smooth unfolding” isn't smooth at all. It is composed of countless small exchanges of information between the agent and the environment. It is this *information* that ultimately coordinates good development.

Now that we have established the general principle that feedback is required for complex development, we can explore the special case of feedback in the ontology of biologic systems.

Feedback and Beautiful Development of Biologic Systems

If the [extra-genetic]/genomic dichotomy of odontogenetic regulation is unresolved, how much more so the complex topic of cephalic morphogenesis?

Moss, 1997

Translated into simple English, this quote means “If we can't even resolve whether or not tooth development is regulated primarily by genes or by environment, we certainly can't say that the more complicated topic of head development is primarily regulated by genes.”

During my time in dental school, I often attempted to discuss the nascent ideas that have developed into this work with my peers. Often these views were contrary to those professed in our classes. Occasionally, I would become so distressed by the perspective on the information being taught that I would have to announce my grievance in the middle of lecture.

One day, after being particularly aggressive in my ranting, I was called to the dean's office. One of the deans who scolded me was the wife of Professor Melvin Moss, whose life's work forms the

basis of this section. Ironically, I was extolling the work the Professor, who had developed a theory for understanding growth and development of bone. Moss had been dean of my dental school for many years, although I never had the chance to meet him. Judging by his work he was on to something important.

As we saw, feedback through an iterative process is essential for the elegant development of complex systems. In organisms, development follows the same iterative process that Alexander advocates for buildings, and Easterly advocates for economies. Biologic systems develop according to a pattern language, similar to the one published by Alexander et al. in the 1970s. In biologic systems our pattern language is our genome.

In this analogy, patterns correspond to genes; changes in patterns are “genetic mutations;” and cell/environment feedback corresponds to autonomous-builder/environment feedback.

There are four principal causes of ontogenesis: material (with what?), formal (by what rules?), efficient (how?), and final (why?). In biology, material cause is represented by all the levels of cellular and intercellular materials, without reference to any specific structural (anatomical) arrangement. Formal cause is the genomic code, i.e., a series of “rules” or “laws.” These act at the molecular level to regulate the initial creation of the constituents of material cause. Efficient cause(s) are the epigenetic factors, as defined above, whose actions immediately regulate the next developmental branching point.

Moss, 1997

There are therefore two levels of feedback processes in the development of living things:

1. Evolution – by which the environment selects genes
2. Ontology – by which genes are expressed in accordance with local environmental signals

We saw earlier that imposed blueprints fail to create elegant complexity because they ignore the need for feedback in beautiful development. “Educators” sometimes mistakenly claim that our genome is a blueprint for designing a human being. Now we can see why this is such an erroneous analogy – a blueprint could never be responsibly for developing *anything* that is both complex and beautiful. Information from the environment obtained through feedback loops is at least as important as the underlying genes/patterns. The failure of the blueprint analogy for genes has also been addressed by Dawkins:

Now, we don’t yet understand everything, or even most things, about how animals develop from fertilized eggs. Nevertheless, the indications are very strong that the genes are much more like a recipe than like a blueprint. Indeed, the recipe analogy is really rather a good one, while the blueprint analogy, although it is often unthinkingly used in elementary textbooks, especially recent ones, is wrong in almost every particular... How a *particular* cell behaves depends not on the genes that it contains — for all the cells in a body contain the same set of genes — but on which subset of the genes is turned on in that cell. In any one place in the developing body, at any one time during development, only a minority of the genes will be switched on. In different parts of the embryo, and at different times during development, other sets of genes will be turned on. Precisely which genes are switched on in any one cell at any one time depends on chemical conditions in [the environment of] that cell.

The Blind Watchmaker, Dawkins 1986.

While the Alexander pattern language has 253 patterns, our genome has approximately 20,000. Just as Alexander's patterns are generalized guidelines whose expression is modulated by environmental cues, so are our genes. Our genes guide our development and maintenance, but they are influenced greatly by their local chemical environment.

Just as the patterns of *A Pattern Language* cannot produce the desired result without a process of iterative feedback (*The Timeless Way*), so too are genes unable to achieve correct organismal development without a process of iterative feedback, what biologists call "cell signaling." We saw the number of steps required to develop an elegant suit – imagine the iteration required to develop a child.

Genes are carried in cells. During cell growth, signals are constantly being exchanged with the environment. A cell is influenced by its neighbors, and influences can be distant in both time and space. Hormones are a major way by which cells exchange information. The impact of this sort of cell signaling can not be emphasized enough. Without this critical information about the cell's surroundings, surely no organism could develop.

In ontogenesis, genomic (intrinsic, prior) and [extra-genetic] (extrinsic, proximate) factors are each a necessary cause, but neither alone is a sufficient cause. Only the interaction of both provides both the necessary and sufficient cause of morphogenesis.

Moss

The strict top-down control and lack of builder-autonomy in modern construction would be analogous to an organism developing with cell signaling defects.

The way in which many biologists are taught genetics in undergraduate courses is based on the model that genotypes produce phenotypes on which selection acts. This view of the biological world is correct in the sense that we now know that different genotypes for a particular trait produce phenotypes. However, it has been known for a long time that the same genotype for a particular trait may develop a range of phenotypes. Standard examples include different kinds of leaves of trees produced in shade and sun and asexually reproducing *Daphnia* with more or less pronounced spines depending on the presence of predators.

Asymmetry, Developmental Stability and Evolution, Møller, Swaddle, 1997

In *A Pattern Language*, no pattern describes the shape or size of an ideal house; just as "there is no gene which single-handedly builds a leg, long or short." They simply provide guidelines that, through feedback with environmental cues, lead to an elegant complex whole. Again, "influences from the external environment too are indispensable: after all, legs are actually made of food!"

Surprisingly, this view about morphogenesis is controversial. I have found that the opposing view, which suggests that genes are *primarily* responsible for growth and morphogenesis, dominates. In fact, this question is so controversial that Moss devoted a 1997 series of articles to clarifying the matter. He summarized the (misguided) prevailing viewpoint using the following quotes:

“The whole plan of growth, the whole series of operations to be carried out, the order and site of synthesis and their co-ordination are all written down in the nucleic acid message. ”

“Within the fertilized egg lies the information necessary to generate a diversity of cell types in the precise pattern of tissues and organs that comprises the vertebrate body. ”

Indeed, most clinicians and experimentalists -there are exceptions-subscribe to the two epigraphs above, stated more succinctly as “genes make us, body and mind.”

In casual discussions on the topic of growth and development with clinicians (who really are just overconfident lay-people in this regard), the implicit “genetic thesis” prevents them from considering the main points of my message – that by controlling environment alone, we can have a major influence on viriculture in our children.

However, a number of non-clown, non-poindesters have managed to see that the “genetic thesis” for complex development such as a human body is untenable. Because of this controversy, we will take the time to justify the view that growth and development are influenced by many “extra-genetic” factors.

But DNA isn't really like that. It's more like a script. Think of Romeo and Juliet, for example. In 1936 (((George Cukor))) directed (((Leslie Howard))) and (((Norma Shearer))) in a film version. Sixty years later Baz Luhrmann directed Leonardo DiCaprio and Claire Danes in another movie version of this play. Both productions used Shakespeare's script, yet the two movies are entirely different. Identical starting points, different outcomes. That's what happens when cells read the genetic code that's in DNA. The same script can result in different productions.

Epigenetic Revolution, Carey, 2011

The “script” or DNA code of identical twins is the same, and of course the twins share many characteristics. But we can readily see that exposure to factors such as temperature, nutrition, light, sound, other humans, and mechanical loading throughout development *could* potentially result in two very different adults in many traits.

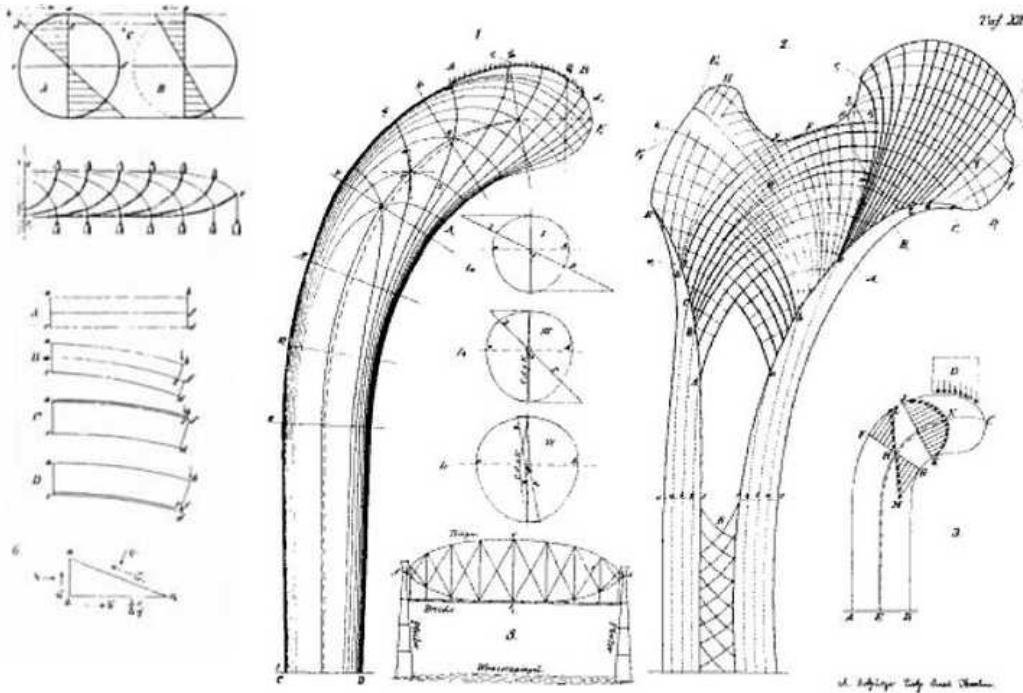
Environmental factors thus play a decisive role in all ontogenetic processes. But it is the organism itself that, as an integrated system, dictates the nature of each and every developmental response... the living organism self-organizes on the basis of its own internal structuring, in continuous interaction with the environment in which it finds itself.

Mechanistic and developmental aspects of genetic imprinting in mammals, Latham et al, 1995

These environmental influencers of development act in feedback with the developing organism. Genetic information alone could never contain the sufficient information to develop an organism well.

It is a fallacy that the genome, the totality of DNA molecules, is the main repository for developmental information; i.e. that there exists a genetic program, or blueprint, theoretically capable of creating an entire organism.

To help understand the influence of environmental factors on ontology, Moss created a theory of development that divided growing tissues into a “functional matrix” and a “skeletal matrix.” The functional matrix is that tissue that stimulates and directs bone growth, and may be an eye, a nerve, a brain, periosteum, muscle; pretty much any non-bony tissue. The skeletal matrix is the bone itself. His theory states that skeletal development is secondary to and bound to the development of the adjacent functional matrix. For example, the bony brain case grows *in response to* the growth of the brain.



Wolff’s law of bone formation, epitomised in the words “the amount of bone depends on the need for it,” may here also be referred to. As will be seen from what follows, it is certainly not true with regard to the need of bone *for the regular and proper accommodation of the teeth in the jaws*, but it may well be true with regard to the strength to resist the pressure strains habitually imposed upon it.

Variations in the Form of the Jaws, James Sim Wallace, 1927

Moss was also concerned with the way bone growth is affected by the functional influence of mechanical loading. In the following quote, he explains how bones achieve proper development by exchanging information with their environment, processing the information, using this information according to guiding patterns, and repeat the process.

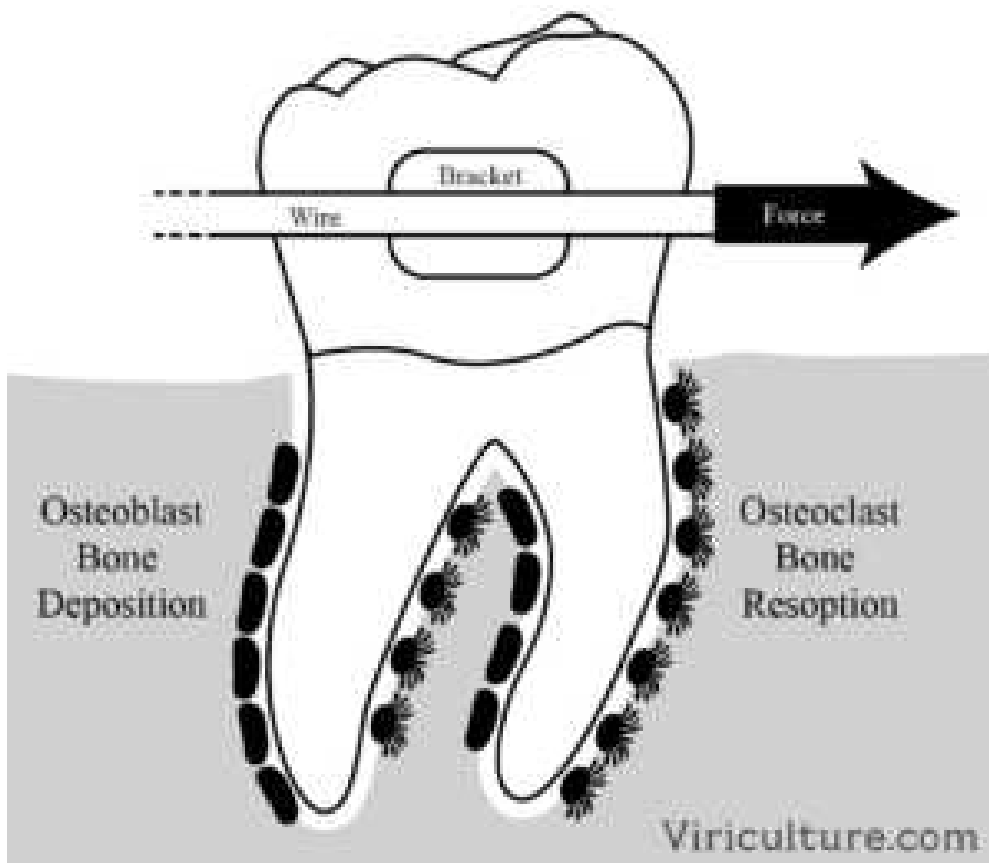
All vital cells are “irritable” or perturbed by and respond to alterations in their external environment. Mechanosensing processes enable a cell to sense and to respond to extrinsic loadings. CCNs [interconnected bone cells are] operationally analogous to an “artificial neural network,” in which massively parallel or parallel-distributed signal processing occurs... The CCNs show oscillation, i.e., iterative reciprocal signaling (feedback) between layers. This attribute enables them to adjustively self-organize. This behavior is related to the fact that biologic CCNs are not preprogrammed; rather they learn by unsupervised or [extra-genetic] “training.”

In the development of bone, information from the environment is not only acquired but also processed by these cellular networks. The results of this processing are the “decisions” of development, and even of bone maintenance in the adult. Remember that bone is constantly changing in response to external factors, especially mechanical loading. Essentially the “CCN” is a brain, although not a very smart one, that is composed of soft bone cells that live inside a hard mineralized bone matrix. When we see a skeleton, you are looking at the mineral house that bone cells used to live in before they died – just like the shell of a hermit crab. The “brain” of our bones is not neural tissue, as is the “brain” of our gut, the so called enteric nervous system. Bones do not “think” quickly, and bone changes occur over many months. However, as Moss explained above, massive parallel processing occurs. This decision making in response to the environmental signals coordinates mineralization or demineralization in the right areas.

Again the importance of feedback in complex development is evident. However mechanotransduction is only one way that cells exchange information with their environment. Cells have an astounding array of mechanisms to receive information. Sensor types include chemical receptors, photoreceptors, thermal receptors, vibration receptors, pressure receptors, odor receptors, electrical receptors, and magnetic receptors etc.

The mechanical signaling that leads to changes in bone growth is very different than simply cutting and moving parts of the cranio-facial complex into the preferred location. In maxillofacial surgery, we routinely “mechanically” move parts of a face into a preferred position by cutting them and then rigidly fixing them with “plates and screws.” This differs from using mechanical forces as a *signal* for cells, which then causes those cells to engage in the differential construction and destruction of the mineralized extracellular matrix of bone. The stimulation of growth by mechanical influence is also used occasionally by surgeons in the technique of distraction osteogenesis. In this technique, the gradual mechanical separation of bone induces the growth of new bone.

The use of mechanical force to influence growth is also fundamental for orthodontics. The general principle is that a constant gentle pushing of a tooth will cause bone to remodel. The tooth is connected to its surrounding bony housing by a “peri-odontal ligament.” This ligament transmits the forces of tooth movement to the bone. The bone cells sense the mechanical influence, resorb the minerals in the area of compression, and lay down new mineral in the area of tension. As the teeth move, they bring their bony housing with them.



This same principle can be applied to growing children to correct deformities of facial bones. In situations where a face lacks sufficient width, palate expanders are used. This creates sufficient space in the dental arch to accommodate all the teeth, but can also improve facial aesthetics.

Gradual bone growth can be achieved in other body parts as well, as we described with distraction osteogenesis above. But unlike in orthodontics, in surgical fields bones are usually cut with “osteotomies” prior to the application of forces. Examples of this include the Surgical Assisted Rapid Palatal Expansion. In this technique the adult bony hard palate is cut in the sagittal plane, and then gradually widened. New bone growth later fills in the space in the palate.

Techniques of influencing bone growth by applying forces *without* cutting bones are generally reserved for growing children. The rationale for this is that adults bony “growth plates” have stopped growing, making the techniques useless. In orthodontics at least, techniques of mechanically loading bone to grow new bone without osteotomies are routinely applied to adults. At least one person (inventor of the “Homeoblock” appliance) claims that the facial bones of full grown adults can be stimulated to grow further *without* the conventional surgical osteotomy. If this is true, there would be a great potential for orthodontists and maxillofacial surgeons to use appliances, as opposed to surgery, to gradually correct common facial deformities already present in adults. Adults who would not consider surgery to correct mild facial deformity might consider appliance therapy (like braces).

This is by no means a product endorsement. Like all modern interventions, we ought to demand high quality evidence of safety and efficacy before using it, and unfortunately the necessary studies have not yet been performed. But I admit that I am inclined to believe that practical changes to adult

facial bones using appliances without an initial osteotomy might be possible, even if they are not of much practical value.

Some practitioners in the field of orthodontics have recognized and embraced the notion that environmental rather than genetic factors are of primary importance when it comes to dentofacial deformities.

The questions whether genetic factors or environmental factors may be the primary agents causing dentofacial maldevelopment has been widely discussed in the past... In certain populations the transition to predominately good to predominately bad occlusion occurred within one or two generations. This evidence throws the weight of suspicion toward environmental, non-genetic etiologic factors... A genetic change of any kind can be ruled out as a factor in this change, as the change is simply too rapid.

Rolf Fränkel

But many practitioners do not realize this, or simply do not care.

Personal experience in communicating these ideas to audiences of dental clinicians occasionally indicates persistence of the attitude... A "simple" explanation is considered improbable, interest in corrective approaches greatly outweighs interest in prevention, and it is considered unsophisticated to ponder environmental versus genetic variables since it is so well known that the two interact. This tends to protect the genetic causation inclination.

How Anthropology Informs the Orthodontic

Diagnosis of Malocclusion's Causes, Corruccini, 1999

However, the general idea that environmental mechanical influences are of practical consequence to facial development was better understood in the past.

It is well known that the whole facial architecture is very intimately connected with and concerned in the masticatory function.

Dentition and palate of the Australian aboriginal, T. D Campbell, 1925

A number of attempts have been put forth to explain which genetic changes have caused the tremendous rise in dentofacial deformity which accompanies the transition from traditional to modern societies. One popular attempt at a genetic explanation suggests that "racial admixture" leads to genes for small jaws being carried in the same genome as genes for big teeth. This theory was rejected over one hundred years ago by James Sim Wallace, who seems to have written one of the earliest texts on irregularities in teeth:

If we assume that the maxilla is not developed on account of a "hereditary tendency" for bone not to be developed by the stimuli which do develop bone, then we may believe this. However, the hypothesis need hardly be discussed, as the idea is preposterous. Then as regards the idea that a small jaw may be inherited from one parent and the large teeth from the other, it is evident that the size of the crowns of the teeth determines the amount of development of bone on the posterior borders of the body of the maxilla, and

provided there is adequate forward translation of the maxilla by the developmental stimuli mentioned, then the size of the maxilla will necessarily correspond in size to that of the teeth.

Further evidence demonstrating the power of environmental factors over skeletal growth is the existence of human skulls with unusual patterns of cranial deformities. These skeletal alterations were achieved by mechanical loading of the growing skull, by binding or wrapping. Obviously genetics has nothing to do with these head shapes. The resulting skulls that were created are very far from the human norm. If nothing else, these skulls represent a proof-of-concept that some environmental factors can have an impact on Viriculture.



While Moss' focus on mechanotransduction is useful for illustrating the principle of extra-genetic factors in development, it is not, practically speaking, the only factor worth extended consideration. It may simply have been chosen because it is easier than the other factors to manipulate experimentally. Moss himself describes other influencing factors.

As previously noted, [extra-genetic] factors include (1) all of the extrinsic, extraorganismal, macroenvironmental factors impinging on vital structures (for example, **food, light, temperature**), including mechanical loadings and electromagnetic fields, and (2) all of the intrinsic, intraorganismal, biophysical, biomechanical, biochemical, and bioelectric microenvironmental events occurring on, in, and between individual cells, extracellular materials, and cells and extracellular substances.

We will return to the focus of researchers' on the influence of mechanical factors in our discussion of facial development. I want to take a moment to emphasize Moss' examples of food, light, and temperature. While these are mentioned only in passing in his work, they, with special attention to food and temperature, will be put forth in this work as major environmental factors of influence.

Although family resemblances are inherited, faulty bone structure is not. It is just as easy to allow your child to be a beautiful miniature of his father or Uncle Henry of grandmother as to be an ugly one. Poor bone structure should not be accepted as inevitable regardless of how similar it is to that of another relative. The chances are the diets father and Uncle Henry and grandmother ate during their own childhood were inadequate in many nutrients.

Let's Have Healthy Children, Davis, 1951

That is not to downplay the importance of mechanical signaling. As we will discuss, the role of mechanical signals, and the hormonal changes triggered by those initial signals, is critical for practical human growth and development.

Ultimately, development of biologic systems requires three factors: raw material, energy, and information:

Nutrition affects raw material, energy, and information

Temperature, sleep, sun exposure, and exercise affect energy and information

Function, ambient noise, population density, genes affect information

Genes provide only *part of one* of these factors – information. Multiple environmental exposures are needed to provide the rest.

Making the Most of our Genetic Fate

“Mother,” he cried, “you bore me doomed to live but for a little season; surely Zeus, who thunders from Olympus, might have made that little glorious. It is not so.”

Iliad, Homer / Butler, circa 800 BC

Many of us believe that genes determine biologic outcomes:

The favorite defense of these inferior classes is an unqualified denial of the existence of fixed inherited qualities, either physical or spiritual, which cannot be obliterated or greatly modified by a change of environment.

The Passing of the Great Race, Grant, 1916

Undoubtedly genes do play a major role. But viriculture is about making the most of our genetic fate, and about optimizing development in spite of our genetics. Viriculture provides practical guidance of how to make the most of our biologic inheritance. I claim that this is possible not out of some feel-good hope I have that everyone regardless of genetic pedigree is capable of being a

“great” person, but rather because I believe that the power of environmental influences of child development are so underutilized in our day.

Here then, we must discuss the age-old Nature vs Nurture debate. Two respectable but somewhat opposed opinions are below. The first is a defense of the power of environment on development, the second a defense of the limits of environment.

If I may say so, parents who say “My child has no musical talent,” or “My child is so weak in literature,” are ignorant. If it is known that talent is not inborn but nurtured, then such things cannot be said. The parent who complains about his child is actually announcing to society that he has bad methods for nurturing.

Ability Development from Age Zero, Shinichi Suzuki, 1969

I’ve argued that grounding values in a blank slate is a mistake. It’s a mistake because it makes our values hostages to fortune, implying that some day, discoveries from the field or lab could make them obsolete. And it’s a mistake because it conceals the downsides of denying human nature, including persecution of the successful, totalitarian social engineering, an exaggeration of the effects of the environment (such as in parenting and the criminal justice system), a mystification of the rationale behind responsibility, democracy, and morality, and the devaluing of human life on Earth.

((Steven Pinker))

I want to emphasize that, of course, both factors are essential for optimal growth and development:

Every character is both genetic and environmental in origin. Let us be quite clear about this. Genotype determines the potentialities of an organism. Environment determines which or how much of those potentialities shall be realized during development.

Geneticism and environmentalism, Thoday, 1965

It is well known that certain traits are heritable. The popular book *The Blank Slate* explores the limits of human malleability. Other researchers have identified the heritability of personality, predisposition to disease, and criminal tendencies. The strong heritability of a particularly controversial trait, IQ, was famously defended in the book *The Bell Curve*. The fact that certain heritable human traits are generally recognized to be superior (consider intelligence, freedom from disease, not being a criminal) formed the basis for eugenic policies of the past (see chapter 5).

Growth and development are also influenced by heredity. Children tend to look like their parents.

Full shines the father in the filial frame,

His port, his features, and his shape the same

Odyssey, Homer /Pope, circa 800 BC

Look how the father’s face lives in his issue

Johnson

Tall parents tend to have tall children. Light-skinned parents tend to have light skinned children. It is undoubtedly true that, through deliberate artificial human selection, we could breed human traits in any direction desired. If you sincerely care that your progeny be strong, fast, tall, smart, or beautiful, surely mating with someone who exemplifies those traits would provide an advantage.

But for nearly all of us this advice is more or less irrelevant. I want to discuss how best to develop a child, given a particular set of genes – Viriculture, not eugenics.

Suzuki asks us to assume that the newborn baby has limitless capabilities and it is in the hands of the parents to provide the environment which will lead to full development of that potential.

Newborns do not have limitless potential, that is a denial of human nature. But it is in the hands of the parents to provide an environment which will lead to full development of their potential.

After the birth of a human being his early years are obscurely spent in the toils or pleasures of childhood. As he grows up the world receives him, when his manhood begins, and he enters into contact with his fellows. He is then studied for the first time, and it is imagined that the germ of the vices and the virtues of his maturer years is then formed. This, if I am not mistaken, is a great error. We must begin higher up; we must watch the infant in its mother's arms; we must see the first images which the external world casts upon the dark mirror of his mind; the first occurrences which he witnesses; we must hear the first words which awaken the sleeping powers of thought, and stand by his earliest efforts, if we would understand the prejudices, the habits, and the passions which will rule his life. The entire man is, so to speak, to be seen in the cradle of the child.

Democracy In America, de Tocqueville, 1831

The same traits which are influenced by genes are also affected by environmental factors. Insufficient food during childhood can stunt adult height even if one's parents are tall. Skin color is influenced by both genetic factors and sun exposure.

That there is a hereditary variation, primarily due to variations in the breadth of the skull, the size of the teeth (general size and sex) in various races and individuals of the same race, cannot be doubted, but hereditary degeneracy in the civilised cannot be admitted until it is proved that the trophic stimuli of mastication and normal healthy development is not sufficient to account for the abnormally small jaws and crowded dental arches generally seen among those in whom these stimuli have been in abeyance.

Variations in the Form of the Jaws, James Sim Wallace, 1927

What are the odds that hunter-gatherers could survive, burdened with the western 50+ % prevalence of malocclusion, given their need to orally process coarse, raw and extremely tough dietary items daily such as roots and wild game? Does it stand to reason that savanna aboriginals would maintain reproductive efficiency if forced to locate game and plants with the Western 60 % prevalence of short-sightedness and other visual impairment? Would not nomadic band members risk extinction if respiratorily encumbered with Western symptoms of frequent allergy and asthma?

How Anthropology Informs the Orthodontic

Diagnosis of Malocclusion's Causes, Corruccini, 1999

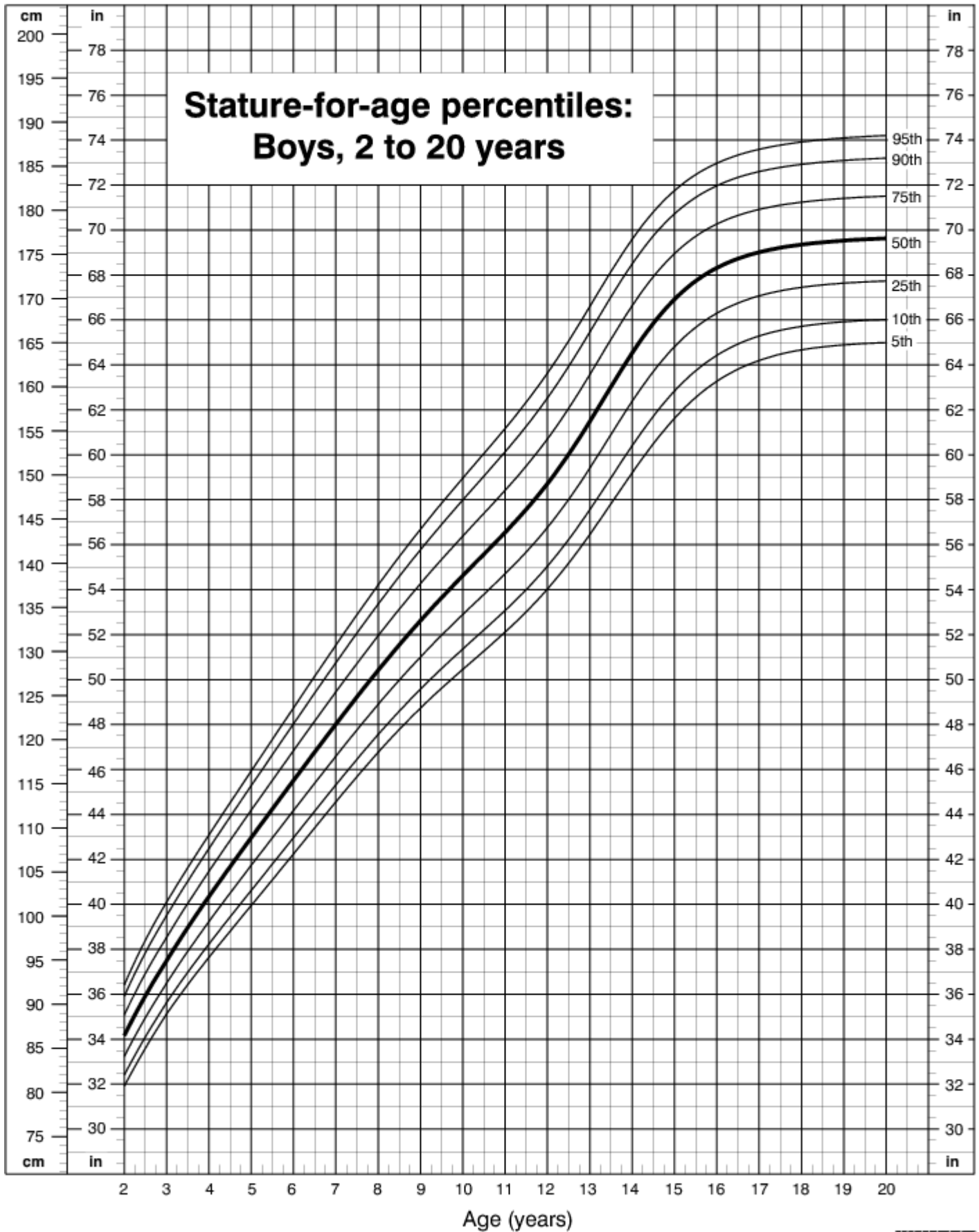
The relative proportion of influence from environmental and genetic factors varies for each trait. For our purposes it is enough to know that many valuable human traits can be influenced by environmental factors. Furthermore, a person's "slate" becomes less blank over time. A 5 year old's "slate" is much less blank than a child who has yet to be conceived. In other words, the potential effects of viriculture are greater the more lead-time we have to control environmental factors. As the classic Jesuit saying goes,

Give me the child until he is seven, and I will show you the man.

Given a child with a particular set of genes, differences in environment could greatly influence his development. Although many may recognize that this is true, modern American parents tend not to maximize the positive effects of viriculture in their children.

Some people do recognize the potential for influence, but usually their attempts at viriculture are limited in their scope. A college professor may try to nurture intellectual development by teaching her child to read at a young age; an athlete may influence her child's physical development through early exercise and training; a musician may begin music lessons for his child before she can speak; a religious leader may try to instill an ethical value system on a young child. Most parents make an effort to help their children's development. However, most do not succeed in a reasonable maximization of viriculture in their children, and this is due mostly to a lack of education on the part of the parents.

CDC Growth Charts: United States



Published May 30, 2000.

SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000)



SAFER • HEALTHIER • PEOPLE™

Nature and Nurture in Human Development – Part 3, Human Height

Posted on [admin](#) Posted in [Book](#)

And these remarks coincide pretty nearly with the deductions of Dr. Villerme, in respect to the height of man in France. The proposition may be easier understood by stating it in this way: A girl is relatively as tall at 16 as a boy is at 18, the sex and full growth of each being taken into account. doctor remarks, that “human height becomes greater, and the growth takes place more rapidly, other circumstances being equal, in proportion as the country is richer, the comfort more general, houses, clothes, and nourishment better, and labour, fatigue, and privations during infancy and youth less; or, in other words, the circumstances accompanying misery put off the period of the complete development of the body, and stunt human stature.

A Treatise on Man and the Development of his Faculties, Quetelet, 1842

To further our understanding of the importance of both genetic and environmental factors in human development, let’s begin with an example of an environmental influence on a trait that is not controversial, adult height. It is common knowledge that tall parent’s tend to have tall children. As Plutarch says,

It is very proper also to bestow a word of praise on the Spartans for the noble spirit they showed in fining their king, Archidamus, because he had permitted himself to take to wife a woman short of stature, the reason they gave being that he proposed to supply them not with kings but with kinglets.

However we also recognize that an individual’s height can be “stunted” by environmental factors.

Another general consideration in the growth of bone would seem to be the effect of nutrition, or a liberal supply of food and healthy hygienic conditions. The average height of the poorer classes is less than that of the rich, and the difference in height has been shown to be greater on the average among children in accordance with whether they were brought up in houses with one, two, three, or four rooms.

Variations in the Form of the Jaws, James Sim Wallace, 1927

It is a matter of common knowledge that body stature and body weight are greatly influenced by environmental conditions prevailing during the period of growth, in which diet and nutrition play a prominent part. Children in rich families tend usually to greater stature than those from impoverished surroundings, since the former are better fed than the latter.

?

It is therefore understood that height is a trait that is influenced only partly by genetics.

You know what you look like to me, with your good bag and your cheap shoes? You look like a rube. A well-scrubbed, hustling rube with a little taste. Good nutrition has given you some length of bone, but you’re not more than one generation from poor white trash, are you Officer Starling?

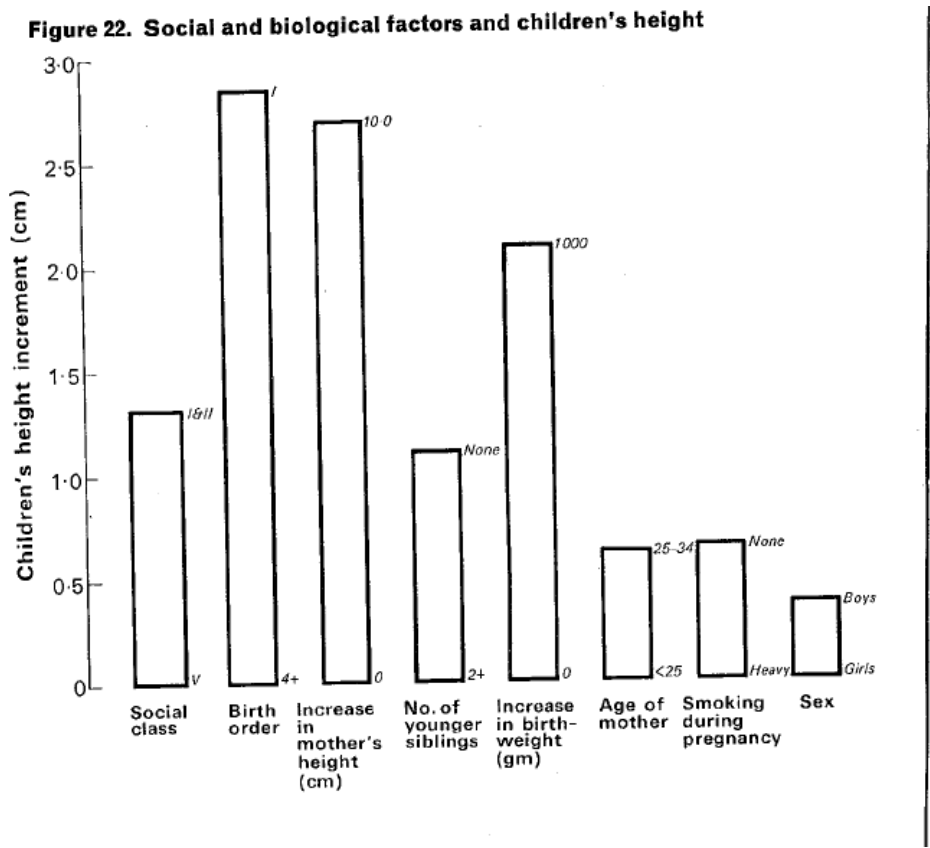
While it is clear to the casual observer that both genetics and environmental influences play a role, studies have been done in order to determine the relative weight of different factors in adult height. This sort of investigation is done by looking at populations, and identifying how much of the difference between individuals height is attributed to each factor.

The short answer to this question is that about 60 to 80 percent of the difference in height between individuals is determined by genetic factors, whereas 20 to 40 percent can be attributed to environmental effects, mainly nutrition. This answer is based on estimates of the “heritability” of human height: the proportion of the total variation in height due to genetic factors.

How much of Human Height is Genetic and how much is due to Nutrition?, Scientific American, Lai

The statistical term for “difference between individuals” is the variance or “variation.” This measure applies only to populations, so it would not be correct to talk about the variance of an individual. But, at least in terms of human height, the proportion of the variance attributed to different factors can give us some idea about how much practical consequence these factors have.

An interesting study attempted to quantify the contribution of various factors on height, finding that the birth order, birth weight, and social class played meaningful roles.



From birth to age seven, Davie 1972

On a population level, differences in environment do lead to practically meaningful differences in mean height. Consider the “secular trend” of average male height, which in Britain has increased about 5 inches in the last 250 years. Today we see comparisons drawn between the North and South Korean soldiers – who are similar genetically. The unfavorable environment in North Korea causes a meaningful decrease in height.

Professor Daniel Schwekendiek from Sungkyunkwan University in Seoul has studied the heights of North Korean refugees measured when they crossed the border into South Korea. He says North Korean men are, on average, between 3 – 8cm (1.2 – 3.1in) shorter than their South Korean counterparts. A difference is also obvious between North and South Korean children.”The height gap is approximately 4cm (1.6in) among pre-school boys and 3cm (1.2in) among pre-school girls, and again the South Koreans would be taller.” Schwekendiek points out that the height difference cannot be attributed to genetics, because the two populations are the same. “Food and what happens in the first two years of life is actually critical for people’s height later,” he says. It seems that this height statistic reveals a tragic fact – that as South Koreans have got richer and taller, North Korean children are being stunted by malnourishment.

Are North Koreans really three inches shorter than South Koreans, Knight, 2012.

The height difference between North and South Korean men (1-3 inches) is a practically meaningful difference. But we would be wrong to consider this 1-3 inches the *maximum* environmental contribution achievable. Even if we concede that the environmental conditions for growth in North Korea are the worst possible (which obviously they are not, as the people are still alive), we cannot say that the average South Korean is *optimizing* his height through environmental manipulation. If we took Korean twins and subjected one to the North Korean environment, and the other to the *best possible environmental conditions for growth*, I predict that the height differences between the twins in adulthood would be greater than three inches.

The “secular trend” of increasing height as nations develop is well understood. But it is important to recognize that the human short stature that has been reversed in the last couple centuries was not the norm in a larger context. Before the advent of farming, human populations had average heights similar to our contemporary norms. The changes in *environment* that accompanied civilization led to the decrease in average height. This theory was popularized by (((Jared Diamond))) in his 1987 article *The Worst Mistake in the History of the Human Race*.

One straight forward example of what paleopathologists have learned from skeletons concerns historical changes in height. Skeletons from Greece and Turkey show that the average height of hunter-gatherers toward the end of the ice ages was a generous 5’ 9” for men, 5’ 5” for women. With the adoption of agriculture, height crashed, and by 3000 B. C. had reached a low of only 5’ 3” for men, 5’ for women. By classical times heights were very slowly on the rise again, but modern Greeks and Turks have still not regained the average height of their distant ancestors.

While some of these changes may be due to racial changes over time, the general principle holds true. Others have made similar observations:

To illustrate the malign impact of agriculture, Dr Stock and one of his students, Anne Starling, examined a unique set of skeletons. All 9,000 are from the Nile Valley in Egypt, but they span an extraordinary historical range, from Neolithic hunter-gatherers

through to 1500 BC. What Dr Stock and Ms Starling discovered was that 40 per cent of hunter-gatherers who lived 13,000 years ago had linear enamel hypoplasia. Fast-forward 1,000 years, to when the Egyptians had become farmers, and the figure rose dramatically, to 70 per cent. Originally, the hunter-gatherers were about 5ft 8in, with robust skeletons. Yet once farming began, the average height decreased by four inches. Dr Stock showed me the bones of a man who lived 7,000 years ago, which are so thin and delicate they look as if they might snap... These results suggest that our ancestors struggled with poor health for 8,000 years before agriculture started to work in the favour of [common people], as opposed to benefiting the elites who controlled the food supply.

Is Farming the Root of All Evil?, The Telegraph

The above author does not seem to realize that contemporary agriculture is *still* not working in the favor of us common people.

Per Professor Richard Steckel the Georgians were an average 2.5" shorter than their Medieval counterparts. He states that Medieval men were, on average, about 5'8". This declines to about 5' 5 ¾" in the 18th century.

But Carolyn Freeman Travers, the Research Manager for Plimoth Plantation, tells us something a little bit different . . . She gives an average height for Medieval England (again based on excavations) of 5' 6 ¾" for men and 5' 1 ½" for women. She goes on to give the average heights of 17th and 18th century Londoners as 5'6" for men and 5' ½" for women. A MUCH smaller change than the one reported by Steckel.

Another study of note is the Height and Social Status in 18th Century Germany. It found a 6" average difference between the poor and the middle class and then another 3" on top of that for the upper class. Which makes sense as studies have shown that nutrition and stress play a large roll in height (A modern studies of twins, quoted by Travers, showed that a person's height is controlled 90% by heredity and 10% by environmental causes. 10% might sound small, but this means that 'a person who would have been 5' 7" under optimal conditions, in an extremely adverse situation might stop growing at 5' 1."').

So, when I make my hero a strapping man, well over six-foot in his stocking feet, am I living in a fairy tale? Not if he's part of the top ten-thousand, or even one of the wealthy middle class. Let's take our "average height" of 5' 6" and add the 3" aristocratic bump. Our average male aristo is now 5'9". Hmmm, that number seems awfully familiar . . . and it should, as it's the average height of a modern English male!

<http://historyhoydens.blogspot.com>, 2006

The last section of the previous quote brings to our attention the fact that the decrease in average stature that accompanied civilization were not shared by all members of society. Physical anthropological evidence consistently demonstrates the superior height (and other indicators of health) of the upper classes.

We know from their skeletons that men were on average 1.67m tall and the women were 12cm shorter, but with quite large variations from one person to another. Surprisingly, given the difference in nutrition between the bronze age and the present, modern Greeks are only half a centimetre taller than their Mycenaean predecessors. The Dendra armour

was tailor-made for a rather narrow-shouldered man 1.68m tall. The skeletons of aristocrats in Grave Circle B shows that the women were 1.58-1.61m tall and the men were 1.61-1.76m tall, around 6cm taller than commoners.

Rodney Castleden

Throughout these years, the underclass of unskilled labor in Britain suffered unbelievable hardship and inhuman living conditions. "Decent people" simply avoided huge sections of London for a hundred years. Historical studies actually show that prior to World War I, the English Aristocracy was taller and had a much longer lifespan than the other classes.

heartoscotland.com

In death the medieval aristocracy were always depicted as a physical elite and many were in life. A modern autopsy on the skeleton of Sir Bartholomew de Burghersh, who died in 1369 in his sixties after a lifetime of campaigning, revealed a sturdy man of nearly six foot with strong muscular arms. His physique was the result of regular exercise and a diet rich in protein, although his teeth were eroded by the grainy bread he had eaten. By contrast, analysis of the bones of the mass of the population reflect stunted growth and infirmities caused by inadequate diet and back-breaking labour.

Aristocrats: Power, Grace, and Decadence, James, 2009

A child's growth rate reflects, better than any other single index, his state of health and nutrition; and often indeed his psychological situation also.

Worldwide Variation in Human Growth By Phyllis B. Eveleth, James Mourilyan Tanner

On the basis of these observations, as well as the studies done to determine the magnitude of the influence of environment on human height, I believe that we can have a meaningful impact on the height of our children. My personal guesstimate is that with pre-natal planning, the average mother could influence the adult height of her son ± 3 to 4 inches, with a smaller impact for daughters (height in women is a little different, as the healthiest women are not the tallest, as will be explained later). If this is true, this is not a matter for parents to take lightly. The value of height for men is well established. To validate this point, one need only to ask a man who is 5'6" to explain how being 5'10" would make his dating life easier.

No matter the details, it should be clear that adult height is a trait that is influenced by non-genetic factors. Our ability to control these factors during development affects the ultimate outcome of height in our children. That parents can control environmental factors relevant in the development of valuable human traits in our children is the fundamental principle of viriculture.



Degeneracy

Posted on [admin](#) Posted in [Book](#)

Iniquitous Time! What has it not made worse?
Our grandfathers sired feeble children; theirs
Were weaker still – ourselves; and now our curse
Must be to breed even more degenerate heirs.

Horace Odes III. 6. 45-48

Degeneracy is the opposite of good development, and is therefore opposed to viriculture. Degeneracy can be physical, such as deformed teeth, faces, or bodies, as shown in the image above; or it can be cultural, such as our brutalist architecture, reality TV, postmodern art, American public education, and contemporary social etiquette.



In all cases, degeneracy is the antithesis of true excellence and beauty. As we will see, degeneracy is a constellation of related entities, and does not need to be strictly defined to be understood.

Most people are largely unaware of their degenerate traits. Even when one understands a negative human attribute (crooked teeth for example), psychological biases prevent affected individuals from

recognizing the pathologic nature of the degenerate trait – especially if a large proportion of the population shares the trait. This leads to perpetuations of undesirable traits that are extra-genetic and could be eliminated in one generation cheaply and easily (with parents notoriously resorting to “I just want my kids to be happy” in defense of their own bad habits). In order to prevent degeneracy in our children, we must first come to terms with it in our own lives – and this often entails some critical introspection. By understanding the ways in which we are degenerate, we can work toward improving these problems.

There is a prevalent myth of modern improvement, which implies that modern people are healthier and wiser than ever before. This is partly due to good PR (that is propaganda) on the part of the medical community, partly due to the loss of classically grounded education. In reality, city dwelling moderns are shameful physical specimens, and neither can they claim mental superiority relative to past peoples. Human physical excellence is highest in primitive societies which consume abundant traditional food, yet still move their bodies in a animal (or truly human) fashion. On the other hand, human cultural and intellectual excellence peaked in Greece and Rome, and later modern Europe. Because cultural and physical degeneration do not always go hand-in-hand, many people who live/lived in sophisticated civilizations still suffered from physical degeneration.

The greatest density of both human physical and cultural excellence of which we have a record was present in Ancient Greece, especially before 400 BC. If we consider the Hellenes of Homer, Hesiod, and Aeschylus as *archetypical man*, then in contrast we today are shrunken, soulless halfmen.

These were the mightiest men ever born upon this earth: mightiest were they

Iliad, Homer / Butler, circa 800 BC

A key realization is that it was not simply race differences that made the Greeks so excellent, but their way of life – from which we can draw much relevant to modern viriculture. We are separated from the physical and cultural excellence of the Greeks by a web of factors that contribute to our contemporary human degeneration.

1. Debt Money
2. Government Education
3. Mass Media
4. Loss of Traditional Child Care Practices
5. Loss of Traditional Social Networks
6. Loss of Traditional Architecture and City and Town Structure
7. Loss of Traditional Religion
8. Dysgenics

Stigmata of Degeneracy

These degeneracies appear at varying periods, since struggles for existence on the part of the different organs and systems of the body are most ardent during periods of body

evolution and involution. During foetal life, during the first dentition, during the second dentition (often as late as the thirteenth year), during puberty and adolescence (fourteen to twenty-five), during the climacteric (forty to sixty), when uterine involution occurs in woman and prostatic involution in man, and finally during senility (sixty and upwards), during all these periods degeneracy may be shown by mental or physical defect, a congenital tendency to which has remained latent until the period of stress.

Degeneracy: Its Causes, Signs, and Results, Talbot, 1898

There is more to “growth” than simply an increase in height and weight. The notion of “degree of development” is central to viticulture, and yet overlooked completely by modern medicine. Two seeds in different soils and conditions have vastly different outcomes despite being clones of one another. This principle is true just as surely for people as trees, and indeed Plutarch uses this analogy as a fundamental principle of childhood education.

Just as in farming, first of all the soil must be good, secondly, the husbandman skillful, and thirdly, the seed sound, so, after the same manner, nature is like to the soil, the teacher to the farmer, and the verbal counsels and precepts like to the seed. I should strenuously insist that all three qualities met together and formed a perfect union in the souls of those men who are celebrated among all mankind, — Pythagoras, Socrates, Plato, and all who have attained an ever-living fame.

Education of Children, Plutarch, circa AD 100

The teeth and the face, which are the most readily apparent aspects of corporeal development (in our clothes-wearing modern world) are very often degenerate. But this ostensible sign of corporeal degeneracy is merely the tip of the iceberg. The body itself varies tremendously on account of environmental exposures over the course of life. Our clothing obscures this primal honest mating signal to some degree, however it is hardly sufficient to staunch the flow of important mating information contained in the light reflecting off of a body – even in modern courtship conducted over iPhone apps.

In the modern world there is a tremendous range of developmental excellence. Let’s consider women. There is a continuum onto which women fall in terms of development, which is quite aside from height, weight, and chronological age *per se*. Any single male not-outright-monstrous, non-nerd, living near a large American city might in an average year encounter enough different shapes of female bodies to validate this claim. Consider the qualitative extremes of this continuum of poorly and well developed twenty-something women:

Poorly Developed Woman	Well Developed Woman
Juvenile	Adult
Neotenus	Fully Grown
Thin, Wirey, Tight	Full, Voluptuous, Plump
Firm Skin (Minimal Subcutaneous Fat)	Soft, pillow-like skin (Subcutaneous Fat)
Abs Defined	Flat Stomach, Abs not Defined ²⁵
Malocclusion / Braces	Straight Teeth / No Braces
Class II Facial Profile	Class I Facial Profile
Slight facial skeleton	Robust facial skeleton
Narrow Hips	Wide Hips
Small Bust	Full Bust
Short or very tall	Average to tall

The degree of attractiveness of a woman cannot strictly be correlated with a location on the development continuum. This is partly because neoteny in women is a valued trait. However, when it comes to excellent viriculture, the “well-developed” mother would be more likely, *ceteris paribus*, produce an excellent child than the “poorly developed.” That said, there may yet be hope for the poorly developed mother, for, although she does not carry in her frame the raw material needed to both build an admirable child and maintain her own body in good health and form, she may overcome this coporeal shortcoming through vigilance in maintaining an excellent “stress-free” development (gestation and childhood) for her child. While the quantitative weights of the factors of epigenetic vs environmental influences on viriculture will never be elucidated, it is enough for the responsible mother to follow the principles of viriculture carefully to ensure the best outcomes, no matter her starting point.

Men display a similar continuum of body development, although the morphology is different (wider chests, more muscularity, more robust facial structure, less subcutaneous fat). Indeed male shape seems to be just as consequential as female body shape, at least if the female judge is ovulating (that is, in search of a short-term sexual partner). For long term mates, women weigh the non-physical relevant honest signals (resource control, social dominance, etc) more heavily than body shape alone.

Within the realm of physical degeneracy lies poor physical development of the brain and the resultant deviant mental and behavioral traits.

The stigmata of degeneracy, therefore, most likely to attract attention are in the order given, those of the face, jaws, and teeth; ear, eye, cranium; body, bodily functions; brain and spinal cord. Under these last are to be included their mental and nervous functions.

Degeneracy: Its Causes, Signs, and Results, Eugene (((Solomon))) Talbot, 1898

Once we start to understand physical degeneracy, we soon see it's stigmata surround us. In the same way, another sort of degeneracy, looming even larger, permeates modernity. It's physical signs can be seen in our buildings and our towns, in our sculpture and paintings; heard in our writings, music, and oratory; and felt in our education, etiquette, and irreligion. This is our modern cultural degeneracy, and understanding it's nature is the first step to recovering for our children many aspects of our lost humanity.

Physical degeneracy, as we shall see, was less common prior to agriculture, and is sometimes associated with increasing civilization. Cultural degeneracy, however, follows a different pattern altogether. Isolated peoples who live traditionally and maintain beautifully developed bodies and faces very often have an intact culture. Such a culture, though it's art, education, and religion provide a source of direction and meaning to life that represents a standard for healthy and humane existence. Intact cultures can, however, also be found among civilized societies in which many members bear the marks of physical degeneration.

An honest assessment of human culture, as opposed to the post-WWII academic "relativist" approach, allows us to see clearly that some human groups maintain a culture of superior excellence and sophistication. No sincere and thoughtful observer will rank a pygmy hut of woven leaves, or a Iroquois long house – no matter how beautiful – on par with the Taj Mahal, or Pantheon. While classicists may argue that the apogee of human culture was reached in the Mediterranean of antiquity, that of Western Europe and its colonial holdings circa 1500 to 1900 certainly was comparable. During its tenure, the culture of the modern West represented the brilliant heights to which man, cousin of the monkey, could achieve. This cultural luminosity has since dimmed, and we today inherit mere the fragments of a once beautiful culture that has fallen into its latest dark age.

Since the fall of the great civilizations of Egypt or Greece or Rome we have lost the vast majority of their cultural fragments. However in the case of the most recent fall of the West (circa 1900) essentially all of the fragments of culture have been retained. Those moderns who are fortunate enough to have the capacity ought to consider it a moral duty to kindle the dying flame of our ancestor's cultural legacy – lest it should vanish entirely.

But there is a more practical viriculture reason why we ought to concern ourselves with developing great culture in our children – as by it their lives are made easier and more beautiful. The "quasi-artistic and quasi-intellectual" refinements of intact Western culture still make dazzling ornaments, by which the bearer consolidates social power. The deeper and broader the excellence of achievement, the more assured one's status. Furthermore, through the proper refinement of culture, we can nurture in our children those universally preferred human character traits.

Below is a chart illustrating some aspects of cultural degeneracy. It is not precise, but rather vaguely accurate to give us a feel for this concept.

	Generate	Degenerate
Literature	Homer Hesiod Tyrtaeus Pindar Apollodorus Aeschylus Sophocles Thucydides Plutarch Ovid Vergil Ceasar Horace Livy Augustine Aquinas Luther Beowulf Song of Roland Nibelungelied Njal's Saga Ariosto Tasso Dante Spencer Cervantes Milton	Euripides Aristophanes Catullus Martial Rabelais Sterne Byron
Music	Ancient Medieval Renaissance Baroque Classical	Romantic (some) Jazz Rock Hip Hop Pop
Visual Art	Ancient Medieval Renaissance Baroque Classical	Modern Post-modern
Religion	Traditional	Modern/Non-Practicing/Atheist New-Age
Food	Artisan Seasonal Locally owned butcher, greengrocer Relationship with Farmers Sustainable soil management Single ingredients Traditional preservation Non-evil animal products Heritage Breeds / Varietals Wild caught/hunted	Commodity Agribusiness Corporate supermarket Irresponsible soil management Multiple unknown ingredients Chemical Preservatives Evil Animal Products Modern Breeds / Varietals
Entertainment	Unamplified acoustic music/singing Reading aloud / storytelling Dancing Exercise Theatre (some) Opera (some)	post-1960 TV and Movies Radio News Video games Smartphones

Developmental Origins of Health and Disease

It is the mother and the nature of the influence that she contributes to her baby's mental development, as well as the chemical substances that percolate through her placenta, that mould to a large extent, the future of the child.

Childbirth without Fear, Dick-Read, 1942

Here I want to introduce an area of academic research which is rapidly growing and of the utmost interest to viriculture in known as “Developmental Origins of Health and Disease,” abbreviated DOHaD.

The basic premise of the DOHaD approach is that early phenotypes such as low birth weight are correlated with prenatal conditions that may elicit biological programming, which operates to shape the structure and function of organs for optimal performance in the fetal environment.

Developmental origins of child mental health disorders, James D. Swanson and Pathik M. Wadhwa, 2008

DOHaD has tremendous potential to make Viriculture (and related topics) a rigorous academic discipline. DOHaD goes a long way in correcting some of the shortcomings of classical medical research.

It is very myopic medical science which works backwards from the morgue rather than forward from the cradle. Yet this is exactly what the customary procedure of medicine has been.

EA Hooton

For example, much work has already been done investigating the impact of poor fetal development, and even prenatal maternal variables on common chronic diseases, such as heart disease or diabetes.

The fetal origins of adult disease model was originally proposed by Barker to explain the observed associations between undernutrition of the fetus, low birth weight (defined as birth weight less than 2,500 grams) and an increased risk of cardiovascular disease, diabetes and metabolic syndrome in later life. Low birth weight was initially considered to be the primary indicator of altered fetal development within this model, although other measures of fetal growth later emerged as equally relevant. With the addition of other epidemiological findings such as the role of preconception maternal body composition and under nutrition, as well as the role of processes that do not impact on fetal weight or growth, the model has been expanded to include events beginning prior to conception as well as in early postnatal life. To reflect the developmental aspects of this model, it is now referred to as the DOHaD.

Early life programming as a target for prevention of child and adolescent mental disorders,

Andrew James Lewis, Megan Galbally, Tara Gannon, and Christos Symeonides, 2014

Infant developmental outcomes such as birth weight, head circumference, or gestational age reliably correlate with adult outcomes such as chronic disease or cognitive impairment. While these adult diseases are worth preventing, viriculture emphasizes the importance of child body and brain growth as an end in themselves. Ironically, many of these researchers don't seem to realize the profound aesthetic facial and body sequelae of this same poor early childhood development. As we shall see, beauty and health in adulthood are largely a result of good growth early in life.

Unsurprisingly, the quality of fetal growth is itself a result of maternal behaviors during pregnancy – especially diet quality and quantity, sleep, temperature, stress, etc.

If nutritional status is inadequate, a child or young person will not grow, either not at all or less than he or she would have under more favorable circumstances. This inadequacy results normally either from lack of food or warmth or the effects of disease.

The Changing Body, Roderick Floud, 2011

Similarly, once a baby is born the mother's child care behavior affects the same aspects of growth and development. Sadly in the modern world mothers are not educated in those behaviors which actually lead to excellent growth and development for their children, and they thereby accidentally make them sicker and uglier. Aggressive marketing for low-calorie and anti-obesity diets aimed at women of child bearing age further exacerbates the problem, leading to future generations of weaklings. DOHaD provides an academic discipline for doctors and researchers to discuss these issues, and eventually to base recommendations to mothers to improve the development of their children.

However, despite the promise of DOHaD for viriculture, bizarre socio-political issues hamper the discussion. It seems that "telling" women, especially pregnant women, the truth about their behavior's influence on their child is some kind of imposition on their rights. The following opinion piece, published in *Nature*, warns scientists not to be too forceful in blaming women for their children's developmental outcomes.

DOHaD would ideally guide policies that support parents and children, but exaggerations and over-simplifications are making scapegoats of mothers, and could even increase surveillance and regulation of pregnant women... There is a long history of society blaming mothers for the ill health of their children. Previous generations found other ways to blame women. As late as the 1970s, 'refrigerator mothers' (a disparaging term for a parent lacking emotional warmth) were faulted for their children's autism. Until the nineteenth century, medical texts attributed birth deformities, mental defects and criminal tendencies to the mother's diet and nerves, and to the company she kept during pregnancy...

Society: Don't blame the mothers, Sarah S. Richardson, 2014

Here the authors assume that the nineteenth century medical texts were wholly wrong, when their conclusions were actually accurate if imprecise. The article continues:

Although it does not yet go to the same extremes, public reaction to DOHaD research today resembles that of the past in disturbing ways. A mother's individual influence over a vulnerable fetus is emphasized; the role of societal factors is not. And studies now extend beyond substance use, to include all aspects of daily life...

It must not be used to lecture individual women, as in a 2014 news report from the US media organization National Public Radio on an epigenetics study in mice: "Pregnancy should be a time to double-down on healthful eating if you want to avoid setting up your unborn child for a lifetime of wrestling with obesity." How are women who lack time or access to healthy foods to act on such advice?...

Although remembering past excesses of ‘mother-blame’ might dampen excitement about epigenetic research in DOHaD, it will help the field to improve health without constraining women’s freedom.

Certainly no individual mother is *entirely* responsible for a child’s poor developmental outcomes – the loss of the cultural embodied wisdom of traditional practice has led us moderns astray. And doctors should be reserved with their recommendations for interventions – as we will see, doctors do not have the best track record in making recommendations about healthy lifestyle practices. However, this article sets a tone that suggests that “women’s freedom” to do anything they want is somehow a more laudable goal than excellent developmental outcomes for our children. I wonder if the authors realize that half of infants grow up to be women.

Traditional cultures had interesting heuristics for ensuring excellent viriculture, but this was done through “surveillance and regulation of pregnant women.” Families, governments, and religions helped women make choices which would improve viriculture outcomes for their children. Today we provide young women essentially no good guidance, and as a result we have an epidemic of adults with poor development. While modern women will ultimately make whatever choices they want, I see no reason why medicos should not encourage mothers to have well developed children.

Stress: A common factor in poor development

Biologic organisms are complex systems which respond in complicated ways to environmental stimuli. When it comes to stresses on an organism, the temporal nature of the exposure is of critical importance to the consequence. Growth hormone, for example, causes body growth when given intermittently, but the same hormone inhibits growth if infused continuously. Stress on the body is commonly communicated between cells through hormones, and as we have seen, hormones affect growth and development. It is important to note, therefore, that hormones and day-to-day life experience are not independent variables. Our daily behavior affects our hormones, which in turn affect gestation and viriculture.

Broadly speaking, chronic low grade stresses are destructive for the body, while intermittent stress, even of high intensity, are benign or even constructive. This general principle is well understood in exercise, and is the theory behind the popular “high intensity interval training” used by athletes to improve performance. But the same principle applies more broadly to human development as well. Unfortunately, the stressors of modernity are generally the chronic low grade variety, and these, especially in aggregate, have negative consequences on viriculture. Many of these influences come to effect a common stress hormonal system in the body associated with the term “hypothalamic–pituitary–adrenal axis.”

The classic stress related hormone is cortisol. In the natural human environment, cortisol is released into blood during times of danger or stress. When given chronically by doctors, drugs that mimic the effect of cortisol cause a number of disastrous side effects known as Cushing Syndrome – the number one cause of which is iatrogenic from doctors prescribing glucocorticoids. These glucocorticoids (different than body building steroids, but sometimes called steroids due to their

chemical structure, remember from TV ads “non-steroidals”) have the function, among other things, of increasing circulating glucose (hence “gluco-” corticoid). However, chronically elevated levels of blood glucose lead to insulin resistance and eventually diabetes, with all the harmful sequelae. The relationship between stress hormones and diabetes is not commonly understood by the average doctor, however it seems reasonable to expect similar outcomes from endogenous as we see in exogenous glucocorticoids. While intermittent pulses of glucocorticoids was adaptive for humans, a chronic infusion, whether prescribed or endogenous from chronic stress, is destructive.

Furthermore, glucocorticoids also regulate the immune system, initially by decreasing inflammation. However, the *chronic* effects of exposure to this signal are patently unattractive. Fat redistributes into unattractive parts of the sides of the face, shoulders, and gut, termed by medicos “Cushingoid moon facies” and a “buffalo hump.” The patients also get purple stretch marks on their belly, and, unsurprisingly, diabetes mellitus. Notably, osteoporosis – essentially the opposite of sound bone mineralization, and muscle wasting, occurs in these patients as well.

All forms of environmental stress are transduced into electrical (neural) or chemical (hormonal) signals that the body uses as information for function, including growth and development. Because of the common pathway of information flow to the body, we can expect that the common hormones that make up part of that pathway are consequential in growth and development as well. Furthermore, we have seen how their misuse leads to such unattractive deformities even in a fully developed adult – imagine the magnitude of consequences such hormone signals could have on a growing child.

The next twist in the stress story may be of even greater relevance for viriculture, as it seems that the sex hormones are negatively impacted by stress as well. As we will see, healthy sexual dimorphism is critical for human beauty – both physical and otherwise. Men prefer feminine women, and women prefer masculine men. Dietary cholesterol, the chemical precursor to both sex- and glucocorticoid-steroids, almost certainly *benefits* growing children by providing an adequate hormone dose. We can expect then, that stress, which is known to markedly affect sex hormone levels, has important effects on viriculture.

Sadly, our modern world is plagued with exposure to chronic stressors. Worse yet, in the last 50 years women, the carriers of our fetuses, and traditional nurturers of our young have abandoned the comforts of a nest for a stressful work-a-day rat-race. A medical crisis of young women with dangerously high levels of circulating cortisol and testosterone has emerged. It seems that women acting “like a man” really does shape our hormone profile. While this syndrome has devastating influences on individual women, we can only guess at the subclinical consequences for the developing fetuses being carried by mothers in high-stress occupations. Among women doctors, a generally “well educated” and well off group, women routinely work in stressful fields such as Emergency Medicine or Anesthesia until weeks before their due date. It is then vacation for 10 weeks, unless they get lucky and have a C-section, in which case it is 12 weeks. Besides from this schedule making impossible for the benefits of mother-infant contact, breastfeeding, etc, this timeline has the baby developing during the very time the mother is engaged in hard, stressful work. Their babies are rarely the healthy full-grown, nine-pound variety.

Low quality studies have found that home births *may* increase infant mortality relative to hospital births, and this dubious claim is clung to by medicos who fanatically oppose home birth as unsafe.

But so too has women working during pregnancy been found to increase infant mortality, yet no one dares oppose that – lest he be labeled “sexist.”

Many high quality studies now confirm that elevated stress hormones of a mother during pregnancy predict mental illness in offspring. We have every reason to expect that the physical consequences for Viriculture are equally



Are You a Degenerate?

Posted on [admin](#) Posted in [Book](#)

A short quiz will help us understand what is meant by “degenerate.”

Were you born full-term? (Yes = +5 points)

Were you born via c-section? (Yes = -5 points)

Did your mother breastfeed you? (Yes = +4 points)

Did your mother sleep in the same bed as you as an infant? (Yes = +3 points)

Was your house cold as a child? (Yes = -2 points)

Are you fat? (Yes = -4 points)

Do you have a classically beautiful face? (Yes = +5 points)

Do you have allergies? (Yes = -2 points)

Do you need glasses? (Yes = -2 points)

Are your teeth crooked or did you ever use orthodontics? (Yes = -4 points)

Are you missing any teeth? (Yes = -2 points)

Do you have any dental fillings? (Yes = -1 point)

Do/did you have impacted wisdom teeth? (Yes = -1 point)

Do you take any medications? (Yes = -2 points)

Have you ever been diagnosed with a mental illness? (Yes = -3 points)

Do you eat bread, pasta, and/or rice? (Yes = -2 points)

Do you eat sweets? (Yes = -3 points)

Did you attend public school? (Yes = -2 points)

Did you watch cable TV growing up? (Yes = -2 points)

Do you read/watch the news? (Yes = -2 points)

Do you work for someone else? (Yes = -3 points)

Do you use an alarm clock? (Yes = -1 point)

What happens at the end of the Iliad? (If you actually know the answer = +2 points)

Who is Telemachus? (If you actually know the answer = +1 point)

Where is the Peloponnese? (If you actually know the answer = +1 point)

Where did Aeneas settle? (If you actually know the answer = +1 point)

Who did Roland serve? (If you actually know the answer = +1 point)

What is a thrall? (If you actually know the answer = +1 point)

Who killed Siegfried? (If you actually know the answer = +1 point)

Who is Dante's guide through Paradise? (If you actually know the answer = +1 point)

Who is Armida? (If you actually know the answer = +1 point)

Who is Pantagruel's father? (If you actually know the answer = +1 point)

Who is Britomartis? (If you actually know the answer = +1 point)

What is Don Quixote's self proclaimed profession? (If you actually know the answer = +1 point)

What is Paradise Lost about? (If you actually know the answer = +1 point)

Which war occurs in *War and Peace*? (If you actually know the answer = +1 point)

What is the earliest commonly performed opera with an intact score? (If you actually know the answer = +1 point)

What does *Così fan tutte* mean? (If you actually know the answer = +1 point)

Who is Fidelio? (If you actually know the answer = +1 point)

Who is the barber of Seville? (If you actually know the answer = +1 point)

Who builds Wotan's stronghold? (If you actually know the answer = +1 point)

Do you know a musical theme from Swan Lake? (If you actually know the answer = +1 point)

Score

+14 points to +36 points
Antiquity

-5 points to +13 points
Modern Degenerate

-43 points to -6 points

Result

Human at the level of Classical

Garden Variety Mild

Severe Degenerate



What is beautiful and why? Part 1

Posted on [admin](#) Posted in [Book](#)

O! how can Beauty master the most strong

The Faerie Queene, Spencer, 1590

What is beautiful?

Elegant development, arrived at through iteration and feedback, is fundamental for the creation of beauty in complex systems. Although beauty is a characteristic of an object or person, an appraiser is required to experience the associated pleasurable emotional perception. Our perception of what is beautiful is in some cases learned or culturally determined. However, in many cases our perception is innate, something shared among nearly all people. While no exact consensus may ever be reached, humans have general preferences in what they consider beautiful. Our cross cultural assessment of beauty is not arbitrary.

It would help to define our subject, therefore, if we were to begin from a list of comparable platitudes about beauty, against which our theories might be tested. Here are six of them:

- i) Beauty pleases us
- ii) One thing can be more beautiful than another
- iii) Beauty is always a reason for attending to the thing that possesses it.
- iv) Beauty is the subject-matter of a judgement: the judgment of taste
- v) The judgement of taste is about the beautiful object, not about the subject's state of mind. In describing an object as beautiful, I am describing it, not me.
- vi) Nevertheless, there are no second-hand judgements of beauty. There is no way you can argue me into a judgement that I have not made for myself, nor can I become an expert in beauty, simply by studying what others have said about beautiful object, and without experiences and judging for myself.

Beauty, Roger Scuton, 2011

Understanding beauty falls in the branch of philosophy known as aesthetics, a branch which has been treated extensively by some of the greatest minds of all time. The theories of beauty are interesting and entertaining, but we aren't going to concern ourselves with them here. Why then should we care about beauty? Because beauty is intimately associated with Viriculture. Before we can understand how to develop children who are beautiful in the eyes of most human observers, we must understand what things are beautiful and why.

Beauty in Nature

Shall I compare thee to a summer's day?

Sonnet 18, Shakespeare, 1609

It is obvious that humans have an innate appreciation for beauty in our natural environment. The number of natural phenomena and formations that we go on long trips just to observe is immense.

We find beauty in the sky – watching sunrise, sunset, looking at clouds, watching the stars, the Milky Way, and the phases of the moon. We stay up late to watch meteor showers, and drive hundreds of miles to see the aurorae. We delight in the changing of the seasons – driving to the country to see the Autumn foliage, admiring frozen formations of windswept snow and ice, and the first green buds of Spring. We take vacations by mountains or rivers or canyons, and seek out waterfalls, geysers, and hot springs, simply, to appreciate their beauty. We hike for hours to arrive at a grand vista, and the beautiful panorama makes the trip worthwhile. All of our major cities fund botanical gardens, allowing the public to satisfy its need to see fruit trees, flowers, and gardens. Our public parks are often left unmanicured, as we are often unable to improve on the beauty of an undisturbed path through the woods. We create special gardens full of animals, so that everyone has a chance to appreciate the beauty of the many forms of life.

Beauty in virtuosos displays of skill

Throughout the [Moonlight Sonata] the themes are of extraordinary beauty and expressiveness, even for a Beethoven...

How to Appreciate Music, Gustav Kobbe, 1906

While the beauty we see in nature is obvious, the beauty we see in virtuosos displays of skill is more complicated. Into this category fits much of art – the most significant source of artificial beauty. Our emotional experience reading great works of literature, or listening to poems; our appreciation of a perfectly rehearsed symphony or opera, or of improvised jazz; our delight at the presentation of a seven course meal, or a traditional omakase – these are all examples in which we find that beauty is in the skill of the creator. We talk of a “beautiful catch,” or a “beautiful play” in sports; a beautiful dance, or gymnastics routine. Movies and theater appeals to the same emotion. Architecture of old churches and cities is beautiful, and not just to the religious. And of course, our museums are filled with paintings, sculpture, jewelry, furniture, armor, and weapons, which are the collective treasures of human achievement, not just because of their historical significance, but because of their beauty. In 1939 the *Winged Victory of Samothrace* was moved from the Louvre to a shelter outside of Paris, because it would be a loss to humanity for such a beautiful work of art to be destroyed. In many different domains, a virtuoso creator is able to produce works of art that appeal deeply to humans across cultures.

Human Physical Beauty

I cannot say often enough how much I consider beauty a powerful and advantageous quality. Socrates called it “a short tyranny,” and Plato, “the privilege of nature.” We have no quality that surpasses it in credit. It holds the first place in human relations; it

presents itself before the rest , seduces and prepossesses our judgement with great authority and a wondrous impression. Phryne would have lost her case even in the hand of an excellent attorney, if, opening her robe, she had not corrupted her judges by her dazzling beauty.

Essays, Montaigne, 1580

The beauty we see in other humans is an important special case of the beauty we see in nature.

Nothing is sure, that growes on earthly ground:

And who most trustes in arme of fleshly might,

And boasts, in beauties chaine not to be bound,

Doth soonest fall in disauentrous fight,

And yeeldes his caytiue neck to victours most despight.

The Faerie Queene, Spencer, 1590

It is common knowledge that men and women are held to different standards of physical beauty. A thick beard, broad shoulders, and muscular arms might be considered beautiful in a man, but would be considered unaesthetic in a woman. That said, there are physical traits that are considered beautiful in both men and women. These are symmetry, “averagedness,” and appropriate sexual dimorphism. The ultimate reason why certain traits are considered beautiful is explained elsewhere. Here we will only be concerned with cataloging those physical traits commonly considered beautiful. Although some cross-cultural differences do exist, there are universal trends in aesthetics.

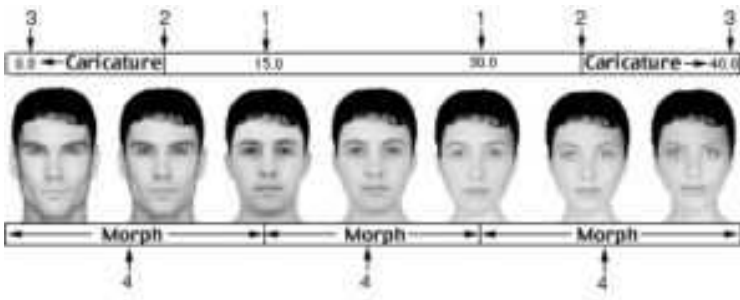
Physical traits considered beautiful in both men and women.

Averagedness – The concept of averagedness is important in explaining human facial beauty. Averagedness is not to what degree a face appears “average.” Instead, it is how much a face looks like “the average” of many different faces combined. Studies that have rated averaged-together faces have found that the more faces are averaged together, the higher the rated beauty. A single composite image of 2 original faces is less beautiful than a composite of 32 faces. “Averagedness” is still a somewhat misleading term, explained as “the mean shape of a set of attractive faces is preferred to the mean shape of the sample from which the [attractive] faces were selected.”



Symmetry – Beauty is correlated with symmetry of body and face. Even imperceptible asymmetries negatively correlate with ratings of beauty, and explicit asymmetries of body or face may be considered monstrous. This is true even if we control for the impact of averagedness on symmetry.

Sexual Dimorphism – Simply put, this means that women think masculine looking men are beautiful, and men think that feminine looking women are beautiful.



Spectrum of sexual dimorphism of the face. Who do you suspect gets a date with who?

It hath bene through all ages euer seene,
 That with the praise of armes and cheualrie,
 The prize of beautie still hath ioynd beene;
 And that for reasons speciall priuitie:
 For either doth on other much relie.
 For he me seemes most fit the faire to serue,
 That can her best defend from villenie;
 And she most fit his seruice doth deserue,
 That fairest is and from her faith will neuer swerue.

The Faerie Queene, Spencer, 1590

Physical traits considered beautiful in women.

The signals, especially for men come, from the shape of the women. That's a big deal for men... It's huge for men.

Bill Nye

Woman, by common consent, we regard as the most perfect type of beauty on earth. To her we ascribe the highest charms belonging to this wonderful element so profusely mingled in all God's works. Her form is molded and finished in exquisite delicacy of perfection. The earth gives us no form more perfect, no features more symmetrical, no style more chaste, no movements more graceful, no finish more complete; so that our artists ever have and ever will regard the woman-form of humanity as the most perfect earthly type of beauty. This form is most perfect and symmetrical in the youth of womanhood; so that the youthful woman is earth's queen of beauty. This is true, not only by the common consent of mankind, but also by the strictest rules of scientific criticism.

Search Lights on Health, Jefferis, Nichols, 1898

Candidly asking a man what makes a woman beautiful will likely give a close approximation to the true answer. Many surveys have been performed to identify those traits that men consider beautiful in women. Additionally researchers have studied actual behavior of men to determine which traits they consider beautiful.

Neoteny – Neoteny refers to the retention of juvenile features into adulthood.

The female, however, ultimately assumes certain distinctive characters, and in the formation of her skull, is said to be intermediate between the child and the man.

The Descent of Man, Darwin, 1871

Women who are more neotenous are rated as more beautiful by men. In other words, men find youthful looking women more beautiful. Neotenous features include a **flat, broad, face; large, wide set eyes; small noses, small jaws, and a hairless body.**

For interesting reasons we will discuss later, neoteny is beautiful in women more so than in men.

7:10 Waist:Hip Ratio – A 7:10 waist:hip ratio means that a women's waist circumference is seven-tenths her hip circumference. This is the empirically determined ideal dimension preferred by men. As I write these lines, I am sharing my couch with a girl who has a 23.5 inch / 34.0 inch ratio. These measurements make up the second part of the "vital statistics" for a woman, the folk wisdom classic "ideal" being 36-24-36 inch dimensions for bust, waist, and hips. The preference for a 0.7 waist:hip ratio is generally true, but of course varies with the individual male judge. According to his lyrics, rapper Petey Pablo's ideal dimensions are 34-24-46.

The approx. empirically derived ideal $7 \div 10 = 0.7$

Couch girl $23.5 \div 34.0 = 0.69$

The classic folk wisdom ideal $24 \div 34 = 0.66$

Rapper Petey Pablo's ideal $24 \div 46 = 0.52$

Interestingly, the waist:hip ratio is a better prediction of female beauty than the bust:hip or bust:waist ratios. And the beauty of a 7:10 ratio is not just a matter of visual cues, as a study using blind male judges showed that they preferred the “feel” of 7:10 women. Combined with the male preference for a full bust, the “ideal” shape of a woman is an hourglass.

A Small Waist

Gurl ay doh remember you, but ay remember yuh waistline.

Doh Remember, Farmer Nappy, 2015

The single most important variable of the bust:waist:hips dimensions for determining female corporeal beauty is the waist measurement. Studies have found that female waist circumference is negatively correlated with male erectile function and sexual satisfaction. The folk wisdom intuitive understanding of the value of small waist in female beauty partially resulted in the misguided corset bubble which eventually burst about a hundred years ago.

Moreover, I maintain that the charm which these corsets are supposed to produce is in the worst possible taste; it is not a pleasant thing to see a woman cut in two like a wasp—it offends both the eye and the imagination. A slender waist has its limits, like everything else, in proportion and suitability, and beyond these limits it becomes a defect. This defect would be a glaring one in the nude; why should it be beautiful under the costume?

Emile, Rousseau, 1762

Studies of female beauty have identified a number of other beautiful traits that we will only introduce here. These include: a full bust, clear skin, wide cheekbones, broad smile, wide eyes, large pupils, full red lips, and long lustrous hair.

Physical traits considered beautiful in men.

The other kinds of beauty are for women; the beauty of stature is the only beauty of men. Where smallness dwells, neither breadth and roundness of forehead, nor clarity and softness of eyes, nor the moderate form of the nose, nor the small size of ears and mouth, nor regularity and whiteness of teeth, nor the smooth thickness of a beard brown as the husk of a chestnut, nor curly hair, nor proper roundness of head, nor freshness of color, nor a pleasant facial expression, nor an odorless body, nor just proportion of limbs, can make a handsome man.

Essays, Montaigne, 1580

Largeness of person in youth is noble and not unbecoming

Hippocrates, circa 400 BC

The goddess Aruru, mother of creating had designed his body, had made him the strongest of men – huge, handsome, radiant, perfect.

Epic of Gilgamesh, circa 2100 BC

Height – Women prefer men who are taller than themselves. In addition, women prefer men who are taller than the average man. As we saw earlier, (((Dan Ariely)))’s study of online dating behavior showed that the two inch male height difference between 5’8” and 5’10” was as valuable for men as an *additional* \$114,000 (2006 dollars) income per year.

9:10 Wasit:Hip Ratio – Just as men have a preference for a a certain waist:hip ratio in women, women prefer men with a certain ratio. Compared to the “ideal” women, an “ideal” man has hips that are less wide relative to his waist. Even so, having a waist larger than his hips is considered unattractive in men. The empirically derived ideal ratio for men is about 9:10, rather than the 7:10 for women.

6:10 Waist:Shoulder Ratio – Another important ratio for men is the waist:shoulder. Women prefer men with relatively large shoulders. The empirically derived ideal here is for a man’s waist to be six-tenth the circumference of his shoulders. Combined with the female preference for a waist approximately the same size as the hips, the “ideal” male shape is a V tapering down from the shoulders. This is in contrast to the hourglass shape preferred by men in women.

Pronounced facial structure – The facial structure of a beautiful man also differs from that of a beautiful women.

And pleased with that seeming goodly-hed,

Vnwares the hidden hooke with baite I swallowed.

The Faerie Queene, Spencer, 1590

Strong, angular bone structure is considered more attractive in men than women – especially large and well defined jaws, brow, and chin; though there is some overlap between the sexes.

The jawline or lower third of the face has been considered an important aesthetic unit of facial beauty for centuries. Historically, male faces that characterize strength and courage impress our youth. Actors who portray such heroes as Julius Caesar, Abraham Lincoln, King Arthur, and Robin Hood are chosen for their strong facial contours, especially their jawlines... A substantial jawline contour has also been considered desirable for women. Popeye’s Olive Oyl does not command aesthetic admiration like the facial appearances of Wonder Woman or Lois Lane.

The Art of Alloplastic Facial Contouring, Edward O. Terino, Robert S. Flowers, 2000

The ultimate reasons *why* these traits are beautiful are discussed in later sections on the teleology of facial and corporeal beauty.

Deep vocal pitch is considered attractive in men, probably due to the association between testosterone levels during development and larynx structure.



What is beautiful and why? Part 2

Posted on [admin](#) Posted in [Book](#)

Why are beautiful things beautiful?

I can see no good reason to doubt that female birds, by selecting, during thousands of generations, the most melodious or beautiful males, according to their standard of beauty, might produce a marked effect.

Before Darwin, there were many guesses about why certain things are beautiful. Some of them were close to the mark, although given how many famous historical commentators on the topic there have been, surely some were bound to hit the mark by chance. We can now see that evolution provides the full explanation of why our minds see beauty in some things but not others. This topic is known as evolutionary aesthetics, and addresses why we can find things as diverse as a landscape, a woman, and a poem beautiful.

Evolution, sex, and sexual selection

A basic understanding of evolution is essential for understanding aesthetics. Organisms differ. These differences result in relative advantages in survival or reproduction. “Adaptive” traits are characteristics that cause these advantages, and they tend to become more frequent in a population over time. Maladaptive traits, which result in decreased survival or reproduction, tend to decrease in frequency over time. Adaptive or maladaptive traits are not absolute, but rather depend on the organism’s environment. Changes in environment lead to changes in the frequency of traits. For example, in a culture of bacteria, a small proportion of the bacteria may produce a protein that can degrade penicillin. When this culture is exposed to penicillin, production of this resistance protein becomes highly adaptive, and the bacteria survive and reproduce. When penicillin is removed, the same resistance protein is now maladaptive, because producing it becomes a waste of limited resources.

Over time, an accumulation of changes in one population may become so profound that the population can no longer produce viable offspring with members of its parent population. The two populations are now considered separate species.

Traits being selected for are reflected in an organism’s observable characteristics. These characteristics are known as a phenotype. The phenotype is influenced by the genotype – the heritable information contained in an organism’s DNA code. Because of this, environmental pressures that change the frequency of traits in a population do so by changing the underlying genes. Genes self-perpetuate when they tend to produce phenotypes with increased survival and reproduction. This is of course not a conscious effort of genes, but simply a consequence of their ability to duplicate themselves – the genes most effective at duplication become widespread.

In the absence of environmental changes, genes most effectively self-perpetuate if the organism creates exact duplicate copies of itself via cloning. This is a common strategy of many living things. Bacteria, protists, plants, fungi, and even some animals reproduce through cloning. In cloned organisms, evolution occurs as a result of random mutations, which may affect survival or reproduction. These random mutations tend to be harmful, and the organisms which carry them are less successful at survival. Rarely a random mutation will be beneficial, leading to more reproductive “success” and increased prevalence in the gene pool.

Why don’t all living things clone themselves instead of having sex? Genes which happen to cause organisms to engage in sex are more effectively spread in unpredictable environments. This is

because sexually reproducing organisms can better adapt to changing environments. Clones evolve by random mutation, and ecological selection. In a stable environment this is a successful strategy, but many environments are not stable. Genes which encourage a diversification of offspring, rather than an exact one-to-one copying, prove more successful in these changing environments. Sex is an additional mechanism along side random mutation that functions to generate variation and diversity in offspring. Having ten children all of whom are slightly different proves to be more advantageous in certain environments than having ten clone children.

The advantage of sex over clones was illustrated in a classic natural experiment involving a type of fish called the topminnow. This fish can reproduce either sexually or asexually, with asexual reproduction producing clones. By looking at different nearby pools containing topminnows with different mating behavior, it was noted that the asexual clones (which only evolve through random mutation with ecological selection) were much more susceptible to parasitic infection. Parasites have a much shorter reproductive lifecycle than topminnows. If both parasites and topminnows clone themselves, the parasites will evolve more quickly, because they will go through more generations in a given time. The parasites represent a changing environment to the topminnows. Because of this, the topminnows who reproduce sexually reaped the benefits of increased variation and diversity. The topminnows who clone themselves are an easier target for parasites. The need for organisms to constantly adapt simply to survive has been formalized in the *Red Queen Hypothesis*, named after Lewis Carroll's Red Queen who said, "Now, *here*, you see, it takes all the running you can do, to keep in the same place."

There is, of course, a downside to sexual reproduction, at least from the gene's-eye-view. In sexual selection compared to cloning, on average only half as many of one's genes are transmitted to offspring. In spite of this "downside," sex still managed to provide a net fitness benefit in many species. Parasites are simply one example of a changing environment. In general, sex is beneficial because, in certain environments, a higher rate of gene diversification helps spread genes.

Organisms which have sex tend to behave very differently than organisms which clone. The most important aspects of human existence, such as family, marriage, children, and sex itself would not be the same in an asexual species. Sex also impacts the way in which organisms are selected. In cloning organisms, "ecological selection" determines which mutants survive and reproduce. Ecological selection is the process by which traits that aid in survival and self duplication become for common in a population. Sexual organisms undergo ecological selection as well, but they also undergo an additional form of selection known as "sexual selection." Sexual selection is when traits are made more common because they are more effective for *mating successfully*.

For the purposes of Viriculture, sexual selection is where the action is. The reality of humanity is such that nearly all important aspects of life including social status, beauty, health, strength, skill, and art, are intimately tied up in mating. Having a firm grasp of sexual selection and how it works is essential to understand later chapters. We are lucky enough to not have to rely on my own amateur attempt to introduce this topics, since we have Darwin's own extant:

Inasmuch as peculiarities often appear under domestication in one sex and become hereditarily attached to that sex, the same fact probably occurs under nature, and if so, natural selection will be able to modify one sex in its functional relations to the other sex, or in relation to wholly different habits of life in the two sexes, as is sometimes the

case with insects. And this leads me to say a few words on what I call Sexual Selection. This depends, not on a struggle for existence, but on a struggle between the males for possession of the females; the result is not death to the unsuccessful competitor, but few or no offspring. Sexual selection is, therefore, less rigorous than natural selection. Generally, the most vigorous males, those which are best fitted for their places in nature, will leave most progeny. But in many cases, victory will depend not on general vigour, but on having special weapons, confined to the male sex. A hornless stag or spurless cock would have a poor chance of leaving offspring. Sexual selection by always allowing the victor to breed might surely give indomitable courage, length to the spur, and strength to the wing to strike in the spurred leg, as well as the brutal cock-fighter, who knows well that he can improve his breed by careful selection of the best cocks. How low in the scale of nature this law of battle descends, I know not; male alligators have been described as fighting, bellowing, and whirling round, like Indians in a war-dance, for the possession of the females; male salmons have been seen fighting all day long; male stag-beetles often bear wounds from the huge mandibles of other males. The war is, perhaps, severest between the males of polygamous animals, and these seem oftenest provided with special weapons. The males of carnivorous animals are already well armed; though to them and to others, special means of defence may be given through means of sexual selection, as the mane to the lion, the shoulder-pad to the boar, and the hooked jaw to the male salmon; for the shield may be as important for victory, as the sword or spear.

Amongst birds, the contest is often of a more peaceful character. All those who have attended to the subject, believe that there is the severest rivalry between the males of many species to attract by singing the females. The rock-thrush of Guiana, birds of Paradise, and some others, congregate; and successive males display their gorgeous plumage and perform strange antics before the females, which standing by as spectators, at last choose the most attractive partner. Those who have closely attended to birds in confinement well know that they often take individual preferences and dislikes: thus Sir R. Heron has described how one pied peacock was eminently attractive to all his hen birds. It may appear childish to attribute any effect to such apparently weak means: I cannot here enter on the details necessary to support this view; but if man can in a short time give elegant carriage and beauty to his bantams, according to his standard of beauty, I can see no good reason to doubt that female birds, by selecting, during thousands of generations, the most melodious or beautiful males, according to their standard of beauty, might produce a marked effect. I strongly suspect that some well-known laws with respect to the plumage of male and female birds, in comparison with the plumage of the young, can be explained on the view of plumage having been chiefly modified by sexual selection, acting when the birds have come to the breeding age or during the breeding season; the modifications thus produced being inherited at corresponding ages or seasons, either by the males alone, or by the males and females; but I have not space here to enter on this subject.

Thus it is, as I believe, that when the males and females of any animal have the same general habits of life, but differ in structure, colour, or ornament, such differences have been mainly caused by sexual selection; that is, individual males have had, in successive generations, some slight advantage over other males, in their weapons, means of defence, or charms; and have transmitted these advantages to their male offspring. Yet, I would not wish to attribute all such sexual differences to this agency: for we see peculiarities arising and becoming attached to the male sex in our domestic animals (as the wattle in male carriers, horn-like protuberances in the cocks of certain fowls, etc.), which we cannot believe to be either useful to the males in battle, or attractive to the

females. We see analogous cases under nature, for instance, the tuft of hair on the breast of the turkey-cock, which can hardly be either useful or ornamental to this bird;—indeed, had the tuft appeared under domestication, it would have been called a monstrosity.

Origin of Species, Darwin, 1859

Fitness indicators

In mating, some traits are preferred. These preferences are not arbitrary, and this is an essential point in understanding viriculture:

Mating preferences indicate something important

To understand why sexual organisms prefer certain traits in their mates, we must understand how these preferences could evolve. In short, preferences for a certain trait in a mate will evolve if mating with carriers of that trait leads to more surviving offspring. Mates are preferred whose traits, on average (and in the evolved environment), tended to spread the organisms own genes most successfully.

Evolution of preferences for these traits occurs because these traits are *honest indicators of evolutionary fitness*. By “evolutionary fitness,” we mean an organism’s ability to survive and reproduce. By “honest,” we mean that the indicator really does convey this information accurately. It may seem circular to say that mates evolve a preference for traits which increase ability to reproduce, but keep in mind that these traits are heritable. Sexual organisms evolved to pass on to their progeny traits not just for survival, but also for mating success.

The classic example of a honest indicator of fitness is the peacock’s tail. The tail is heavy, cumbersome, and takes a great deal of energy to grow. It is an advertisement to peahens that the male carrying a large train is strong, nimble, and had a superabundance of energy to develop the tail in the first place. The tails also make them more susceptible to predation. If a peacock is able to evade predators in spite of his large train, then he must be especially fit. Honest signals of fitness must be costly to the bearer, or they could easily be faked. This principle of costly honest signaling is known as the handicap principle. In their evolved environment, peahens who preferred such tails must have been more successful evolutionarily, and thus this preference became universal. If the tail were a dishonest indicator of fitness, no such universal peahen preference could have evolved.

The most prominent evolutionary theory of social signals, including sexual signals, is the handicap principle proposed by (((Amotz Zahavi))) in 1975. It explains the evolution of extravagant, and thus costly, display traits as honest signals of the ability to deal with environmental problems throughout evolutionary history. A handicap is honest in the sense that only high-quality individuals can afford it. It ‘costs’ high quality peacocks less to produce and carry around an extra inch of tail than it ‘costs’ low-quality peacocks. Coevolution of the signaling trait and signal reception results in a situation in which it pays high-quality, but not low-quality, individuals to develop fully the costly trait (paid for by the preferences of others, e.g. mate preferences). Handicap traits usually signal both the phenotypic and genotypic quality of the bearer: condition almost

always shows genetic variation among individuals (i.e. is heritable) and handicaps necessarily capture the genetic variance in condition.

Facial attractiveness, Randy Thornhill, Steven W. Gangestad email 1999

Fitness indicators do not need to be corporeal. A common example of a behavioral fitness indicator is the “stotting” behavior of gazelles. When being chased by predators, gazelles repeatedly jump high into the air, instead of running away as quickly as possible. This has been proposed as an indicator to both mates and the predator of the vigor of that gazelle. Unfit gazelles simply cannot risk stotting, since they are too busy running away. Stotting shows the predator that this gazelle is too strong to pursue as prey, and it demonstrates to potential mates the superabundant strength and speed of that individual. It is another example of the Handicap principle. Preferences to mate with gazelles who stot would evolve if stotting were truly an honest signal of evolutionary fitness.

Anecdote warning: a hunter shot a buck who ended up having more than twenty antler points – an unusually high number. In an article written describing the event, a biologist gave his assessment about the health of the animal.

Wenner confirmed the deer appears to be healthy. An animal with any disease would not be capable of carrying those antlers, the biologist said.

The antlers represent an honest signal of the health and superabundant energy required to grow them. Antlers of this quality could not be faked.

Humans display both physical and behavioral fitness indicators. In our evolved environment, the universal male preference to mate with women possessing approximately a 7:10 waist:hip ratio likely evolved due to this being an honest signal of health and fertility. The universal female preference to mate with men with high social status likely evolved due to this being an honest signal of protection and power over valuable resources. Despite the increased pacificity of our modern environment, women maintain a preference for men who can demonstrate physical strength, especially in direct competition with other men. This is likely an evolutionary holdover from when intraspecies physical dominance correlated more closely with evolutionary fitness. As Darwin said,

A hornless stag or spurless cock would have a poor chance of leaving offspring.

Today “civilized” men tend not to explicitly *fight* to control women. Our weapons in the intraspecies battle have become primarily social rather than physical. Men’s horns and spurs are chiefly our social standing, control of resources, and physical beauty. A typical homeless man might as well be a spurless cock. The most beautiful man in a city might as well be a 20-point stag, and could likely command a “soft harem” of women.

As when two rams stird with ambitious pride,

Fight for the rule of the rich fleeced flocke

The Faerie Queene, Spencer, 1590

The Handicap principle applied to humans explains why men with Ferraris and VIP-area access attract women.

In the classic peacock example, the male with the largest train has “the best genes” because he is able to survive with such a burdensome honest signal. In some ways this must in general be true. However, I think it is more reasonable to assume that honest signals of beauty are influenced by both environmental factors and genes. It is possible that genes are sexually selected that *indirectly* influence these environmental factors, for example through genetically mediated behavioral preferences.

This can be illustrated with a simple thought experiment. A mad scientist manages to clone 100 peacocks. They have identical genes. Would all of their trains be of equal size? Of course not. Extra-genetic influences would certainly play a role. Even in this controlled setting, the precise extra-genetic influences of train size are so complex as to be considered random. In this biological case, we may expect that train size would follow a normal distribution. Now the mad scientist decides to introduce peahens into the enclosure. Peahens sexually select the mates with the largest trains. But in no sense are they selecting “good genes.” They are simply selecting good development.

The classic view of mates selecting for “good genes” is expressed in the following quote:

Since good genes are required to make a face and body that are symmetrical and are not deformed or diseased, physical attractiveness is a good indication not only of health, but also of high quality genes.

However this classic view does not take into account environmental influencers of development. My own view is that good development may be just as important as good genes, especially in humans. Good development can be seen as an honest signal of the historical influence of many extra-genetic factors such as food, sleep, stress, status etc. Compared to many animals, humans care for their young for an extended period. If well developed mates helped have more successful offspring, a preference for mates who can honestly signal their ability to obtain resources critical for development could arise. The honest signals of good development would be sought by mates, even though these signals were not directly caused by genes. In fact, if mutants arose with genes that mimicked “good development” without exposure to the critical resources, we might expect that the opposite sex would evolve to see through this genetic trick.

Because nothing can ever be conceived in ugliness

Symposium, Plato, circa 380 BC

There is a great overlap between what can be considered honest economic signals, and honest signals of evolutionary fitness, are both are entwined in viriculture and good human development. Which skills or traits are the most honest indicators of superior power and social standing? These are those activities and skills which people of multi-generational leisure pursue for their own ends in their abundant free time. This is ultimately because ostensible skill these leisurely pursuits is an honest signal to the world of that individuals power over others (mediated through his wealth or free time).

(iii) Teleology of Beauty

Some day, I doubt not, we shall arrive at an understanding of the evolution of the Aesthetic faculty; but all the understanding in the world will neither increase nor diminish the force of the intuition that this is beautiful and that is ugly.

Evolution and Ethics, Huxley, 1894

We've discussed the things that are generally considered to be beautiful. With our background of evolutionary theory, we can now answer the question: *Why* are these things beautiful? Although many answers have been put forth over the millenia, the best answer is based in evolution. Our evolved aesthetic sense finds beauty in things that are beneficial to our evolutionary fitness. It is therefore not quite correct to say:

v) The judgement of taste is about the beautiful object, not about the subject's state of mind. In describing an object as beautiful, I am describing it, not me.

Beauty, Roger Scuton, 2011

My judgement of a beautiful object may not "describe me," but it does tell us something important about me. Beauty directs us toward mates who are more likely to produce healthy offspring. Beauty guides our choice of habitat and food selection. And beauty allows us to appreciate refined skill, and the rarity and difficulty of this achievement. In Plato's words, love of Beauty leads us to the divine and immortal, and science has finally caught up with him. The evolutionary answer to the question of beauty paints it as a sort of conspicuous consumption. Beauty is therefore *not* distributed according to celestial caprice, a trait that "none can bestow save the gods alone." By understanding beauty as an evolved motivator of behavior, we can better understand how to achieve beauty through viriculture.

Of course, beauty is not the only evolved motivator of beneficial behavior. Pleasure serves a similar role. We feel pleasure when we eat sweets, or have a morning coffee, but we would not typically describe this perception as "beautiful." The distinction between beauty and mere pleasure is worth some discussion, and is explained by Denis Dutton.

While evolutionary psychology may have a capacity to shed light on the existence of art and art's persistent qualities, it cannot pretend to explain everything we might want to know about art. In particular, there is an aspect of Kant's aesthetics that ought to be borne in mind when discussing evolutionary psychology in an aesthetic context. Kant distinguished between what he called the agreeable from the beautiful. The agreeable are the straightforward subjective sensations of things that we like in direct experience: the taste of sweet, for example, or the colour blue. The pleasurable experience of such sensations, Kant held, contains no intellectual element: it is a brute feeling, often seeming to satisfy a desire (such as hunger), and as such must be carefully distinguished from the experience of the beautiful, in which the imagination combines with rational understanding in the experience of an imaginative object. For Kant, the art is cut off from desires – the beautiful object is contemplated or observed, it is not used or consumed. Works of art, especially of fine art, therefore engage the high faculties, and the pleasures they afford are of a different order than sexual or gustatory sensations of pleasure.

The emotional response to beauty, as opposed to that of preference, may be a way of allowing for a more complicated range of behavior than simply rejection or acceptance, including commitment, exploration, and settlement. Our perception of beauty can best be understood as a factor which motivates our behavior. The behaviors stimulated by things widely agreed to be beautiful must have on average increased our ancestors survival or reproduction.

Why are certain natural things beautiful?

All organisms must exist in the context of an environment. Environmental factors are not uniformly beneficial or harmful to an organism. Evolution favors organisms that tend to avoid harmful stimuli, and experience beneficial stimuli. These pressures form the basis of simple behaviors, instincts, or preferences. This of course is not the same as the experience of beauty. Plant sprouts will grow their leaves toward a light source, but this does not mean that the plant experiences sunlight as beautiful. The experience of beauty is closest to an emotion. Emotions are the product of relatively sophisticated nervous systems. We can expect that, at least, a brain is necessary for an aesthetic sense to evolve.

A well studied subject for our consideration is the human tendency to find certain landscapes beautiful. Landscapes have long been the subject of art. Some of the earliest cave paintings depict game animals running through a landscape. Real estate or hotel rooms command a premium when they display vistas containing water or parkland. These human tendencies cannot be explained away as cultural preferences, as people all around the world share them. The emotional impact of beauty is an evolved solution to motivate us to engage in behaviors that promote survival and reproduction, without relying on our conscious awareness of the benefits of those behaviors.

Our ancestors were hunter-gatherers, who lived in small family bands. Permanent settlements were not common. There was a constant need to find water, food, shelter, and protection from danger. Because these roaming bands were constantly moving through new territory, strong selection pressures would be placed on heuristics that rapidly identify favorable environments. One of these evolved heuristics is our sense of beauty for certain environments. Without being able to explain why, we are drawn to certain environments, and repulsed by others. There can be no question that these emotions were shaped by ecological selection. Humans around the world tend to prefer landscapes with open grasslands, climbable trees, huntable animals, and potable water. Although humans have demonstrated their ability to survive in deserts or tundra, we maintain that the environments which closely mimic the East African savannas of the majority of our evolutionary history are most beautiful.

Beauty helps us in choosing our environments in another way. The emotional reward we get from a beautiful landscape is not just a matter of advantageous contents. Beauty also functions as a heuristic for gathering as much information as possible about an environment. A scene in a dense forest may be pleasant, but a broad vista from a high place is more likely to be *beautiful*. We may spend all day hiking up a mountain, or pay to get up to the top of the Empire State building simply

for the beautiful view. Even virtual landscapes provide us with this aesthetic satisfaction, and game designers make a special effort to include beautiful vistas as a reward for exploration. This emotional response is likely a holdover from when sweeping vistas were the most effective way to explore and navigate an environment.

In this way, motivation to experience beauty may have helped our ancestors gather information. Landscapes are also preferred which include partially hidden paths, waterways, or other features that suggest unexplored territory. Perceiving beauty in this incomplete information may have evolved as a motivator to accumulate more data on the local environment.

Many of the other natural features commonly considered beautiful provide meaningful information about environment quality. Our experience of beauty when looking up at the sky may ultimately stem partly from the weather information contained in cloud patterns. Sunsets provide information about time and impending darkness. The beauty we find in budding or fruiting trees and flowers, or the melancholy in falling leaves may be evolved heuristics about how to cope with a changing environment. Note the autumn imagery:

That time of year thou mayst in me behold
When yellow leaves, or none, or few, do hang
Upon those boughs which shake against the cold,
Bare ruined choirs, where late the sweet birds sang.
In me thou see'st the twilight of such day
As after sunset fadeth in the west;
Which by and by black night doth take away,
Death's second self, that seals up all in rest.
In me thou see'st the glowing of such fire,
That on the ashes of his youth doth lie,
As the deathbed whereon it must expire,
Consumed with that which it was nourished by.
This thou perceiv'st, which makes thy love more strong,
To love that well which thou must leave ere long.

Sonnet 73, Shakespeare, 1609

It is not by chance that today we still prefer landscapes with interspersed trees and grassland, pristine water, clear skies, and wildlife. This is not because a garbage dump is less “good” in an ultimate sense – many bacteria may “prefer” the dump to our parks. It is simply that proto-humans

who found their garbage dumps beautiful did not manage to survive and reproduce effectively enough to become our ancestors. In some ways this creates a major source of discontent in the modern world. Things might be easier if we could honestly aesthetically prefer the city of Newark to Yellowstone, or Central Park. Despite the changes imposed on us by civilization, we have retained our evolved preferences for environment.

Why are virtuoso displays of skill considered beautiful?

It is easy to understand that we see beauty in environments which helped our ancestors survive. It is less intuitive to understand why we feel the same emotion when we hear a symphony, see an abstract painting, or appreciate a Shaker cabinet. This question is similar to the question *why is art beautiful?* which has been explored by philosophers throughout history, but again cannot be completely understood outside of the context of evolution. But while our evolved preference for fertile landscapes and pristine waterways is a result of *ecological* selection, our preferences for virtuosity seems to stem more from *sexual* selective pressures.

Again we can turn to *The Art Instinct* for an explanation of our evolved appreciation of art and other great displays of talent and craftsmanship.

Applied to human art, this suggests that beauty equals difficulty and high cost. We find attractive those things that could have been produced only by people with attractive, high-fitness qualities such as health, energy, endurance, hand-eye coordination, fine motor control, intelligence, creativity, access to rare materials, the ability to learn difficult skills, and lots of free time” (Miller 2000). This view accords with a persistent intuition about art that can be traced from the Greeks to Nietzsche and ((Freud)): art is somehow connected, at base, to sex. The mistake in traditional art theorizing has been to imagine that there must be some coded or sublimated sexual content in art. But it is not the content *per se* that is sexual: it is the display element of producing and admiring artists and their art in the first place that has grounded art in sexuality since the beginning of the human race.

To the extent that art-making was a fitness indicator in the Pleistocene, it would have to be something that low-fitness artists would find hard to duplicate. (Were it easy to fake, then it would not be accurate as a gauge of fitness). The influence of the Pleistocene mind on the concept of art therefore provides us with a perspective, at least at a psychological level, on some of the modern problems of philosophical aesthetic. Consider virtuosity: if music is a series of sounds in a formal relation, why should it make any difference to us that the sound of a Paganini caprice are also difficult to realize on a violin? From the standpoint of sexual selection theory, there is no issue; virtuosity, craftsmanship, and the skilful overcoming of difficulties are intrinsic to art as display.

It is interesting to note that our evolved tendency to see beauty in displays of skill and craftsmanship is at odds with modern industrial mass production of nearly all of the physical objects we see on a daily basis. In some sense, beautiful man made objects must be expensive in terms of time or effort to produce. In the past, all artificial objects were an embodiment of human time and effort. With mass production, the embodied time and effort has sharply decreased. We are not yet

smart enough to mass produce objects with the same aesthetic value as hand crafted objects. It may be possible to mass produce beautiful objects in the future, but the process will almost certainly have to involve iteration and feedback.

We find art and other virtuoso displays of skill beautiful largely because our ancestors who shared these preferences had more surviving offspring. Artists are sexy, and we have evolved this preference because art is a honest signal of the creator's fitness. If the creation of art were easy or cheap, art would not function as a sensitive indicator of the fitness of potential mates. The emotion of beauty stimulated by art motivates us to engage in behaviors that (in our evolved environment) are evolutionarily advantageous.

Why are certain human physical traits considered beautiful?

Beauty is partly an affair of health. It may be reckoned as a personal advantage; though it does not, properly speaking, contribute directly to our happiness. It does so indirectly, by impressing other people; and it is no unimportant advantage, even in man. Beauty is an open letter of recommendation, predisposing the heart to favor the person who presents it. As is well said in these lines of Homer, the gift of beauty is not lightly to be thrown away, that glorious gift which none can bestow save the gods alone—

Still, taunt me not with the gifts that golden Aphrodite has given me; they are precious; let not a man disdain them, for the gods give them where they are minded, and none can have them for the asking. —*Iliad* 3, 65

Essays, Schopenhauer, circa 1840

In chapter six we discussed which human physical characteristics are especially important for sexual attraction and our perception of human physical beauty. The detailed explanations of why we tend to find particular features such as symmetry, a female 7:10 waist to hip ratio, or a male chiseled physique beautiful are addressed in later sections concerning the specific teleology of human body and facial beauty. Each characteristic has its own explanation with nuanced differences. But in all cases the fundamental underlying principle is the same:

*Certain human physical features are beautiful because
our ancestors who shared these preferences had greater evolutionary fitness*

Preferences for perceiving certain traits as beautiful would develop if the behaviors motivated by the aesthetic sensations led to increased fitness. Just as our preference for beautiful landscapes has the hidden function of stimulating behaviors that leads us to choose safe habitats with abundant food, our preference for beautiful mates leads us to choose the best parents for our children (at least in terms of number of surviving offspring). An exquisitely sensitive ability to judge honest signals in mates could evolve if these signals truly had an impact on our children's chances of survival and reproduction – and this is exactly what we see. There is an astonishing amount of information displayed to us by visual cues of another human, and we have evolved an aesthetic sense that can

compute this data at a glance, and push our behavior in the evolutionary advantageous direction, whether our conscious intentions like it or not.

In other words, human physical beauty tells us something important about the possessor – that this person is a suitable mate. This is mediated by the message that beauty sends about health, fertility, developmental history, and ability to control valuable resources. Schopenhauer, despite writing before *The Origin of Species*, accurately identified the relationship between health and beauty.

Genes play a role in determining beauty. This can be illustrated with the extreme case of genetic disease. Take Treacher Collins syndrome for example. It has a known genetic basis and results in characteristic facial deformities. Through no fault of their own, people with this syndrome would tend to be considered less beautiful than syndrome-free healthy people. This judgement of beauty is not, of course, due to some ultimate cosmic truth. We simply inherited these preferences. Our ancestors who preferred mates who had the characteristics of Treacher Collins syndrome or other genetic diseases had fewer surviving offspring.



The unfairness of this reality is illustrated by Quasmodo throughout *The Hunchback of Notre Dame*.

“I never realized my ugliness till now. When I compare myself with you, I pity myself indeed, poor unhappy monster that I am! I must seem to you like some awful beast, eh? You,—you are a sunbeam, a drop of dew, a bird’s song! As for me, I am something frightful, neither man nor beast,—a nondescript object, more hard, shapeless, and more trodden under foot than a pebble!”

Even as little as a still photo of a facial profile can cause revulsion in the viewer if the face is poorly developed. Our revulsion to ugliness is as much a part of us as our evolved love for beauty. Luckily we can recognize the injustice in these attitudes and use our reason to transcend our evolved first response. But the fact that we have an aesthetic preference for mates with certain genetic traits is only part of the story. As discussed earlier, the common notion that our perception of human beauty is simply a way of identifying mates with “good genes” is an inadequate explanation. Although genetic factors certainly influence beauty, beauty tells us much more than simply the genes of an organism. We can further explore this idea with a thought experiment of twins.

Take identical twin sisters twenty three years old. In a great tragedy, one of the twins stops eating adequate food. The patient wastes away, becoming fatigued and atrophic. The twin sister, although emotionally devastated, suffers no negative health consequences. The twins have the same genes, but the healthy twin would be expected to be “more beautiful.”

Let's consider a different example with two healthy twenty three year old identical twin sisters. One is ovulating and the other is menstruating. The fertile twin is expected to be more sexually desirable to a mate – more beautiful. This is borne out in empirical tests. Obviously no genetic difference exists here, and so “good genes” cannot be the only factor in determining relative human physical beauty.

Current theoretical and empirical findings suggest that mate preferences are mainly cued on visual, vocal and chemical cues that reveal health including developmental health. Beautiful and irresistible features have evolved numerous times in plants and animals due to sexual selection, and such preferences and beauty standards provide evidence for the claim that human beauty and obsession with bodily beauty are mirrored in analogous traits and tendencies throughout the plant and animal kingdoms. Human beauty standards reflect our evolutionary distant and recent past and emphasize the role of health assessment in mate choice as reflected by analyses of the attractiveness of visual characters of the face and the body, but also of vocal and olfactory signals. Although beauty standards may vary between cultures and between times, we show in this review that the underlying selection pressures, which shaped the standards, are the same. Moreover we show that it is not the content of the standards that show evidence of convergence—it is the rules or how we construct beauty ideals that have universalities across cultures.

Darwinian aesthetics: sexual selection and the biology of beauty,

Grammer K, Fink B, Møller AP, Thornhill R, 2003

We have evolved to identify extra-genetic cues in our mate selection. Genetics is of course important in mate selection – which is why most humans are not interested in mating with a macaque or a fish. But many of the details that influence mate selection in our species may be due more to extragenetic factors than sometimes assumed. Interestingly, Darwin's own discussion of human preferences for beauty emphasizes the role of culture:

The senses of man and of the lower animals seem to be so constituted that brilliant colours and certain forms, as well as harmonious and rhythmical sounds, give pleasure and are called beautiful; but why this should be so we know not. It is certainly not true that there is in the mind of man any universal standard of beauty with respect to the human body. It is, however, possible that certain tastes may in the course of time become inherited, though there is no evidence in favour of this belief: and if so, each race would possess its own innate ideal standard of beauty. It has been argued (75. Schaaffhausen, 'Archiv. für Anthropologie,' 1866, s. 164.) that ugliness consists in an approach to the structure of the lower animals, and no doubt this is partly true with the more civilised nations, in which intellect is highly appreciated; but this explanation will hardly apply to all forms of ugliness. The men of each race prefer what they are accustomed to; they cannot endure any great change; but they like variety, and admire each characteristic carried to a moderate extreme. (76. Mr. Bain has collected ('Mental and Moral Science,' 1868, pp. 304-314) about a dozen more or less different theories of the idea of beauty; but none is quite the same as that here given.) Men accustomed to a

nearly oval face, to straight and regular features, and to bright colours, admire, as we Europeans know, these points when strongly developed. On the other hand, men accustomed to a broad face, with high cheek-bones, a depressed nose, and a black skin, admire these peculiarities when strongly marked. No doubt characters of all kinds may be too much developed for beauty. Hence a perfect beauty, which implies many characters modified in a particular manner, will be in every race a prodigy. As the great anatomist Bichat long ago said, if every one were cast in the same mould, there would be no such thing as beauty. If all our women were to become as beautiful as the Venus de' Medici, we should for a time be charmed; but we should soon wish for variety; and as soon as we had obtained variety, we should wish to see certain characters a little exaggerated beyond the then existing common standard.

While Darwin is right to a degree, a great deal of research after his death has confirmed that certain physical traits are considered beautiful by all cultures. My own view is that our evolved preferences dominate our learned preferences in our assessments of human physical beauty.

We might expect that evolution would favor preferences for traits which are the most honest indicators of fitness. This is exactly what we find. Mates are preferred who have characteristics, both genetic and otherwise, that tend on average to yield more surviving offspring.

Aesthetic preferences as adaptations vs Preferences as by products

The examples in this chapter have hereto treated beauty as an adaptation that increases evolutionary fitness. While our aesthetics preferences can function as adaptations which guide our selection of environment and mates, they can also exist simply as by-products of evolution, and serve no adaptive function.

An example of an aesthetic preference that is likely a by-product of our evolutionary history human color preference. By far the most preferred color is blue with green typically in second place. It seems immediate apparent that these would be the common colors of our ancestral landscapes, with water and sky appear blue, and vegetation appearing green. Despite this evolved tendency, preferring a green dress, or green painted walls is not in any meaningful way “adaptive.” This is simply a misfiring of our evolved preference for clear skies and lush trees.

Shininess is another human preference that seems to be an accidental by product of evolution. Millions of years ago, the only shiny objects on Earth were forms of water, wet lips, healthy hair or fur, sap, and certain rocks (obsidian comes to mind).

All of these things are advantageous for survival or reproduction, especially water. It seems that water is the primary factor in our preference for shininess – I read a story online about how a marketing firm gave shiny objects to young children, who then proceeded to lick them. Whether or not that story is true, shininess was an uncommon characteristic of valuable resources in our evolutionary past. Since the invention of metallurgy, and especially the industrial revolution, the proportion of chromed-out features in our environment has exploded. Walking around in a city on a sunny day is enough to hurry one into the nearest Sunglass Hut. People have made the most of this

preference for the shiny by using objects as ornaments and gifts. Some cultures especially value shiny personal ornamentation...

Niggas wear shades just to stand on side of me

Hoes say “take that chain off boy ya blindin’ me”

Bling Bling, B.G., 1999

... although others have reservations about the practice.

The emulation with fashionable dames, now-a-days, so far from being, as with the Spartan women, to excel each other in household virtues, is to wear the largest diamonds. And, in this ambition, they forget fitness, beauty, taste, everything but the mere vulgar desire to shine... In all this, we repeat, there is neither refinement nor elegance, but simply vulgar ostentation.

Ladies Book of Etiquette and Manuel of Politeness, Hartley, 1872

There is no likely evolutionary reason to find inexpensive shiny objects so agreeable. This preference is probably an accident of our evolved preference for looking at bodies of water. Our sense of beauty is sometimes an adaptation, and sometimes simply a byproduct of our evolved minds. Only in the cases where our aesthetic sense is an adaptation can our understanding of evolution help us determine *why* we see beauty in some things and not others.

Like all other organisms, humans must make the most of their environment. We happen to have brains which are sophisticated enough to experience emotion. The emotion of beauty is, for the most part, an adaptation that motivates us to pursue behavior that is in our evolutionary best interests.



I'm pretty sure there's a lot more to life than being really, really, ridiculously good looking

Posted on [admin](#) Posted in [Book](#)

Because *you* are not flesh, nor hair, but moral purpose;

if you get that beautiful, then *you* will be beautiful

Epictetus

Good-lookingness is no doubt an important factor in our lives. But obviously beautiful people can be terrible men and women.

Unhappy Paris! but to women brave!

So fairly form'd, and only to deceive!...

Thy graceful form instilling soft desire,

Thy curling tresses, and thy silver lyre,

Beauty and youth; in vain to these you trust,

When youth and beauty shall be laid in dust:

Troy yet may wake, and one avenging blow

Crush the dire author of his country's woe.

Iliad, Homer / Pope, circa 800 BC

Just as good-lookingness is not the only factor in a good life, it is not the only important factor in human mate selection either. There is a big difference between physical attractiveness and attractiveness in general. An ugly person may make a better mate than a beautiful one. As Jimmy Soul sang,

If you wanna be happy for the rest of your life
Never make a pretty woman your wife
So for my personal point of view
Get an ugly girl to marry you

Someone recently wrote a book titled *The ugly wife is a treasure at home*, after a traditional Chinese aphorism. We all know attraction really is more than skin deep. Just as evolution has shaped our views of corporeal beauty, it has given us other important criteria on which we judge the merit of potential mates. Preferences for certain traits in a mate may be expected to develop for any trait that reliably correlates with survival and reproduction of offspring. These traits have been categorized over the years by evolutionary psychologists, and will be reviewed in this section.

Non-physical traits preferred by women in mates and why.

Looks don't concern me, maestro. Only talent interests a woman of taste.

Amadeus, 1984

Males who are high in status will not only beat off other males, they are likely to have more resources to contribute to the union with a female and the children that are products of that union. Females will, it is suggested, therefore favor males of status who appear willing to contribute resources to their offspring. This combination of female choosiness and male status and access to resources is a combination that is likely to increase reproductive success.

The Status Syndrome, Marmot, 2005

Although physical traits such as male height, muscularity, and facial beauty are important factors in attraction, in choosing long-term partners women tend to be more concerned with non-physical traits. In general, women prefer to mate with men with:

High status – Women prefer men who rank highly in their social context, especially relative to other men. Humans are social animals, and during our evolutionary history other group members

likely represented the greatest potential source of benefits and risks to a woman. A high status man is dominant to men of lower status. Compared to a man with low status, a high status man has more control over this important human element, due to the interpersonal advantages which social power confer. In practical terms, status translates into control over other group members' labor and violence – critical factors for survival and reproduction in an ancestral context. By mating with a high status man, a woman can assume some of this power for herself and her offspring.

Status is communicated through group behavior, including dress, body language, and vocal patterns. Women pick up on these signs, which ultimately influence mate choice. While status is conveyed at least in part visually, and good-lookingness may be one component of social status, ugly men can achieve high status, and handsome men can be low status.

Resource control – Women prefer men who control valuable resources and show a willingness to share those resources with her. In an ancestral context, great evolutionary pressure would exist to select for women with this trait, as resource control such as abundant food, clean water, and safe shelter meant a greater chance of survival and reproduction for her and her offspring. The legacy of this selection lives on in us today. All things being equal, women tend to prefer a given man rich than poor. This is borne out in online dating data collected by Ariely which found a correlation between male income and female first contacts.

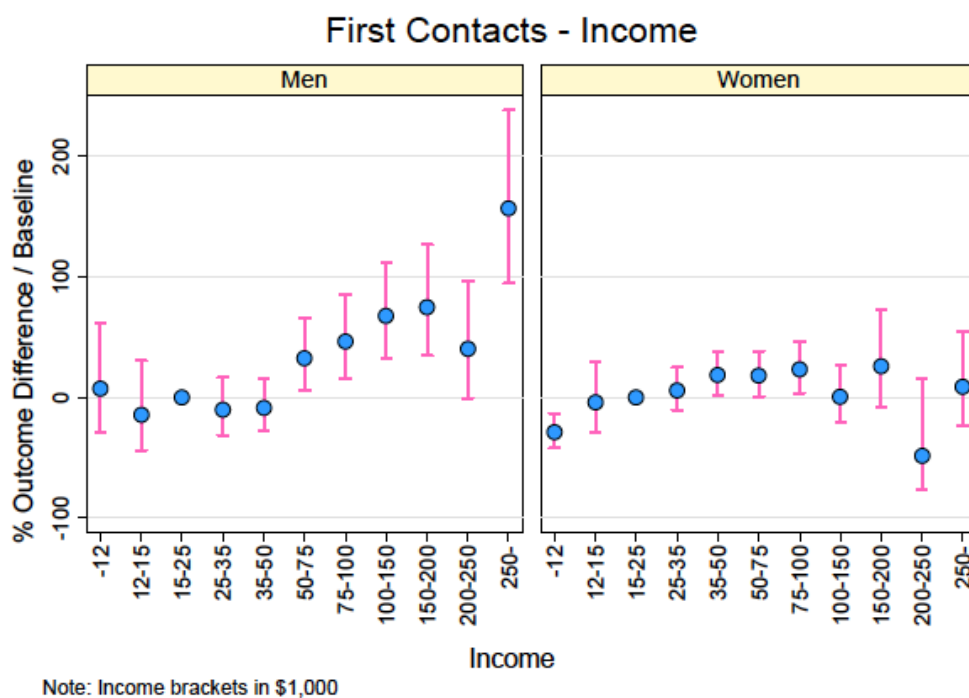


Figure 5.6

Remember, it was not until the Beast presents Belle with his sumptuous library as a gift that she begins to see him as a romantic prospect rather than a monster.



Despite being a hideous beast, resource control helps him “earn her love” in order to break his curse. This valid preference of women motivates men into the unaesthetic conspicuous consumption of mass-produced goods that plagues our culture today. This showiness which, like a Mercedes leased on a maxed out credit card is often just puffery, is not just wasteful but also ignores the social and intellectual aspects of human female attraction.

Can't pay my rent, cause all my money's spent

but thats OK, cause I'm still fly

Still Fly, Big Tymers, 2002

No matter the arguably negative modern consequences, true resource control by a man is an important aspect of attraction in women.

Proof of commitment – Women prefer long-term romantic relationships with men who demonstrate a proof of commitment (especially exclusive commitment) to her. This commitment can go a long way in excusing bad-lookingness in a mate. A man who a woman would not consider for a romantic fling might find mating success after a protracted demonstration of his dependability and attention to her. Likewise, even a beautiful, dominant, wealthy man might be denied by a potential mate if he refuses to make an honest demonstration of commitment. Proof can come in many forms. The Western tradition of men proposing marriage with an expensive ring is a testament to the importance of a valid *proof*. Back before birth control when women often “saved themselves” until a serious relationship or engagement, a ring functioned as an “honest signal” that the man wasn't planning on hitting the road after getting laid. Of course in today's cultural vacuum this tradition is simply a vestige, as the average man can now score on the first date with a girl he just met on okcupid.

Accomplishments, prowess, or ambition – These traits are attractive to potential female mates because they are the means by which status and resources are achieved. Additionally, they may be valuable in their own right, especially physical prowess. Men with great skill in one domain often leverage that ability into dating success (musicians, chefs, painter, poet, sportsman, etc.)

Girls only want boyfriends who have great skills.

Napoleon Dynamite, 2004

Ambition can be seen as a signal that a man may *in the future* accumulate valuable accomplishments.

Intelligence – Intelligence is attractive because it increases the survival and reproduction of a woman and her offspring. Intelligence certainly feeds back into resource control and social status, and it overlaps with prowess and achievement. There is no question that language and other mental traits are major determining factors for mate selection. Furthermore intelligence is likely more heritable than some of the other attractive male traits, meaning not just more surviving children for a woman attracted to witty, funny, creative, even virtuous (when our civilization was intact) men, but more surviving grandchildren as well.

Whence could so much virtue spring?

Dido and Aeneas, Purcell / Tate, 1688

As we can see, female attraction is complex, and related to many factors beyond appearance. Don Quixote says it best:

Be advised, Sancho, there are two sorts of beauty, one of the soul, the other of the body. That of the soul displays its radiance in understanding, in honesty, in good conduct, in generosity, and in good breeding, and all these qualities may exist in an ugly man. And when we focus our attention upon this beauty, and not upon the beauty of the body, love generally arises with great violence and intensity. I, Sancho, see clearly enough that I am not beautiful, but at the same time I know I am not hideous; and it is enough for an honest man not to be a monster for him to be dearly loved, provided he has those spiritual endowments I have spoken of.

Don Quixote, Cervantes, 1605

Non-physical traits preferred by men in mates and why.

Civilized men are largely attracted by the mental charms of women.

The Descent of Man, Darwin, 1871

True as Darwin's claim may be, as we know that men tend to be very concerned with a mate's physical appearance.

One very interesting generalization is that in most societies the physical beauty of the female receives more explicit consideration than does the handsomeness of the male.

Ford and Beach, 1951 (quoted after *The Adapted Mind*)

This asymmetry in preferences stems from the different roles of the sexes in terms child care – mothers in an ancestral environment had to carry and extensively nurse any child they wanted to survive. Combined with a lack of long term birth control, children preventing them from being free to accumulate resources as efficiently as an unfettered man. Since the physical indicators of fertility and nursing ability children are intertwined with our perceptions of beauty, it follows that men who favor beautiful women would be selected for. Because the male sex role of resource provisioning (as opposed to direct infant care) is more about skill, ability, and performance than the woman, woman who had a relative preference (compared to men) for these traits were selected. While this heritage lives on in us, that does not mean that good-lookingness is the *only* important trait to men. Generally, men prefer non-physical traits in women that increase the likelihood that they will produce many surviving offspring.

Willingness to mate – A prerequisite in producing human offspring is mating, and men display a preference for women who appear willing to mate. Because of the much greater biological cost and danger that gestation and nursing takes on the mother (traditionally a 3 year full time commitment) compared to the father (no commitment), women are far choosier than men when it comes to mates, especially short-term mates. This creates a demand in the “sexual marketplace” by men for access to mating with women. In general, women choose their short-term mating partners, and men happily oblige. Because men benefit evolutionarily from “no-strings-attracted” mating, selection has favored men with the ability to identify subtle indicators of a willingness of the female to actually engage in sex. These signs help men judge which women represent the most efficient use of his limited time resources. Trade-offs between partner quality and time investment necessary is a relevant factor, and this is often the topic of “locker-room conversation” among men (no I didn’t get laid on the first night, but she is really hot *versus* yeah we had sex, but she isn’t hot enough to call again). That said, all things being equal, men generally prefer a beautiful woman who is willing to mate to a beautiful woman who is unwilling to mate.

Chastity and Fidelity

But now, in these our detestable times, no maiden is safe, even if she is hidden and enclosed in another labyrinth like the one in Crete; because even there, through chinks in the wall, or carried by the air itself, with the zealously of accursed solicitation the amorous pestilence finds its way in and, despite all their seclusion, maidens are brought to ruin.

Don Quixote, Cervantes, 1605

In addition to a willingness to mate, a man prefers women who are committed to him and only him. This is signaled to men through a track record of sexual restraint. Unlike women, men had no way to verify paternity of the children they provided for, and this created a selective pressure for men to be very concerned about restricting the sexual promiscuity of their own female mates. This

biological tendency has been enshrined in human culture as well, as it seems to contribute to stable societies (at the expense of women's personal freedom).

Rigoletto: Never leave this house!

Gilda: I only go out to church.

Rigoletto: Oh, that is good.

Rigoletto, Verdi / Piave, 1851

Traditionally, this was subdivided into pre-marital chastity and post-marital fidelity, but they are essentially the same concept. Men prefer women who honestly signal their restraint to mate with other men. Some people lament the traditional emphasis on female chastity as oppressive:

In this same year Postumia, a Vestal virgin, had to answer a charge of unchastity. Though innocent, she had given grounds for suspicion through her gay attire and unmaidenly freedom of manner. After she had been remanded and finally acquitted, the Pontifex Maximus, in the name of the whole college of priests, ordered her to abstain from frivolity and to study sanctity rather than smartness in her appearance.

History of Rome, Livy, 9 BC

Attitudes have certainly changed since the advent of effective contraception (with premarital chastity declining in the eyes of male suitors from mandatory to desirable). "Western" women today have less social pressure to follow traditional norms of sexual etiquette. But it would be disingenuous to attribute to cultural pressure as the sole cause of the preference of female chastity. The biological value of female chastity is easy to understand. Unlike maternity, the paternity of a child is uncertain. Our ancestors who preferred promiscuous women likely ended up raising fewer of *their own* offspring, compared to our ancestors who preferred chaste women. Human monogamy is imperfect, and we can expect that adaptive heuristics for males to avoid cuckoldry would be advantageous. The cross-cultural preference of men for chastity and fidelity in a mate is a legacy of these adaptations.

Indicators of being a nurturing mother – Human mothers bear the majority of the burden of infant care. Because of this, the character traits associated with nurturing are seen as relatively more attractive in women than men.

Think first, ye women, to look to your behaviour. The face pleases when character commends. Love of character is lasting: beauty will be ravaged by age, and the face that charmed will be ploughed by wrinkles. The time will come, when it will vex you to look at a mirror, and grief will prove a second cause of wrinkles. Goodness endures and lasts for many a day, and throughout its years love securely rests thereon.

The Art of Love, Ovid, AD 2

Selective pressures to find nurturing women attractive would arise if female nurturing were associated with better survival of offspring (and it undoubtably is). Characteristics of a mate who

will likely be a nurturing mother include empathy, gentleness, self-sacrificing, and enjoys being around children. All things being equal, men would likely prefer a long term mate who is a kindergarten teacher rather than an accountant or factory foreman, because kindergarten teacher is a honest signal about her nurturing ability, tendency, or preference.

Intelligence – As with men, and for the same reasons, intelligence is an attractive feature in women.

Of that most glorious visage ye did vew?

But if the beautie of her mind ye knew,

That is her bountie, and imperiall powre,

Thousand times fairer then her mortall hew

The Faerie Queene, Spencer, 1590



Bodies Part 1: Stress and Beauty

Posted on [admin](#) Posted in [Book](#)

Of all Gods workes, which do this world adorne,
There is no one more faire and excellent,
Then is mans body both for powre and forme,
Whiles it is kept in sober gouernment;
But none then it, more fowle and indecent,
Distempred through misrule and passions bace:

It grows a Monster, and incontinent

Doth lose his dignity and native grace.

The Faerie Queene, Spencer, 1590

[Previously](#) we outlined the human physical traits that are considered beautiful and introduced evolutionary aesthetics as the general explanation of why we see beauty in these traits and not others. In this chapter and the next, we will explore in detail why we have evolved to see beauty in certain specific facial and corporeal traits.

Stressors of development

The concept of the fitness indicator as an honest signal of mate quality is a critical concept in understanding human physical beauty. An important related concept is the developmental stressor. Developmental stressors are deviations from the normal conditions to which an organism is adapted. These stressors can impede proper development of an organism. They can be either environmental or genetic, and some examples are given below:

Genetic – Inbreeding, Mutation, Hybridization, etc.

Environmental – Thermal, Nutritional, Chemical, Population Density, Acoustic, Parasitic, etc.

Increasing a stressor beyond a certain point negatively affects an organism's development. Organisms have a limited amount of energy, and stressors require energy to cope with. Stressors therefore detract from an organism's ability to develop optimally, since they use up this scarce resource. Stressors are useful to identify because they can be used as the independent variable in animal experiments seeking to identify the *cause* of symmetry and sexual dimorphism – key aspects of beauty.

Both genetic and environmental factors may be stressors of development. It seems reasonable to assume that organisms with genotypes that are able to buffer the developmental consequences of environmental stressors might lead to higher evolutionary fitness (partly through survival, and partly because mates find them more attractive). However, for the purposes of viriculture, genotypes are fixed, and the *environmental* stressors are more relevant to our discussion than our genetic ability to buffer their effects. The term “reaction norms” is used by biologists to describe the different phenotypes that result from a single genotype due to different environmental conditions. In a sense, viriculture is all about reaction norms. A child's reaction norms are the range of potential developmental outcomes, depending on how we control his environment.

The general pattern emerging from studies available is that the amount of phenotypic variation increases in response to deviations from optimal environmental conditions. For example, this is the case for the variation in the number of vertebrae among a range of fish species exposed to different development temperatures. Another example concerns the body size of the barn swallow offspring raised in nest environments differing in their abundance of experimentally manipulated levels of ectoparasitism. Nestlings raised in poor environments with lots of haematophagous mites were

phenotypically more variable than those raised in parasite-free nests... Therefore it is generally thought that variation in expression of phenotypes increases as environmental conditions deteriorate and environments deviate from the optimum.

Asymmetry, Developmental Stability and Evolution, Møller, Swaddle, 1997

The variation from “normalcy” associated with adverse environmental conditions that Møller describes in the context of animal experiments was noted by Price in his investigations of traditional peoples who had recently switched to modern dietary practices.

Those individuals living in their native environment on their native foods have universally normal facial and dental arch form reproducing the characteristics of the race. Those living on the normal environment except for using the imported foods of white flour, sugar, sugar products, syrup, polished rice, and the like, have in the succeeding generations marked changes in facial and dental arch forms. This problem of progressive degeneration in the younger members of the family is again illustrated by the group shown in Fig. 107.



The older girl has reproduced the tribal pattern of the race with normal broad, dental arches. The second girl shows marked narrowing and lengthening of the face. The third child, a boy, shows very marked divergence from the tribal pattern. This group is shown below with their teeth exposed. It will be seen that the oldest girl has broad dental arches typical of Nature’s normal design. The second girl has a marked depression laterally in the molar and bicuspid region producing a narrowing of the palate. The third child has in addition to the narrowing of the face a marked deficiency in bone growth so that the cuspids both above and below are forced entirely outside the arch.

Nutrition and Physical Degeneration, Price, 1939

Price’s description of the “very marked divergence from the tribal pattern” is essentially the increased variation of phenotype in response to deteriorating environmental conditions. A similar divergence for the mental/behavioral “pattern” has been noted by other authors as well. One interesting example come from Engles’ *The Condition of the Working-Class in England in 1844*:

And, finally, Dr. Hawkins, in speaking of Manchester:

“I believe that most travellers are struck by the lowness of stature, the leanness and the paleness which present themselves so commonly to the eye at Manchester, and above all, among the factory classes. I have never been in any town in Great Britain, nor in Europe, in which degeneracy of form and colour from the national standard has been so obvious. Among the married women all the characteristic peculiarities of the English wife are conspicuously wanting. I must confess that all the boys and girls brought before me from the Manchester mills had a depressed appearance, and were very pale. In the expression of their faces lay nothing of the usual mobility, liveliness, and cheeriness of youth. Many of them told me that they felt not the slightest inclination to play out of doors on Saturday and Sunday, but preferred to be quiet at home.”

For all this testimony of the physicians and commissioners, the report itself offers hundreds of cases of proof. That the growth of young operatives is stunted, by their work, hundreds of statements testify; among others, Cowell gives the weight of 46 youths of 17 years of age, from one Sunday school, of whom 26 employed in mills, averaged 104.5 pounds, and 20 not employed in mills, 117.7 pounds. One of the largest manufacturers of Manchester, leader of the opposition against the working-men, I think Robert Hyde Greg himself, said, on one occasion, that if things went on as at present, the operatives of Lancashire would soon be a race of pigmies. {159a} A recruiting officer {159b} testified that operatives are little adapted for military service, looked thin and nervous, and were frequently rejected by the surgeons as unfit. In Manchester he could hardly get men of five feet eight inches; they were usually only five feet six to seven, whereas in the agricultural districts, most of the recruits were five feet eight.

From the combination of both experimental and anthropological examples, we can see that environmental stressors can have a major impact on physical even mental outcomes.

A further concept related to stressors of development is “developmental canalization,” which refers to the ability for a genotype to develop stably under a range of environmental conditions. Physical traits with low canalization are more sensitive indicators of the history of exposure of an organism to environmental stressors. Let’s recall that mates are evaluated on the basis of phenotype, not genotype. It is therefore not possible for a mate to tell the difference between a mate with:

- a) a high canalization genotype in the context of a stressful development
- b) a low or average canalization genotype in the context of a stress-free development

While the message that the phenotype sends to mates is very important, *how* an individual attains the “high quality phenotype” is not consequential for mate selection.

How can it be that these two different sources of stable development would both seem attractive to a mate’s evolved aesthetic? Because both of these options have real value to a mate in terms of evolutionary fitness – but for different reasons. A genotype with high canalization for good-lookingness would make for a desirable mate because those genes provide insurance against the uncertainties of future environments for offspring. But a phenotype that is simply good-looking (despite an average canalization genotype) would be desirable for a mate as well, because that individual has proven with an honest signal his ability to control/escape/protect against the environmental stressors present throughout his own development. This honest history is an

indication that this mate may provide/protect against these stressors for their offspring (or pass on the traits that indirectly cause his offspring to protect against the stressors themselves).

The fact that two mates could have achieved equal levels of good-lookingness through two very different means, and are indistinguishable to mates is an indication that there are multiple underlying values mates select for based on the same visible phenotype. In our example, the female would be unwittingly selecting for either one phenotype which communicates either:

- a) “good” genetics which effectively buffer environmental stressors of development
- b) proof of an ability to engage in behavior that minimizes exposure to developmental stressors.

If these two had different consequences on fitness, mates would have evolved to distinguish between the two. We can therefore consider the possibilities of the ultimate origins of good-lookingness on the basis of environmental and genetic factors:

- a. Genes are the primary determinant of good lookingness through their direct impact
- b. Environment is the primary determinant of good lookingness
- c. Genes are the primary determinant of good lookingness, but they do so indirectly – by changing the organisms behavior and therefore changing the organism’s environment.

Of course, the reality is a blended view of all three. A good-looking man is a desirable mate not just because his genes directly impact looks, but also because his genes are associated with the behaviors which allow good looks (and the correlated desirable traits) to *develop*. To illustrate, let’s imagine that broccoli develops a child into a beautiful adult. Genes that predispose a taste for broccoli would not directly impact looks, but they would indirectly cause good lookingness.

If adverse environmental conditions are ubiquitous, organisms should have developed ways in which to avoid or minimize the costs of tolerating such conditions. Such tolerance could have a behavioral or physiological basis that could be partly genetic. The most readily available way of reducing the impact of the environment is by behavioral means. If particular environmental conditions are adverse, avoidance of these conditions by, for example, environmental choice or thermal preference will reduce the impact of stress.

Asymmetry, Developmental Stability and Evolution, Møller, Swaddle, 1997

Among both lay people and professionals, desire for a beautiful mate is often assumed or implied to be a desire for “good genes.”

Women will naturally go after the strongest male that shows the greatest signs of ability in providing food and protection. They do this because they are searching for the best genetic specimen to impregnate them and add value to their DNA.

However, we can see that this explanation of mate preference for beauty is only part of the full story. In the classic peacock example, the male with the largest train has “the best genes” because he is able to survive with such a burdensome honest signal. However, this same honest signal of beauty is also influenced by environmental factors.

Consider an experiment in which a mad scientist manages to clone 100 peacocks, all with identical genes. Would all of their trains be of equal size? Of course not, extra-genetic influences would certainly play a role. Even in this controlled setting, the precise extra-genetic influences of train size are so complex as to be considered random. In this biological case, we may expect that train size would follow a Normal distribution. Now the mad scientist decides to introduce peahens into the enclosure. Peahens sexually select the mates with the largest trains. But in no sense are they selecting “good genes.” They are simply selecting good development.

We saw a similar example of this in our thought experiment with twins in the previous chapter. If we have twins and one gets sick – they have the same genes, but different attractiveness. Similarly, if we have twin sisters, and one is ovulating, this fertile twin may be expected to appear more sexually desirable to a mate. Obviously no genetic difference exists. But males have evolved to identify extra-genetic cues in their mate selection.

Good development may be just as important as good genes, especially in humans. Good development can be seen as an honest signal of the historical influence of many extra-genetic factors such as food, sleep, stress, status, etc. Compared to many animals, humans care for their young for an extended period. If a well-developed mate has more successful offspring, a preference for mates who can honestly signal their ability to obtain resources critical for development could arise. The honest signals of good development would be sought by mates, even though these signals were not directly caused by genes. In fact, if mutants arose with genes that mimicked “good development” (with dishonest signals, as we shall see) without exposure to the critical resources, we might expect that the opposite sex would evolve to see through this genetic trick.

Genetics is of course important in mate selection – which is why most people are not interested in mating with a macaque, or a fish, or someone with a deforming genetic disease. But many of the details that influence mate selection in our species may be due more to extragenetic factors, especially exposure to stressors, than is generally assumed.

Teleology of corporeal beauty

We can now revisit the characteristics which are associated with human physical beauty, and provide an explanation of why these factors are beautiful. The explanations are based in evolutionary psychology. To illustrate the alternative possibility that our judgement of human physical beauty is due to cultural indoctrination, I have included the story below, which I came across online:

But I realized that I couldn't keep promising him – or myself – that I would ever be thin, even if I tried. Moreover, I didn't think I should be obligated to keep trying. It was a dilemma: I was a fat woman, and my husband now admitted that he found fat women unattractive.

I argued that what we consider attractive is influenced by society; he insisted that it was an innate preference for which he didn't deserve to be judged. He felt like I was accusing him of being gullible and stupid, brainwashed by a culture that vilifies fatness.

He couldn't understand why I would give up trying to be thin.

This woman hoped to convince her poor husband that his finding beauty in thin woman was an arbitrary element of his culture. However, it should by now be clear to readers that our cultural emphasis on traditional standards of beauty (such as small waists in women) is *secondary* to universal biological tendencies. We are all born with a knowledge about which physical traits are beautiful.

While this understanding is muddled and confused in the mind of us moderns, the ancients understood the reality with a shocking accuracy. Consider Diotima's classic analysis of the nature Love and Beauty – which is essentially exactly true, and not just in a poetic or metaphorical sense.

‘I’ll try to make myself clearer. Reproduction, Socrates, both physical and mental, is a universal human activity. At a certain age our nature desires to give birth. To do so it cannot employ an ugly medium, but insists on what is beautiful. Sexual intercourse between man and woman is this reproduction. So there is the divine element, this germ of immortality, in mortal creatures – *i.e.* conception and begetting. These cannot take place in an uncongenial medium., and ugliness is uncongenial to everything divine, while beauty is congenial. Therefore procreation has Beauty as its midwife and its destiny, which is why the urge to reproduce becomes happy and gentle when it comes near beauty: then conception and begetting becomes possible. By contrast, when it comes near ugliness it becomes sullen and offended, it contracts, it withdraws, and shrinks away and does not beget. It stifles the reproductive urge, and is frustrated. So in anyone who is keen (one might almost say bursting) to reproduce, beauty arouses violent emotion, because beauty can release its possessor from the agony of reproduction. Your opinion, Socrates, that love is the desire for beauty, is mistaken. ‘

‘What is the correct view, then?’

‘It is the desire to use beauty to beget and bear offspring.’

‘Perhaps.’

‘Certainly! And why to beget? Because begetting is, by human standards, something eternal and undying.’

Symposium, Plato, circa 380 BC

Plato seems to have really, truly understood Love and Beauty, although he understood it outside of the framework of modern biology. However the practical conclusions which follow are the same whether we consider Eros a god or pattern of neurohormonal signals. Indeed this an excellent example of how scientific paradigm shifts do not always move us closer to the truth. With the advantage of 2400 years of scientific advancement, we can parse the same explanation in evolutionary terms – that love is the desire to use beauty to achieve the greatest evolutionary fitness (what Plato describes as divinity).

Teleology of corporeal beauty in both men and woman.

Symmetry– Beauty is correlated with symmetry of body and face. Even imperceptible asymmetries negatively correlate with rating of beauty, and explicit asymmetries of body or face are considered monstrous. This is true even if we control for the impact of averagedness on symmetry.

Recent experiments on birds and insects have shown that females prefer to mate with males possessing the most symmetrical sexual ornaments. Because deviation from perfect symmetry are negatively correlated with fitness in some species, the degree of symmetry in ornaments may provide females with information about mate quality.

Asymmetry, Developmental Stability and Evolution, Møller, Swaddle, 1997

Like all of our evolved aesthetic tastes, symmetry is beautiful because it is an honest signal to mates about *something important*. Symmetry in organisms is the result of development. The type of symmetry superficially present in humans is known as bilateral symmetry, meaning that the right and left sides of our bodies are approximately mirror images. I say superficially because the selective pressures which caused organisms to evolve externally symmetrical bodies did not lead to symmetry internally.

During development, the coordination of equal growth on both sides of the body at the same time requires both energy and information. For example, our right and left hands must coordinate growth in such a way to develop symmetrically. In this sense, symmetry is an honest signal of an organism having the energy and information necessary for exquisite coordination of growth. This correlates meaningfully with other important characteristics for mating. For example, body symmetry correlates with IQ, although not very strongly.

Information for development comes from both our genes and our environment. Energy for growth comes from our environment alone. Symmetry therefore provides an honest signal about the genetic and environmental exposure of a potential mate during development. The genetics and environmental history of a potential mate are important for survival and reproduction for reasons we discussed earlier. Firstly, an honest history of a mate who has been exposed to few environmental stressors of development may indicate an ability to protect the mate and her offspring from environmental stressors in the future. This could lead to superior survival and reproduction for the offspring. Secondly, the symmetry of a mate could be a signal of genes that correlate with an ability to withstand environmental stressors of development “unphased.” For the same reasons, this could mean greater fitness of offspring.

As we discussed, symmetry could indicate either an “average” developmental history but superior genes to buffer the effects of developmental stressors; or “average” genes, but an honest signal of an historic ability to avoid environmental stressors of development. In fact, symmetry in humans is surely the result of both of these factors at once. Furthermore, these factors cannot be separated, as avoidance of environmental stressors of development depends on behavior, which may depend on genetic influences itself.

The genes for bilateral symmetry in organisms are evolutionarily ancient, and preserved in nearly all potential mates that are even remotely human. Symmetry therefore would not really typically good genes, as all potential mates have similar symmetry genes (at least genes which directly code for symmetry). However, symmetry may be attractive in animals precisely because genes alone are not enough to achieve it. Everyone has the same symmetry genes, they are very old and well

preserved among animals. But despite these same genes for symmetry, the actual expression of those genes may be a sensitive indicator of the developmental history and stress exposure of that individual. It may be that symmetry is such a universal characteristic of attractiveness among animals simply because it is a signal that has proven impossible to fake – a very honest signal.

Asymmetry does not typically increase in a linear relationship with environmental stress. At low levels, environmental stresses may have no effect, or even reduce asymmetry. However at increasing exposures, corporeal asymmetry increases with stress. Similarly, the energetic cost for an organism to maintain symmetry likely increases non-linearly as the organism approaches perfect symmetry. Each marginal unit of symmetry therefore requires more than a proportionate the metabolic cost to achieve. Near perfect symmetry may therefore convey a disproportionately more powerful message to mates than moderate symmetry.

Asymmetry also does not occur in all aspects of an organism simultaneously. Some body parts, especially those involved in coordinated movement, have a higher developmental canalization. This means that they are less vulnerable to deviation due to environmental stressors. Secondary sexual characteristics, especially the ornamental traits such as female breasts, are particularly vulnerable to asymmetrical development in the presence of environmental stressors. Only an individual who had an optimal developmental history can display sexual ornaments that have grown both large and symmetrical. For the rest of us, due to limited developmental resources, ornamental traits are stunted in size, symmetry or both. The human face, which is not involved in locomotion, seems to have a relatively low developmental canalization, and the consequences of this are explored in the next chapter.

Ultimately, there is meaningful information relevant to evolutionary fitness in symmetry. We have evolved an aesthetic sense to read this information and feel the emotion of love because, in our ancestral environment, feeling drawn to symmetrical mates really did lead to enhanced survival and reproduction – or in the words of Diotima, beauty stimulates love in order to lead us toward immortality through reproduction.

Sexual Dimorphism – Here “sexual dimorphism” implies that women on average think masculine looking men are beautiful, and men think that feminine looking women are beautiful. In earlier chapters, we discussed the peacock’s tail as the result of sexual selection of females preferring males with long tails (females lack tails), and this is an example of sexual selection.

Just like symmetry, sexual dimorphism is a signal of something important. In a proximal sense, women prefer sexually dimorphic men (who are taller, stronger, faster, with a more robust skeleton than themselves) because these traits are reliably associated with a man’s ability to protect and provide resources for women and their children. Because of the primacy of female choice on mate selection, this female preference alone would be enough to push the evolution of sexual dimorphism. But men also exhibit preferences which have a selection effect, although to a lesser degree. Men prefer sexually dimorphic women (smaller, greater percentage body fat, less body hair, less robust skeleton than themselves, “optimal” female sex ornaments) because these traits are reliably associated with an ability to successfully gestate and nurture children. The correlation

between these valuable traits and sexual dimorphism led to the evolution of our aesthetic preference for dimorphic mates.

But there is a more ultimate reason why sexually dimorphic mates are beautiful. Just as in the case of symmetry, it has to do with the information that sexually dimorphic traits send to potential mates about the genetic and environmental influences on development. Sexual dimorphism is governed by the levels of sex hormones in our bodies. Despite their usefulness in developing attractive mates, sex steroids are metabolically expensive. Sex hormones cause diminished immune function. They also require abundant biological energy and valuable nutrients to maintain at high levels. Because of this, only those individuals who have the best genetics or environmental exposure can maintain high levels of sex hormones. In turn, these individuals display greater sexual dimorphism. In this way, sexual dimorphism functions as an honest signal of either genetic superiority or environmental wealth. Exceptional sexual dimorphism is attractive for the same reason that a gazelle's stotting behavior is attractive, it is an honest signal of a superabundance of health and vigor. Deficiencies of sex hormone exposure during gestation and development lead to decreased sexual dimorphism.

This is why secondary sexual characteristics (breasts, muscles, lower facial 2/3s) are the basis of mate attraction, as opposed to traits like arm length, or ankle circumference.

A leg man? Why would I be a leg man? I don't need legs. I have legs.

(((Seinfeld)))

Just as low developmental stress leads to well sexed, sexually dimorphic adults, the high developmental stressors during development may lead to androgyny. In America it has reached the point where a significant fraction of the population genuinely doesn't know its own sex, and this modern phenomenon may be accounted for by modern lifestyles (low cholesterol diets, high population densities, etc.). This may be why "scientists" are never able to find a "gay gene," – as homosexuality and androgyny are secondary to environmental influences on gestation and development.

The secondary sex characteristics of an organism are typically very sensitive to developmental stress. This sensitivity to stress means these body parts provide more sensitive information to mates. Barring the injection of exogenous steroids, high levels of sex hormones is an un-fakable indication of an organism's robust health history.

Teleology of corporeal beauty in woman.

The signals, especially for men come, from the shape of the women. That's a big deal for men... It's huge for men.

Bill Nye

The physical traits considered beautiful in women are tied inextricably to health, youth, and fertility. Ultimately, men who preferred to mate with women possessing these traits had higher evolutionary fitness.

Neoteny – Neoteny refers to the retention of juvenile features into adulthood. Women who are more neotenous are rated as more beautiful by men. In other words, men find youthful looking women more beautiful.

The ultimate reason men see beauty in neotenous women is simple – female fertility is associated with their youth. Humans tend to form pair bonds, as imperfect as these may be. Because of the tendency for humans to maintain their mates for more than a single copulatory event, our preferences have evolved to consider not only current, but future fertility of a potential mate as well. A concept known as “residual reproductive value” is an important factor in what we find attractive in mates. Not only is their current fertility important, but their expected future fertility is important as well, since we may well mate with this same partner in the future. The importance of residual reproductive value helps explain why a man’s maximum acceptable age for a woman to marry is about 5-10 years younger than for short term sexual relationships. Residual reproductive value for women peaks during adolescence, just as a girl is finishing puberty. It is not surprising that this age is typically preferred for marriage in traditional societies. Even “civilized” men in shown unlabeled photos find girls around 16 years old most attractive for marriage. These young women are not at peak fertility at that moment (a common misunderstanding), just their peak residual reproductive value.

7:10 Waist:Hip Ratio – A 7:10 waist:hip ratio means that a woman’s waist circumference is seven-tenths her hip circumference. This is the empirically determined ideal dimension preferred by men.

Men prefer this waist:hip ratio because it is associated with increased evolutionary fitness. Pubertal female sex hormones cause a redistribution of body fat into a “gyno” pattern – fat in the butt, hips, and breasts. This pattern stores fat in just the right places for mobilization during gestation and nursing. This same fat actually *becomes* a baby during pregnancy, and milk during lactation.

The DHA-rich fat deposits that give women curvy hips and thighs are an almost irresistible nonverbal mating message to men. It not only makes a woman visually attractive to males, it also signals that she has plenty of brain-building fats to confer on progeny—nature’s own Head Start. And it indicates that such a woman is also likely intelligent, herself a beneficiary of those brain-buffing fatty acids.

Eternal Curves, Psychology Today, Lassek, Gaulin, Marano, 2012

In fact, a mother’s waist to hip ratio correlates with her child’s performance on cognitive tests, with low ratios ~0.7 scoring the highest. It should come as no surprise then that modern research shows that women who have waist:hip ratios closer to 1 have a more difficult time becoming pregnant. Our evolved aesthetic instinct has provided men with this wisdom without ever needing to perform a study.

“If you think of the kind of women that men on a building site may whistle at, they tend to whistle at beautiful women,” he told the BBC. “They don’t whistle at a perfectly healthy and fecund 20-year-old.”

Men May Prefer Beauty Over Youth, Cindy Martin

A 7:10 waist:hip ratio is also attractive because of a secondary factor – that maintaining high levels of sex hormones throughout development is metabolically expensive, and therefore the woman must have good genes, environment, or both.

The beautiful woman should, indeed, have a pretty face, but the perfect figure is even more essential; and behind this beauty of face and beauty of form is an even more fundamental fact that a woman must be beautiful of body to the very core of her being; she must have health beauty, vital radiant health that keeps the bloom upon her cheek, the flash and sparkle in her eye, the snap and vigour in her carriage, grace in her every movement, and last but by no means least, the vivacity of mind that can no more flower in a sick and weakly body than roses can thrive on barren impoverished soil.

Physical Beauty, how to Keep it, Annette Kellerman, 1918

A Small Waist – The single most important variable of the bust:waist:hips dimensions for determining female corporeal beauty is the waist measurement. Studies have found that female waist circumference is negatively correlated with male erectile function and sexual satisfaction.

There is certainly some overlap between a small waist:hip ratio and a small waist. Both are associated with fertility and are honest signals of health. A small waist in an absolute sense also indicates that the potential mate is not obese. Obesity is both correlated with and the cause of morbidity and mortality.

Persons who are naturally very fat are apt to die earlier than those who are slender.

Hippocrates, circa 400 BC

Obesity also leads to birth complications, and even puts the child at a disadvantage epigenetically. There is no doubt that maternal overweight and obesity decreases evolutionary fitness of the offspring, and that this is reflected in our distast for a potential mate's excessive waist circumference.

As mentioned before, the extremely small waists considered desirable during the 18th century likely were so for non-biological reasons. It seems more likely that most men's evolved aesthetic was not so interested in the actual physical appearance of the tight laced waist, but rather due to the status connoted by such an outfit.

In the pictured representations of the women of that time, and in modern romantic imitators of the chivalric thought and feeling, the waist is attenuated to a degree that implies extreme debility. In modern communities which have reached the higher levels of industrial development, the upper leisure class has accumulated so great a mass of wealth as to place its women above all imputation of vulgarly productive labor. Here the status of women as vicarious consumers is beginning to lose its place in the sections of the body of the people; and as a consequence the ideal of feminine beauty is beginning to change back again from the infirmly delicate, translucent, and hazardously slender, to a woman of the archaic type that does not disown her hands and feet, nor, indeed, the other gross material facts of her person.

The Theory of the Leisure Class, Veblen, 1899

The biologic beauty of a small female waist as an indicator of health and fertility is distinct from the culturally conditioned preference for tightlaced waists that connote status by debilitating women.

Further explanations for why certain female features are considered beautiful include:

Clear Skin – This trait is tied to averagedness, as averaged faces tend to have fewer skin imperfections. It is also a sign of health.

Wide Cheekbones – Honest signal of proper skeletal development

Broad Smile – Honest signal of good dental development and care

Wide Eyes – Honest signal of proper skeletal development

Large Pupils – Honest signal of youth

Full, Red Lips – Honest signal of fertility, receptivity, optimal sex hormone levels

Long, Lustrous Hair – Honest signal of past years of good health

Teleology of corporeal beauty in man.

Height – Women prefer men who are taller than themselves. In addition, women prefer men who are taller than the average man. The proximal reason for this is that taller men are better able to protect mates, and often have higher social status. The ultimate reason height is beautiful in men is because it is an indicator of both desirable genes and a desirable developmental history.

Growth is one of the most complex processes of the body. Stature is only one of its manner of evidencing itself; it also accounts for general bodily development.

Women differ in this respect, as the tallest women are not generally considered the most attractive. This is at least in part due to the fact that estrogen inhibits bone growth, and the women with the most estrogen, when they are very feminine and fertile may be shorter than those with less estrogen.

The same basic explanation for height applies to the other male specific aspects of beauty such as the **9:10 Waist:Hip Ratio**, the **6:10 Waist:Shoulder Ratio**, and a **pronounced facial structure**.



Bodies Part 2: The Well Developed Body

Posted on [admin](#) Posted in [Book](#)

A Well Developed Body

Having explored why it is that certain human body traits are beautiful, we can now explore the notion of a well developed body.

A well developed body is one that has:

1. A fully matured skeleton
2. Strong and defined musculature
3. Properly distributed fat in an appropriate amount
4. The above characteristics appropriate to the individual's sex

The characteristics of a well developed body are the result of a healthy and low-stress development, and a well developed body is a beautiful body in the eyes of any healthy human judge.

When speaking of another human, we moderns use the word “good” in a vague moral sense. Among animals however, well developed bodies are synonymous with general “goodness.” “Good” specimens of show dog, for example, display that characteristics of a well developed body. When

humans were closer to our animal roots, our own language reflected this association, as the beautifully well developed bodies of Homer's heroes made them "good" men.

ὅς τις ὄδ' ἔστιν Ἀχαιῶς ἀνὴρ ἠϋς τε μέγας τε

Who is this Achaean both good/handsome/noble and great/huge/mega?

Illiad, Homer, circa 800 BC

The word ἠϋς implies both goodness and beauty, and combined with Agamemnon's μέγας (mega) stature, Priam immediately identifies him as first among the Greeks. That physical excellence (both size and beauty) was, in the Heroic Age, so closely allied with rank and leadership suggests that this is a primal human norm. Indeed when we consider what type of men are elected to positions of authority in politics and corporations, we find "good and great" still play a role today. The nature of size and beauty in men as honest signals of good development help explain why humans would might evolve instinctive psychological preference for huge handsome men as their leaders. Indeed, in ancestral times, such male leaders must have, on average, led to better survival and reproduction outcomes for *the entire group*, otherwise no such preferences would be selected for.

This archaic, naively honest animalistic human preference is equally evident in the earliest Norse myths:

A manchild was it, and great of growth from his birth, as might well be.

So he was sprinkled with water, and had to name Sigurd, of whom all men speak with one speech and say that none was ever his like for growth and goodliness. He was brought up in the house of King Hjalprek in great love and honour; and so it is that whenso all the noblest men and greatest kings are named in the olden tales, Sigurd is ever put before them all, for might and prowess, for high mind and stout heart, wherewith he was far more abundantly gifted than any many of the northern parts of the wide world.

Volsung Saga, circa AD 1200

However, centuries of civilization and culture distanced our minds from our animal roots, and in Greece, by Euripides' day the relationship between physical excellence and moral goodness was less concrete.

O Zeus, why, when you gave to men sure signs of gold that is counterfeit, is there no mark on the human body by which one could identify base men?

Medea, Euripides, 431 BC

Whether the corporal differences between the noble and common people of archaic Greece is attributable to genetics or environment, or whether it even existed at all is of course impossible to say for certain. But we can see that the average modern lacks the explicit appropriate appreciation for human corporeal "goodness."

It is worth repeating that, as indicated earlier, an outright massive woman would not represent a well developed woman, on the contrary, it would indicate some inappropriate sex hormone

exposure during development. The healthy female doses of estrogen during development partially stunts the growth of the bones, and the the well developed female skeleton, although full figured and wide especially in the hips, will not be as tall or robust as a good man's.

Skeletal Development – The Bony Frame of Beauty

The first consideration in a well developed body is the fully mature skeletal development. Of course, in considering people we must speak in relative terms, and the well developed skeleton is relatively wider, taller (especially for men), denser, and stronger. The skeleton is the aspect of good development that in adulthood we are least able to alter, and therefore it represents the “deepest,” or “truest” aspect of physical beauty. Even if we make the generous assumption that the two men below are the same height (which they surely are not), no amount of muscular development can elevate the man with the poorly developed skeleton to an equal plane of corporal beauty with the well developed skeleton.



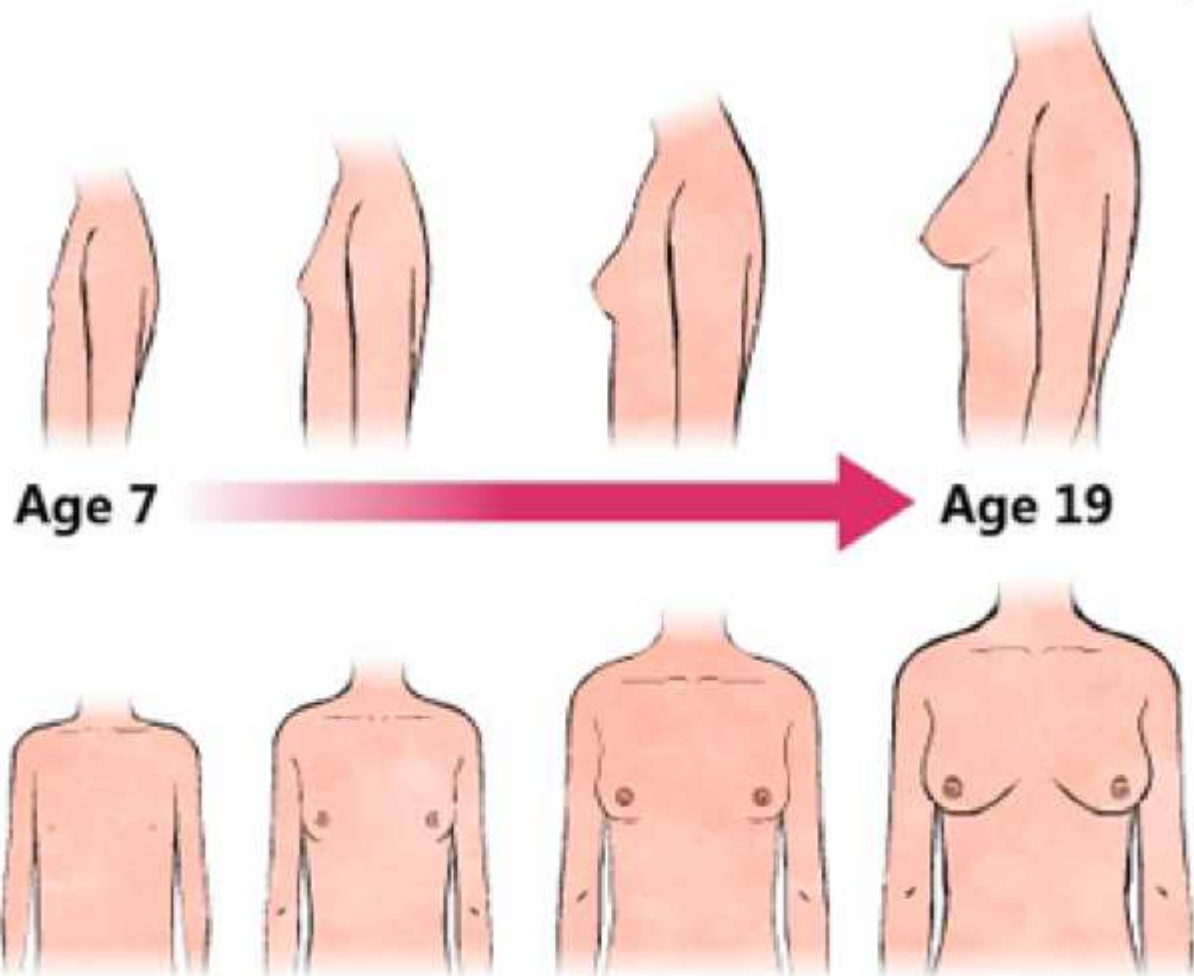
While the skeleton is the most important part of human beauty, it is the most neglected aspect of human beauty, as before plastic surgery, skeletal development was generally considered unalterable, genetic, or divinely ordained. Just as well developed male bodies have a wider skeleton, so too is the face wider (as we shall explore in depth in the next chapter), and for similar reasons. Ultimately a skeleton cannot grow without the raw material components of bone (protein, calcium, phosphorous, etc). If functional stress increase without additional raw materials, the body may steal the material from one part, or re-allocate growth, but it will not be able to develop the entire skeleton optimally. For truly optimal skeletal development, reaching the utmost of what one's genes allow, there *must* be a superabundance of bone-building raw materials available, and this of course must come from the mother (during gestation), and the diet (once the child is born).

Chronological versus developmental age

Not all bodies mature at the same pace. Despite these differences in pace, our skeletons will stop growing toward the end of puberty, around 18 for people of European descent. Because of the variable rate of maturation, but the strict limit of time for skeletal growth, adults have widely varying degrees of skeletal development in adulthood. This makes youth the absolutely critical time for establishing human corporeal beauty – since we don't get a second shot. Once set, our degree of skeletal development does not change. While we are aware of the body changes that accompany puberty, we underestimate how much of these changes are due to skeletal growth.

If we examine two women, both age 23, one may have the body of a full grown adult woman, while the other may have the body of an adolescent girl. Because we know skeletal growth is mediated to a significant degree by environmental factors, we can see how these factors control the degree of development of our secondary sex characteristics.





Since secondary sex characteristics are closely associated with beauty, skeletal development is therefore critical in determining how attractive we are. In men secondary sex traits impart strength and robustness, and in women they illustrate a superabundance of body-building material relevant for successful gestation. The body changes that occur during puberty determine our adult secondary sex characteristics, which are the most valuable cues for courtship and mating. The evolved human psyche reads these honest signals of development, and behaves accordingly. In general, we prefer mates with well developed skeletons (an interesting exception exists, discussed below).

While low developmental-age men are less attractive to healthy women, they can overcome their corporeal ugliness with displays of resource control, status, or can attenuate the effects with excellent muscle development, fat distribution, and head, facial, and body hair.

While readers may agree that the well developed man and woman skeleton approximate the classical ideals of human beauty, some, especially male readers, may balk at this notion, and sincerely prefer the stunted, juvenile, “poorly developed” female skeleton retained into adulthood.

Consequently, young persons, in whom the passions are in a state of excitement and ferment, will look upon those faces as divine, which, though not strictly beautiful, have the charm of tender and passionate expression; and they will be less affected by a truly beautiful woman, even with the shape and majesty of Juno, whose gestures and actions evince modesty and decorum.

This is certainly not a pathologic preference on their part, and is rooted in our ancestral mating behavior. As far as our evolved minds can see, the body of the 23 year old women with poor skeletal development – but who is muscularly strong from Pilates, and has been beautifully plumped up to 22% body fat by six months of beefsteaks, fatty fish, and heavy cream – appears as a healthy 14 year old girl. Since humans pair bond, a young partner, even if she is not yet sexually mature, is a good investment for a man, as she has many future years of childbearing remaining (she has a high “residual reproductive value”) Such a girl is read by men as attractive, indeed, studies find that “very young” (~15 years old) women are preferred by men in choosing wives, with older women preferred for one-night-stands. Essentially such a 23 year old hijacks men’s brains with her poorly developed skeleton, tricking them into thinking she is, in fact, a still-growing but decently developed 14 year old.

The *true* most attractive woman, controlled for chronological age, will always be the well developed woman.

While the influence of environment on skeletal growth, and therefore bony frame is the factor of major importance, the common understanding is completely at odds with this reality. Consider this anonymous internet post:

You know what makes guys sexually attractive to women?

ALPHA GENETICS.

>i’d l-like you if you were more muscular

SAID LITERALLY NO WOMAN EVER. Women are attracted to FACE, HEIGHT and FRAME. a MALE MODEL tier face, a decent HEIGHT and a GOOD FRAME, i.e. BROAD SHOULDERS and NARROW HIPS, or in other words THINGS SOLELY DETERMINED BY GENETICS.

Lifting is the GOAT way for incels to think they’re doing something useful with their time. Take it from someone who knows: Girls are not even remotely attracted to gymcels. When girls picture a guy with a nice body, they picture a tall guy with a good face, clear skin and a V taper. NO AMOUNT OF WORKING OUT IN THE GYM CAN GIVE YOU HEIGHT, FACE, OR FRAME.

You can gymcel your ENTIRE LIFE but it won’t change these SET IN STONE, GENETIC factors that MATTER THE MOST. Really the only way working out will make you look better is if you’re already overweight and losing weight reveals previously hidden cheekbones/jawline, and therefore improves your FACE. Thinking women like guys with autistic bulging muscles is stupid as FUCK.

Don’t you gymcels get it? It’s either ALPHA GENETICS, or BETA RESULTS.

The above example illustrates how deluded we can be about the role of genetics (as opposed to environment) in the development of a well developed skeleton.

Muscle development

The second aspect of the well developed body is strong musculature. The absolute number of muscle cells one has is laid down early in life, although they grow larger with exercise. Increases in muscle size developed during our youth are generally retained more permanently than increases after puberty.

However, unlike our skeletons, our muscles can be developed tremendously throughout adulthood; compare the two twins below.

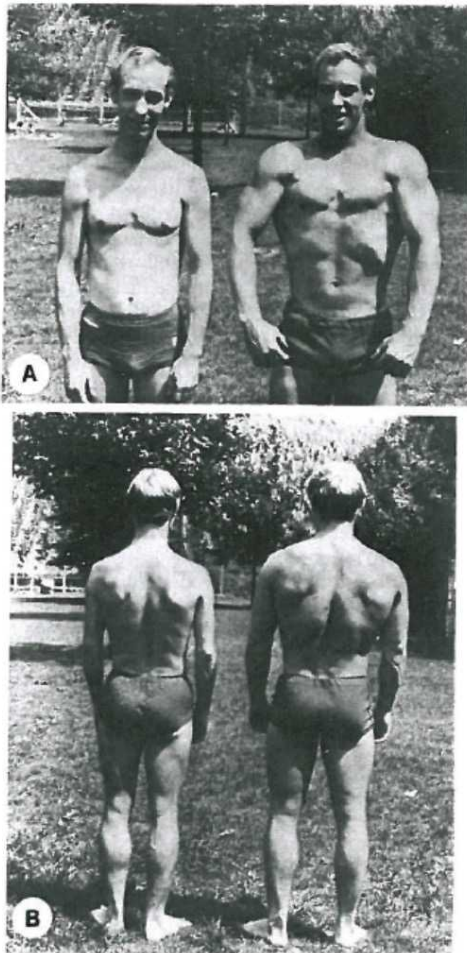


FIGURE 14 *Interaction between genetic background and specific types of physical training. Identical twins, one an endurance runner and the other a weight lifter. There is a noticeable difference in muscular development. Differences in heart size and maximal O₂ uptake (see text) were probably related to the training, giving the runner a greater endurance capability.*

Musculature is therefore a less important aspect of human corporeal beauty than skeleton, but it is still certainly consequential. A poorly developed skeleton can be made “datable” with good musculature, and by it a good skeleton is made godlike. Musculature represents a more short term insight into the health history of a human, but there is no denying that this is important for health and mating success.

As any steroid user knows, male sex hormones such as testosterone promote rapid muscular development, allowing superhuman gains. For this reason, healthy men perceive women with masculine levels of muscle development as less attractive, as some pathologic state is required for

their circulating sex hormones to allow such musculature. The well developed body is muscular, and healthy muscular development is critical to corporeal beauty, but it's degree must be appropriate for the sex.

The Greeks had long ago established the exact programs necessary to perfect the athletic development of the body. Gymnastics was considered fundamental in education. The word calisthenics comes from the ancient Greek words kalós (καλός), which means “beauty”, and sthénos (σθένος), meaning “strength,” and is the art of using one's body weight and qualities of inertia as a means to develop one's physique. Today many options exist for developing strong and beautiful musculature.

Body fat development and control

The third aspect of the well developed body is proper body fat distribution and control. Like our muscles, the absolute number of our fat cells does not change during our lives. The distribution of our fat cells, which is quite relevant for facial and corporeal beauty (especially in women – consider that much of the butt, and essentially all of the breast size is fat), is laid down early in life, even during gestation. Furthermore, and unlike muscle, pathologic hormonal states often lead to strange and horrifically unattractive re-allocations of body fat.

However, just like muscle, our general body fatness can be greatly increased during adulthood. For the average modern, the difficulty is avoiding gaining too much fat. This is easily avoided by taking no sweets or starches. However, the addition of the appropriate amount of body fat, especially for a young women of child bearing age, can be equally problematic, given the ghastly lack of understanding of diet and health among doctors and the public (this topic is discussed at length in chapter 13).

A well developed body is therefore neither too fat not too thin, with the optimal absolute percentage ranging from about 18-29% for a woman, and somewhat less for a man.

Gender/sex appropriate development

The last, and most subtle aspect of the well developed body is that it is developed appropriate according to its sex. A tall, rippling muscular man with a robust forehead may be healthy and beautiful, but the same traits in a women are pathologic. Sex appropriateness is an indication of both developmental sex hormone exposure (the skeletal development and secondary sex characteristics), and current circulating sex hormone levels (musculature, fat, and body hair). No body can be said to be well developed if it is not in accordance with its sex.

I would like to add here that the modern world has a horrific deficit of true corporeal beauty. Many contemporary degenerates would appear as borderline monsters without the ubiquitous aegis of baggy clothing. But the deepest tragedy is that this corporeal degeneracy does not seem to decrease our ability to desire true beauty in others (or at least does not extinguish it completely). Even ugly Quasimodo loved Esmerelda, who in turn found him repulsive, but was happy to die for the well-developed Phoebus. And Cervantes' beautiful shepherdess Marcela expresses the same sentiment.

Heaven made me, as all of you say, so beautiful that you cannot resist my beauty and are compelled to love me, and because of the love you show me, you claim that I am obliged to love you in return. I know, with the natural understanding that God has given me, that everything beautiful is lovable, but I cannot grasp why, simply because it is loved, the thing loved for its beauty is obliged to love the one who loves it. Further, the lover of the beautiful thing might be ugly, and since ugliness is worthy of being avoided, it is absurd for anyone to say: "I love you because you are beautiful; you must love me even though I am ugly."

Don Quixote, Cervantes, 1605

Clearly Cervantes read his Plato (see page 143). Indeed as he implies, human physical beauty is essentially a prerequisite for real, full, and permanent love.

No one has escaped Eros or will escape Eros as long as there is beauty, and eyes see.

Daphnis and Chloe, Longus, circa AD 100

Whose face and shape proportiond were so well,
They seemd the house where love itselfe did dwell.

Orlando Furioso, Ariosto, 1532

And this seems to be especially true in the eyes of men.

By no other plan [than maintaining physical beauty] can woman win love worth having nor keep the love she has won. On no other basis can she win and keep the admiration of the world at large, which is so essential to keeping the man she has won proud of his possession of her and attentive, lest he lose her.

Physical Beauty, how to Keep it, Annette Kellerman, 1918

This beauty deficit among millions of modern degenerates leads therefore to the even crueler love deficit, a fate-worse-than-death state of permanent unrequited love, or even spiritual deficit, dispensed not by divine anger, but by our shattered culture's failure to protect our average citizens. Indeed Socrates tells us just how appreciation of the beauty in face or form can stimulate the elevation of the soul to a higher plane.

But he whose initiation is recent, and who has been the spectator of many glories in the other world, is amazed when he sees any one having a godlike face or form, which is the expression of divine beauty; and at first a shudder runs through him, and again the old awe steals over him; then looking upon the face of his beloved as of a god he reverences him, and if he were not afraid of being thought a downright madman, he

would sacrifice to his beloved as to the image of a god; then while he gazes on him there is a sort of reaction, and the shudder passes into an unusual heat and perspiration; for, as he receives the effluence of beauty through the eyes, the wing moistens and he warms. And as he warms, the parts out of which the wing grew, and which had been hitherto closed and rigid, and had prevented the wing from shooting forth, are melted, and as nourishment streams upon him, the lower end of the wings begins to swell and grow from the root upwards; and the growth extends under the whole soul-for once the whole was winged.

Phaedrus, Plato, circa 380 BC

Consider this a cautionary tale for mothers – spare your poor unborn children the curse of being unloveable, and use the ancient embodied wisdom of traditional culture to develop for them beautifully well developed and loveable bodies.



Bodies Part 3: Posture, Carriage, and Grace

Posted on [admin](#) Posted in [Book](#)

Structure and function in our bodies influence each other. The physical body determines our posture and carriage, but so to does chronic posture effect our bones and muscles. While some unaesthetic postures are the sequelae of poor development, awareness of proper posture can help improve beauty and health.

A useful starting point for the discussion of posture was used by Gokhale in her popular book *8 Steps to a Pain Free Back*. In this wonderful practical guide, she uses examples from Western history as well as contemporary “traditional peoples” to demonstrate that the posture maintained by the majority of moderns is a degenerate aberration. The critical difference between correct and incorrect posture, she explains, begins in the hips, which in the modern tend to be “tucked,” with

the tailbone curling inferiorly and anteriorly. This is the position we adopt when we sit on our tailbones in poorly constructed made-in-China public school furniture. Traditional posture, on the contrary, rotates the tailbone up and back, as when we sit on the edge of a flat surface on our “sit bones.” This gives the spine a “J-shape,” as opposed to the modern destructive “S shape, which fails to stack and stretch the vertebrae appropriately. Interestingly, the same spinal posture is arrived at from a very different direction by strength training coaches when explaining the proper posture to maintain during heavy squats. Gokhale further illustrates the proper posture by imagining we still have a tail coming from our tailbone – we shouldn’t be sitting on our tail.

Far from being simply unaesthetic this modern degenerate posture is extremely destructive to our spinal health, and is closely associated with the back pain that plagues moderns as an epidemic. As Western culture shattered but Western furniture design remained, we lost our proper postural education to guide us, once explicitly taught to nearly everyone as a component of dance.

The inference to be drawn from these incontrovertible facts is, that if we, in very early life, teach young children to practice similar exercises, and follow them steadily afterwards, we shall confirm them in excellent health, and prevent the accession of those evils which so often cause deformity to the figure, and destruction to the constitution, at later periods of life.

Quoted in *Ladies Book of Etiquette and Manuel of Politeness*, Hartley, 1872

Gokhale runs hands on classes to unlearn the modern destructive postural habits, especially associated with sitting, and replace them with the traditional human norms, restoring our lost cultural wisdom. Many people have been spared surgery or interventions by medicos through her rebuilding of this seemingly tiny aspect of culture.

Working along similar lines, the bestselling book *Born to Run* publicized the notion that shoes are likely harmful to our postural health. Our feet have evolved to engage in feedback with the ground, and adapt to the quality of the surface. By covering the sense organs of the feet, we lose the normal evolved influence of our feet on our posture. The tight and thick covering of modern shoes renders impotent the various muscles of the foot itself, and our feet essentially atrophy.



A similar issues are addressed in the book *Move Your DNA*, which emphasizes that the lack of varied movement of all kinds in the lives of most moderns is an aberration in the context of our evolutionary heritage.

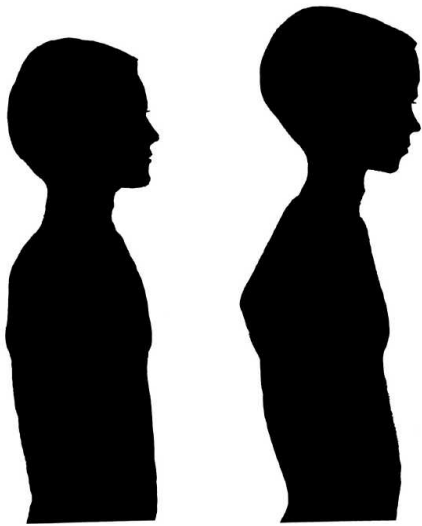
Besides from protecting our physical health, posture is also associated with mental health. Indeed if we think of posture as body language, then we can see how mood and status are both communicated through our body position. Body language is older than spoken language, and whether or not you have studied it in a book, your subconscious understands and reacts to it. Indeed we are constantly judged by our body language and posture, even if we never notice. Low status, depressed mood, and fear are characterized by a small, shrinking posture – curling the chest and pelvis, with the arms and legs close to the core, or crossed. The head would be down, and the gaze lowered. Interestingly, this body language overlaps with the destructive posture of modernity described by Gokhale, and is almost unavoidable when sitting in a cheap modern chairs and poorly designed desks, doing written or computer work. High status, fearless, or exuberant posture is characterized by bigness, and openness – the spine is full extended, bringing the neck, chest and pelvis open and exposed, almost as a defiant invitation to a would-be attacker (a proper honest signal in the style of stotting); the limbs are never crossed, neither does a limb cross the midline, but rather, sitting or standing, the are spread out, often to an extreme; the head is head high, with the eyes looking up, or at the subject of interest. This posture is instinctively adopted during extreme triumph, consider *Victorious Achillies*, a fresco painted by Franz von Matsch.



Interestingly, it seems that the influence of status and mood on posture goes the other direction as well – good high status posture can boost mood, imply status to others, and even alter blood levels of markers of stress.

Certain postural deformities, however are so intrinsic to a body that they cannot simply be unlearned. Scoliosis, for example, is essentially a disease of crooked spine, and postural training is often not enough to compensate for the deformity. Just like in their confusion about the causes of dentofacial deformity, the medical community considers the common type of adolescent “idiopathic scoliosis” to have no clear cause, to be “multifactorial,” and to be partly genetic in origin. This however, shows the lack of clarity of medicos about the nature and origin of corporeal asymmetry. What is scoliosis if not gross corporeal asymmetry? Just like more mild body and face asymmetry, it arises from environmental stressors of development during critical periods of growth. It is no surprise that, in the years of adolescence when the rate of spinal growth is highest, individuals with inadequate raw materials or energy for growth will realize a sudden and distinct corporeal asymmetry. Neither is it surprising to learn that scoliosis is positively correlated with “idiopathic” dental malocclusion (crooked teeth) – since they may have the same root cause.

Another related postural aberration which cannot be changed simply by proper training is the “forward head posture.”



This aberration of posture is explained fully in another post, but essentially arises due to inadequate airway caliber caused by inadequate skeletal growth of the jaws. Again medicos struggle to explain the correlation between forward head posture and various other dentofacial deformities, never realizing that they are both stigmata of poor skeletal development. The functional load of chronic heavy backpack use during childhood – another modern aberration – only exaggerates both the risks of forward head posture and scoliosis, and is in no way comparable with Viriculture.

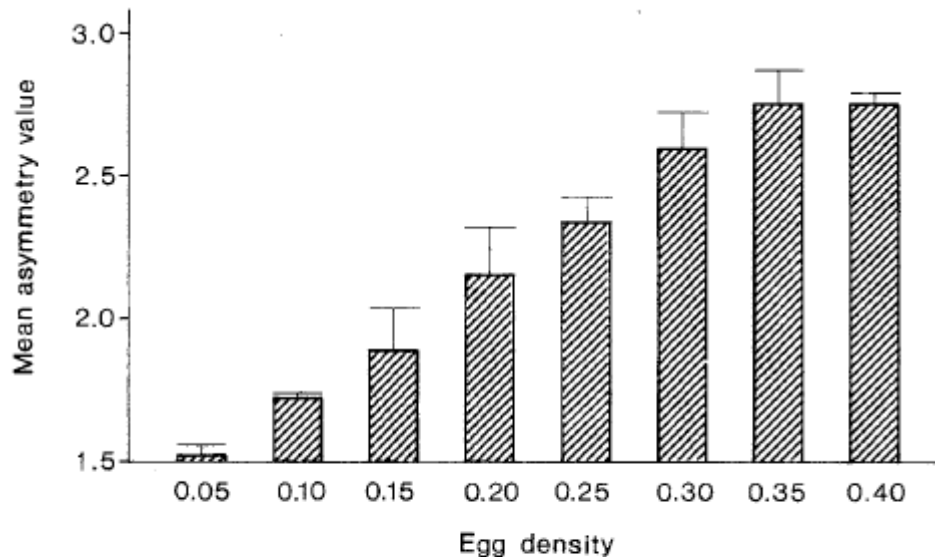


Fig. 6.4 Mean (+ s.e.) asymmetry value versus rearing density in Australian blowflies. Mean asymmetry value is a composite measure of left-right asymmetries for three meristic traits (refer to Clarke and McKenzie (1992) for more details). Values are means of replicates. Adapted from Clarke and McKenzie (1992).

Bodies Part 4: Trends in Corporeal Beauty

Posted on [admin](#) Posted in [Book](#)

Why Human Beauty Must be Expensive

The canon of expensiveness also affects our tastes in such a way as to inextricably blend the marks of expensiveness, in our appreciation, with the beautiful features of the object, and to subsume the resultant effect under the head of an appreciation of beauty simply. The marks of expensiveness come to be accepted as beautiful features of the expensive articles.

The Theory of the Leisure Class, Veblen, 1899

Beauty is an evolved emotional motivator for behavior. We find beautiful mates beautiful in order to motivate us to love and mate with them, even in the face of obstacles. This evolutionary pressure to love beautiful, but not ugly, individuals stems from the better survival and reproduction (in an ancestral environment) of offspring from beautiful mate. The beauty is not an end in itself, but rather an honest signal of mate fitness. Mate fitness comes from both “good” genes, and “good” environmental exposure. This exposure has been shown in experiments to influence factors critical to beauty, such as symmetry, sexual dimorphism, height, body fat, and musculature. Only optimal environments result in these beautiful traits. Typically, those environmental exposures that maximize the health and vigor of an organism will lead to corporeal beauty. Environmental stressors harmful to development are buffered by control of valuable resources. However these resources are scarce – and there is therefore a struggle, especially between males, for control of these critical resources (esp. food and habitat). Again, consider the relationship between population density and body asymmetry in animal experiments.

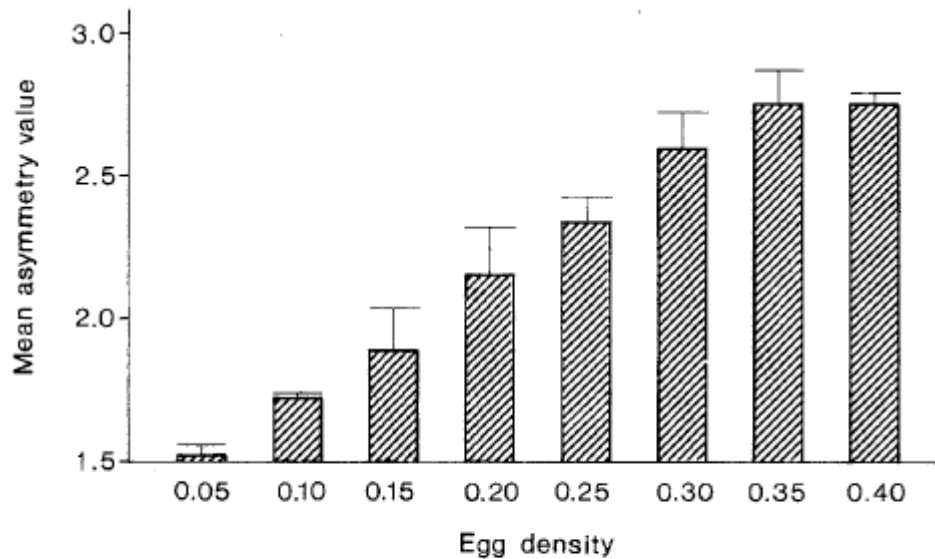


Fig. 6.4 Mean (+ s.e.) asymmetry value versus rearing density in Australian blowflies. Mean asymmetry value is a composite measure of left-right asymmetries for three meristic traits (refer to Clarke and McKenzie (1992) for more details). Values are means of replicates. Adapted from Clarke and McKenzie (1992).

This struggle for limited resources is the basis for an economy, and mammals function in resources this sort of rudimentary economic system. Because the resources that buffer environmental stressors generally have a non-linear effect on the development of beauty, beauty is an honest signal of a disproportionate control of valuable resources. In this way, beauty sends a message to mates that the organism has a wealth of those resources most critical to survival and reproduction.

Those individuals who are beautiful are advertising an honest signal of their ability to control these critical resources during their own development. Because critical resources (high quality food, habitat, comfort, hygiene) are scarce, the cost of developing beauty must be higher than the cost of developing ugliness.

Trends in Corporeal Beauty

A ponderous stone bold Hector heaved to throw,
 Pointed above, and rough and gross below:
 Not two strong men the enormous weight could raise,
 Such men as live in these degenerate days

Iliad, Homer / Pope, circa 800 BC

Our guiding philosophy is to doubt that unproven modern interventions are superior to traditional practice. It is therefore reasonable to assess if important measures of viticulture were superior among traditional peoples. There are two main methods that have been used to assess this question. The first

is to look at the skeletal and dental remains of traditional peoples from long ago. The second is to find contemporary traditional peoples and observe them directly.

Obviously, direct observation of living traditional peoples can tell us a great deal about their health and physical beauty. This is the method led to Weston Price's belief in the physical degeneracy of many moderns:

It is important to preface the observations by constructing a mental pattern of physical excellence from the pictures of the various primitive groups and, with this yardstick or standard of normalcy, observe our modern patterns.

Nutrition and Physical Degeneration, Price, 1939

And of course Price was not alone. But a surprising amount of relevant information can be gleaned through the method of assessing skeletal remains as well. Skeletal remains are useful because they provide the best known data for assessing long term trends in human health. A fundamental principle of physical anthropology is that environmental factors effect human bodies in predictable ways. Stressors leave a permanent mark on bodies. For the purposes of viriculture, the most relevant information comes in the form of changes in adult height, changes in facial structure, changes in dental occlusion, changes in dental caries rate, and changes in the the rates of poor dental enamel development. These metrics are useful for two reasons – 1) they are used as proxies for environmental stressors which we have seen is relevant for development of symmetry and sexual dimorphism, and 2) these metrics are valuable in contemporary society as ends in themselves (height, straight intact teeth, etc.).

The environmental factors that have a negative impact on human corporeal development are often associated with inadequate resources in an ancestral setting. Because inadequate resources had a negative effect on survival and reproduction, selective pressures favored individuals who could read the marks of inadequate resources (an aesthetic sense), and avoid mating with the (preference for beauty in mates). Popular depictions of pre-agricultural societies place them in a struggle for subsistence. However, anthropologists' understanding of the situation is quite different. In 1968 Sahlins described hunter-gatherers as the "original affluent society," whose work is minimal, and leisure and food abundant. As we saw in chapter six, Diamond calls the switch from hunter-gatherer to agricultural societies "the worst mistake in the history of the human race." Consider the following assessment of the corporeal changes that accompanied the shift to agriculture.

The transition to settled agriculture has been widely celebrated as a triumph... Our research suggest that life *became* "nasty, brutish, and short" for the typical person with the rise of agriculture, government, and urbanization. The hunter-gatherers and those living in dispersed settlements were the healthiest groups in our sample. They were taller and had fewer pathological lesions than... residents who relied on the products of settled agriculture.

The Backbone of History, Steckel, Rose, 2005

These claims are made partly due to the abrupt decline in skeletal markers of health in the archeological record that coincides with the introduction of agriculture. The reality is that many pre-

agricultural societies were more effective at meeting the basic needs of human development than their agricultural replacements.

The body is free from deformity and proportioned as beauty and symmetry would indicate desirable.

Primitive Man and His Food, Arnold Paul De Vries, 1952

The physical superiority of pre-agricultural people can be exaggerated, however. While average health (and the associated corporeal markers of beauty) fell with the rise of agriculture, elites have always enjoyed superior health, evidenced by their tall, well formed bodies and teeth. There is no need for us to revert to agricultural conditions in order to develop optimal bodies. We can however, learn which environmental factors are relevant.

Understanding why the rich in archeological records were exposed to fewer stressors of development is simple – they controlled more of the scarce resources important for development.

On the other hand, there are many theories to why agriculture coincides with a decline in corporeal markers of health, including increased disease from population density, and exposure to domesticated animals. The most convincing of these theories is that the changes in the diet that accompanied the switch to agriculture are responsible. This was not simply a change in calorie intake, but rather a change in the composition of the diet. Many nutrients, notably fats, protein, fat-soluble vitamins, and iron are essential for proper development were affected by this change.

For viriculture, the most relevant long term trends in human development are: 1) The rich are exposed to fewer stressors than the poor, and 2) Pre agricultural peoples are exposed to fewer stressors than post-agricultural peoples. Modern humans are the poorly developed “runt of the litter,” and in nature the runts are usually left to die.

Corporeal Aging

When women fade at thirty, grow fat at forty, and shrivel up at fifty, no system of morals will save them, for man’s love must have feminine beauty as a flower must have water; and if women will insist on becoming ugly, men will instinctively turn again and yet again to the fleeting beauty of youth—beauty that fades and passes if it be neglected and uncared for.

Physical Beauty, how to Keep it, Annette Kellerman, 1918

Just as the well developed body depends on the four critical factors of skeleton, musculature, fat, and appropriate sexual dimorphism, so too do these four factors make up by far the most important determinants of beauty or ugliness of the aging body. – although most cosmetics companies would have you believe it is their SPF 15 anti-aging “serum.” During development these factors ought to be encouraged to grow as well as possible, and during aging we must preserve and maintain them to the best of our ability.

	Well Aged	Poorly Aged
Skeleton	Normal posture Normal bone density	Khyposis Low bone density High Fracture Risk Decreasing Height
Musculature	Maintenance of Muscle Mass Maintenance of Strength	Muscle wasting Objective / Subjective Weakness
Fat	18-25% body fat Properly distributed fat	Obese Dried up Mental decline
Sexual Dimorphism	Normal levels of sex hormones Maintainance of skeleton, muscle, and fat	Inappropriate sex hormones Gynocomastia Hirsutism

Bone density is a popular subject these days in medicine, mostly because drug companies happened upon a couple classes of drugs which decrease the rate at which the elderly lose bone density and they need an excuse to sell them to as many people as possible. This is why “osteoporosis” and “osteopenia” are marketed so heavily – they are huge money makers. Ostensibly, these drugs, especially the “bisphosphonates,” benefit patients by decreasing the risk of a fracture of a major bone, like the hip. But while they are effective in increasing “bone density” as measured by an expensive type of x ray (an invalid endpoint), they have little absolute effect on fracture rate, and behavioral modifiers (how to help grandma not slip in the tub), are likely far more efficient. These drugs have a number of awful side effects as well, the classic maxillofacial side effect being that the bones of the jaw may not ever heal after what should be a routine dental extraction. Drug companies make additional billions pushing calcium/vitamin D supplements (now in chewable chocolates) on essentially all women. Even more ungodly is the use of artificial sex hormones (estrogen or testosterone) to “maintain bone health” in the elderly.

The *real* healthy way to avoid decreases in bone density in adulthood does not involve doctors. Exercise (that is function) is often put forth as a means of maintaining bone density into decrepitude, and weight bearing exercise is of critical importance in maintaining bone health. However, medicos rarely mention that we can very well accumulate the raw material components of bone in a traditional way without pills – that is by getting adequate sun exposure (vitamin D), eating fatty animal products (protein, cholesterol, and vitamin D), and eating bones and bone broth (calcium and phosphorous). These same factors of high cholesterol diet and exercise combine to naturally maintain high levels of bone-protective sex hormones, without the insanity of dosing the

elderly with artificial prescription estrogen and testosterone. While some decrease in height can be considered a natural aspect of aging, much of modern height loss among the elderly is due to poor bone health caused by our own poor behavior.

As far as the musculature is concerned, nearly all elderly moderns lose their muscles and become weak – but this is not necessarily inevitable. If nothing else, Art DeVany has given us a proof of concept in his strong, muscular 80 year old body, maintained with a Paleolithic diet and high-intensity-interval style exercise.

Unlike muscle and bone, which generally decrease in old age, fat can either decrease or increase. Some old people, especially on a grain based diet, literally dry up as the proportion of subcutaneous fat and the proteins which hold them together degrade without replacement. Others, many other these days, balloon to enormous proportions that are a great shame to our common humanity. The inability of medicine to solve even this most basic problem of obesity should demonstrate just how bad medicos are at solving the major problems of chronic disease. Indeed *chronic* disease for everyone is the medical industry's greatest money-maker, and in the most degenerate parts of the US we are close to achieving that end.

The last aspect of aging that needs discussion is sex hormone maintenance. This determines to a large extent the preservation of bone, muscle, and fat themselves. Sex hormone imbalance can lead to disgusting results, which sadly as all too common in the elderly, for example true breasts on old men, or beards on women. As mentioned above, the best and safest way to maintain sex hormone levels is naturally, not by the crude method of prescription intake.

Just as a mother cannot gestate a well developed baby without these raw materials, and an infant cannot grow to fully formed adult, neither can an adult persist indefinitely without maintenance raw material intake. It is partly for this reason that our elderly are so decrepit. An adequate diet, and healthy human movement in many ways prevent the worst aspects of aging.

Can we control the development of human corporeal beauty in our children?

And what would you say about the body, my friend? Are you not surprised at any one of his own accord bringing upon himself deformity, leanness, ugliness, decrepitude?

Laws, Plato, circa 380 BC

The reader should have little doubt by now that controllable environmental factors are major influences on human corporeal beauty. Some of traits of body beauty, such as fat percentage and muscle development, are well known to be malleable into adulthood. Others, like skeletal frame and fat cell distribution are laid down early in development, yet still very much under environmental influence. These influences have a practically appreciable impact, for example good viticulture might be expected to have a few inches positive effect on adult height outcomes for men. Even body symmetry itself, a critical factor in corporeal beauty, is a consequence of controllable environmental factors during development. Likewise the development of sexual dimorphism is impacted by environmental stressors.

Experiments and careful observations have established the stressors of development in humans. They include energy intake and output, raw material intake, and information exposure. Simply put the most relevant controllable factors for the development of human corporeal beauty are diet, ambient temperature, mechanical loading, and freedom from disease – all summed up over the entire life of the organism. The exact details and how to practically control these factors for viticulture are covered in later chapters.



Faces Part 1: Introduction

Posted on [admin](#) Posted in [Book](#)

Don Quixote heaved a deep sigh and said, “I cannot say positively whether my sweet enemy is pleased or not that the world should know I serve her; I can only say in answer to what has been so courteously asked of me, that her name is Dulcinea, her country El Toboso, a village of La Mancha, her rank must be at least that of a princess, since she is my queen and lady, and her beauty superhuman, since all the impossible and fanciful attributes of beauty which the poets apply to their ladies are verified in her; for her hairs are gold, her forehead Elysian fields, her eyebrows rainbows, her eyes suns, her cheeks roses, her lips coral, her teeth pearls, her neck alabaster, her bosom marble, her hands

ivory, her fairness snow, and what modesty conceals from sight such, I think and imagine, as rational reflection can only extol, not compare.”

Don Quixote, Cervantes, 1605

Having explored body beauty in general, we can now discuss the special case of facial beauty. The face is generally agreed to be the most important determinant of human physical beauty – we can judge the attractiveness of a person based on their face, even without seeing their body. A 2010 study by Buss assessed the relative importance of facial and body appearance in dating choices:

Participants viewed an image of an opposite sex individual whose face was occluded by a “face box” and whose body was occluded by a “body box...” To experimentally test the relative importance of facial and bodily attractiveness, participants were instructed that they could only remove one box (the “face box” or “body box”) to inform their decision about whether or not they would engage in the designated relationship with the occluded person.

More than just a pretty face: men’s priority shifts toward bodily attractiveness in short-term versus long-term mating contexts

For long-term partners, both men and women preferred to judge on the basis of face rather than body at a ratio of about 2:1. As important as bodies are in determining human physical beauty, faces are even more important.

Jerry, my face is my livelihood, my allure... my twinkle! Everything I have I owe to this face.

(((Seinfeld)))

The questions of why faces are such an important aspect of beauty, why certain faces are beautiful, and why we have a face at all are addressed here. The environmental contributors to facial beauty, and the consequences for viriculture are also addressed here.

Our quest has been for information relative to the health of the body, the perfection of the teeth, and the normality of development of faces and dental arches, in order that we might... learn the secret of such splendid body building.

Nutrition and Physical Degeneration, Price, 1939

Why do you have a face?

Faces are not essential to life, and many living things lack a face. But faces seem to arise almost inevitably in those organisms who have developed centralized information processing organs, such as brains. It seems beneficial to place much of the sensory equipment of an organism close to the brain, as this reduces the latency in responding to environmental cues like danger, food, or potential mates. In those organisms that can control their movement, this sensory equipment is better suited

“facing” in the direction the organism is traveling. The face then can be used to sense what is “ahead,” and make educated guesses about the future. If these educated guesses are superior to chance in determining survival and reproduction, selective pressures will favor the evolution of a face.

Faces do not exist for one reason alone. In fact, they are redundant to an astounding degree. Faces house our ability to see, smell, taste, and hear. They are also essential for communication, both verbally and non-verbally. The redundancy of faces functions as biological insurance in our unpredictable lives:

The best way to illustrate such redundancy is with an aspect of the life story of the colorful philosopher of science Paul Feyerabend. Feyerabend was permanently impotent from a war injury, yet he married four times, and was a womanizer to the point of leaving a trail of devastated boyfriends and husbands whose partners he snatched, and an equally long one of broken hearts, including those of many of his student (in his day, certain privileges were allowed to professors, particularly flamboyant professors of philosophy). This was a particular achievement given his impotence. So there were other parts of the body that came to satisfy whatever it was that made women attached to him.

Mother Nature initially created the mouth to eat, perhaps to breath, perhaps for some other function linked to the existence of the tongue. The new functions emerged that were most probably not part of the initial plan. Some people use the mouth and tongue to kiss, or to do something more involved to which Feyerabend allegedly had recourse.

The Black Swan, Taleb, 2007

In pop psychology it is often said that most of information communicated through conversation is not in the *words*, but in the tone and facial expressions of the speaker. In humans, facial expressions are a universal language that all of us can understand at a glance. Montaigne’s story below illustrates the relative weight we should place on word versus facial expressions in revealing our true emotions.

Plutarch’s writings, if we savor them aright, reveal him to us well enough, and I think I know him even into his soul; yet I wish we had some memoirs of his life. And I have embarked on this digression apropos of the gratitude I feel toward Aulus Gellius for having left us in writing this story about his character, which concerns my subject of anger. A slave of his, a bad and vicious man, but one whose ear were pretty well filled with the lessons of philosophy, having for some fault of his been stripped by Plutarch’s command, at first muttered, while he was being whipped, that he was being punished without reason and that he had done nothing. But finally, starting to shout and to abuse his master in good earnest, he reproached him with not being a philosopher, as he boasted: for he often heard him say that it was ugly to get angry – indeed, he had written a book about it – and the fact that right then, all plunged in anger, he was having him so cruelly beaten, completely belied his writings. To which Plutarch, all coldly and sedately, said: “How is this, clown, by what do you judge that I am angry at this moment? Does my face, my voice, my color, my speech, give you any evidence that I am excited? I do not think that my eyes are wild, my face agitated, my voice terrifying. Am I red? Am I foaming at the mouth? Does any word escape me that I shall have to repent? Am I quivering? Am I trembling with rage? For I tell you, those are the true

signs of anger.” And then, turning to the man who was flogging him, he said: “Go right on with your job while this fellow and I are arguing.”

Essays, Montaigne, 1580

But the face also communicates information of another type, separate from mood or expression. Just like bodies, faces communicate *honest signals* containing a great deal of important information to predators, rivals, and potential mates. Faces can provide reliable information about an individual. Ultimately, the existence of this reliable information led our ancestors to develop exquisite abilities to read faces and judge people accordingly. Bodies communicate this information as well, but I will argue that faces are the most sensitive indicator for much of the information relevant to mate selection. This, combined with the fact that the face is visible even when we are clothed, is why the face is the most important factor in human physical beauty.

Non-genetic factors are of practical consequence in facial development

The face of a child is often fully developed, yet, owing to some of the constitutional diseases, arrested development of the face at this point takes place. The second generation inherits this deformity, while the grandparents possess normally developed faces.

Degeneracy: Its Causes, Signs, and Results, Eugene ((Solomon)) Talbot, 1898

An [earlier post](#) introduced the theoretical role of environmental influences in craniofacial development, we must now consider how important they actually are.

Most people assume that the structure of the face is determined by genetics – however, this is not entirely true.

The answer is that genes don't fully mold the face and we don't even know much much they shape it.

Evolution of the Human Head, ((Lieberman)), 2011

It may seem far-fetched to suggest facial development is meaningfully affected by environmental factors such as ambient temperature, nutrition, population density, noise, and mechanical factors. This phenomenon however, has been proven true in animal experiments. While the corresponding experiments have never been performed on humans, there exists low quality evidence which leads to similar conclusions about the importance of these environmental factors in human facial development.

One interesting example of the power of environmental influences on development of the face comes from studies in carp. These sorts of animal experiments are useful because researchers have few ethical qualms with the careful manipulation of factors such as temperature, population density, food quality, etc. in little fish. These biologists sometimes use the term “phenodeviants” to describe individuals who display a particular pattern of phenotypic abnormality. Phenodeviants can be the

result of genetic stresses, such as mutations or inbreeding, but phenodeviancy is also associated with certain environmental changes, most notably temperature and food.

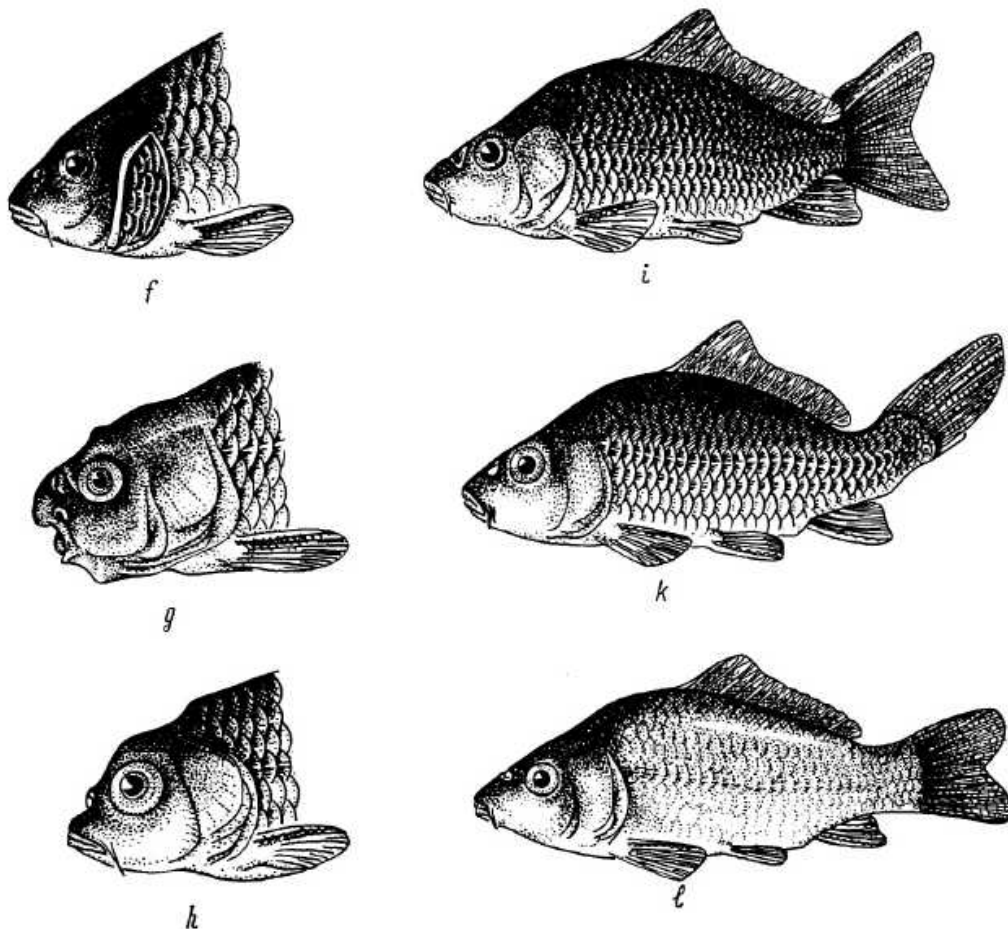
The frequency of appearance of any phenodeviant does, to a large extent, depend on the environmental conditions under which the fishes exist... Temperature and the extent of food supply for the fry represent the most important environmental factors affecting the frequency and the degree of manifestation of these defects.

Genetic Bases of Fish Selection, V.S. Kirpichnikov, 1981

In these experiments, the consequences of these environmental changes included changes in both body and face, with one pattern explicitly called "deformation of the head." The illustrations of the carp phenodeviant from this same book are telling because they demonstrate that environmental stressors *alone* can account for facial deformities.

Phenodeviant

141



It is hardly surprising that temperature and food supply are of such consequence to growth and development. After all, we are ultimately made of food, and organisms cannot function without heat energy. Food provides us not only with the molecular components for building bodies, but also with the energy needed to run them. For warm blooded animals, ambient temperature, unless it happens to be at the optimal setting for body function, requires food energy to counterbalance. As readers

know, eating food is a good way to warm up on a cold day. Sweating and cooling also requires additional energy which ultimately comes from food.

An experiment on fruit flies found temperature fluctuations induced the development of phenodeviants, including one in which “the head is much reduced.”

12 1 ♀ The head is much reduced. The right eye of the fly is absent and in its place there is a deep concavity surrounded by bristles. The ocellus is very prominent.

Temperature induction of phenodeviants in Drosophila melanogaster mutants,

H. F. Hoenigsberg, 1968

While temperature and nutrition may be the most important environmental factors to influence physical development, others certainly exist. For example, once male orangutans reach sexual maturity some males go on to develop large cheek pads, known as flanges, as well as a throat pouch which aids in vocalization to attract mates.



Other males maintain “arrested development” with their adolescent appearance and never develop flanges. Heritable differences between males are unlikely to account for these flange differences, since all the males in any group are closely related. So which environmental factors are responsible for the dramatic differences in facial development? Ethologists have found that flange development in males is inhibited by social cues. In groups where an existing flanged male is present, development of flanges in other males is suppressed. It is even believed that the distinctive flanged male mating growl helps mediate this suppression in other nearby males. In cases where a young male grows up around only females, flanges develop from a very young age. The molecular mechanism of these changes in facial development are not understood. It is enough to show that environmental factors, even unexpected ones such as social cues, can dramatically effect facial development in our closest animal relatives.

Cephalometrics

In an effort to identify and correct dental and facial deformities, a large amount of work has gone into establishing techniques for measuring and assessing faces. Today, orthodontists and surgeons routinely identify if and how a patient's face differs from the norm or "ideal." The measurement of heads is known as cephalometrics. The values for facial norms are based on empirically derived studies. The values for ideal facial proportion are based partly on empirically derived judgment, and partly on heuristics, experience, and preference of the medico. On the basis of these ideals, interventions are performed for patients in cases when the patient and the doctor agree that the deformity warrants treatment.

In order to better understand patterns of dental and facial deformity, and how they affect viriculture, we have to introduce some jargon.

The first terms are basic anatomical words that describe three dimensional locations on the body.

Anatomical position – The position with the body erect with the arms at the sides and the palms forward. This position is used as a reference for anatomical terminology.

Anterior – Toward the front of the body

Posterior – Toward the back of the body

Superior – Toward the top of the body

Inferior – Toward the bottom of the body

Medial – Toward the middle of the body

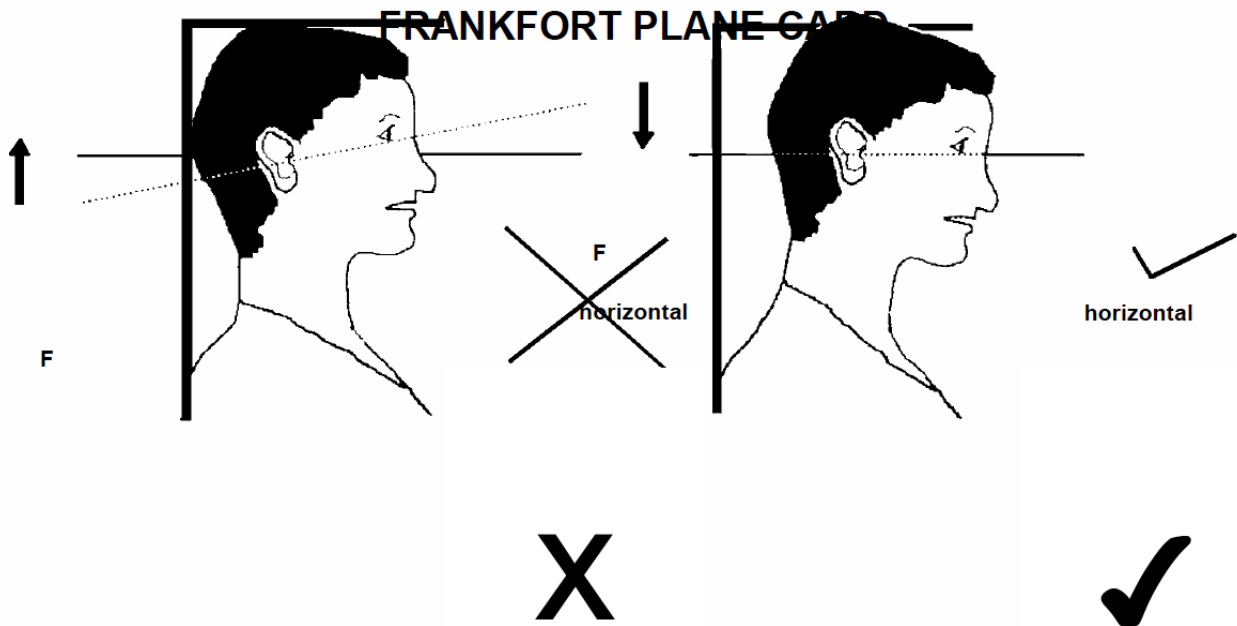
Lateral – Toward the side of the body

Long ago reference landmarks of the face and head were agreed upon on which the measurements data are based. Some of these landmarks are visible on the skin. Others are bony landmarks that are used in radiographic analysis of a face and head. Two relevant types of radiograph commonly used in orthodontics and facial bone surgery are the lateral and anterior-posterior cephalometric x-rays, or "cephs." Ceph radiographs are especially useful in facial analysis because they allow us to see what amounts to the closest thing we have to a universal reference for comparing different faces to one another – the bones of the skull base. The skull base is made up of fused bones that sit directly inferior to the brain. These bones are superior to the air passages behind our nose, and superior-posterior to the back of the throat.

While a normal person in anatomical position, or walking looking ahead has his skull base approximately 90 degrees to the ground, a more specific definition for facial "horizontal" was needed to standardize craniofacial analysis. In 1884 in Frankfurt, the World Congress of Anthropology agreed upon a horizontal definition:

a plane formed by drawing a straight horizontal line from the top of the ear canal to the bottom border of the eye.

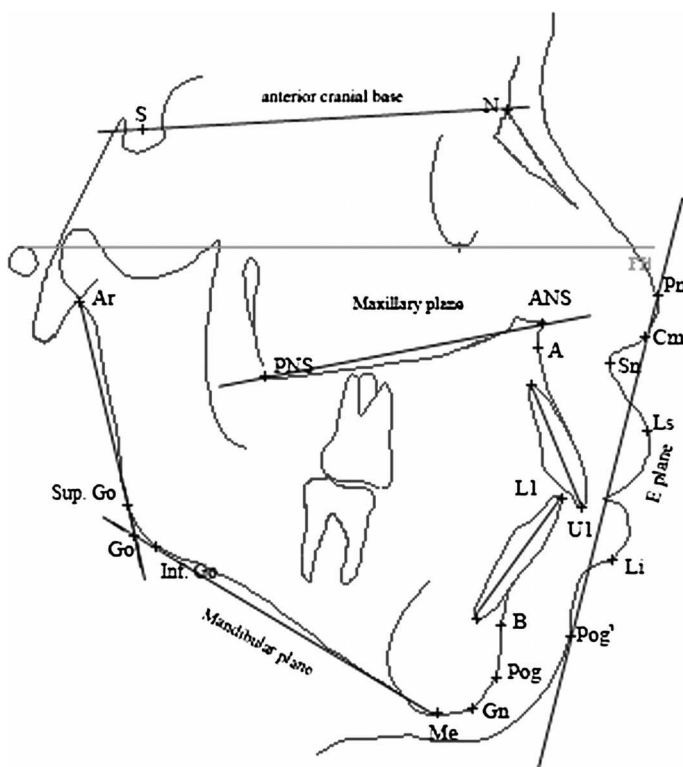
The skull is therefore only in true anatomical position when the Frankfurt plane is horizontal to the ground.



In cephalometric radiographs, the Frankfurt plane is defined slightly differently, as different landmarks are visible:

a plane passing through the right and left porion and the left orbitale; drawn on the profile radiograph or photograph from the superior margin of the acoustic meatus to the orbitale.

Using this reference plane, standard measurements can be assessed.



Classic bony radiographic cephalometric landmarks

Sella Turcica – From the Latin for “Turkish Saddle,” the sella turcica is the bony seat of the pituitary gland.

Menton – From the Latin for “chin,” the most inferior, anterior part of the chin.

Gonion – The most posterior, inferior point of the angle of the mandible.

Nasion – The most anterior point of where the frontal bone meets the nasal bones

Orbitale – The most inferior anterior point on the margin of the orbit

Porion – Upper most point on bony external auditory meatus.

A-point – In a lateral cephalometric radiograph, Position of deepest concavity on anterior profile of maxilla

B-point – In a lateral cephalometric radiograph, Position of deepest concavity on anterior profile of mandibular symphysis

These points have been chosen somewhat arbitrarily, however they have for many years formed the basis for standard measurements. In performing facial analysis, the relative position of these points, and their relationship to average values, helps medicos determine the magnitude and direction of deformity. The analysis compares a patient’s facial measures to average. When a patient’s values differ from the average by a couple of standard deviations, surgery may be warranted. Using average measurements of one race to assess a patient of another race may lead to mis-diagnosis.

Let’s explore some specifics of facial analysis as it is used by practitioners. From this, we can get a better feel for the patterns of modern dentofacial deformity. The first of these specifics is facial profile divergence. When viewed from the side, a face will be either “posteriorly divergent,” “anteriorly divergent,” or “normal.” When looking at a photograph, these labels are determined by the relative position of two soft tissue landmarks on the face, the glabella, and the pogonion. When facial divergence differs too much from the average, faces are considered unattractive.

Another consideration in facial analysis is profile convexity. When viewed from the side, a face will be either “convex,” “concave,” or “normal.” When looking at a photograph, these labels are determined by the relative position of three soft tissue landmarks on the face, the glabella, the subnasale, and the pogonion. Just like facial divergence, when convexity differs too much from the average, faces are considered unattractive.

A similar analysis can be performed more precisely using lateral cephs. In that case, the bony landmarks of the A-point, nasion, and B-point, are used to form an angle that tells us about the relative position of the jaws antero-posteriorly. The normal range of this angle is about 1 to 5°. Less than 1° is known as a “Class III skeletal relationship,” and indicates that the mandible is too far anterior, or that the maxilla is too far posterior. Greater than 5° is known as a “Class II skeletal

relationship,” and indicates that the mandible is too far posterior, or that the maxilla is too far anterior.

How do we know in a patient with an ANB $< 1^\circ$ whether the mandible is too far forward or the maxilla is too far backwards? This is where the skull base comes in handy as a reference point. Two other angles, the SNA (Sella-Nasion-A point) and the SNB (Sella-Nasion-B point) relate the jaws to the skull base. By combining this information, diagnosis of mandibular or maxillary hyper- or hypoplasia can be made.

Because the jaws house the teeth, the jaw relationships tend to carry over into the relationship between the upper and lower teeth. Dentists have long classified this relationship according to the relative positions of the 1st molars and canine teeth. The normal “Class I” relationship is shown below.

When the mandibular teeth are relatively posterior than this norm, the relationship is “Class II.” When the mandibular teeth are relatively anterior, the relationship is “Class III.” Predictably, there is a correlation between the skeletal classification of the jaws and the dental classification of the teeth. Orthodontists intervene to correct mild abnormalities in growing children, but severe abnormalities may need surgical intervention to correct.

This occlusal classification scheme comes from Angle over a century ago, who used the statue *Apollo Belvedere* as the standard of aesthetic perfection (back then dentists still studied the classics)

...



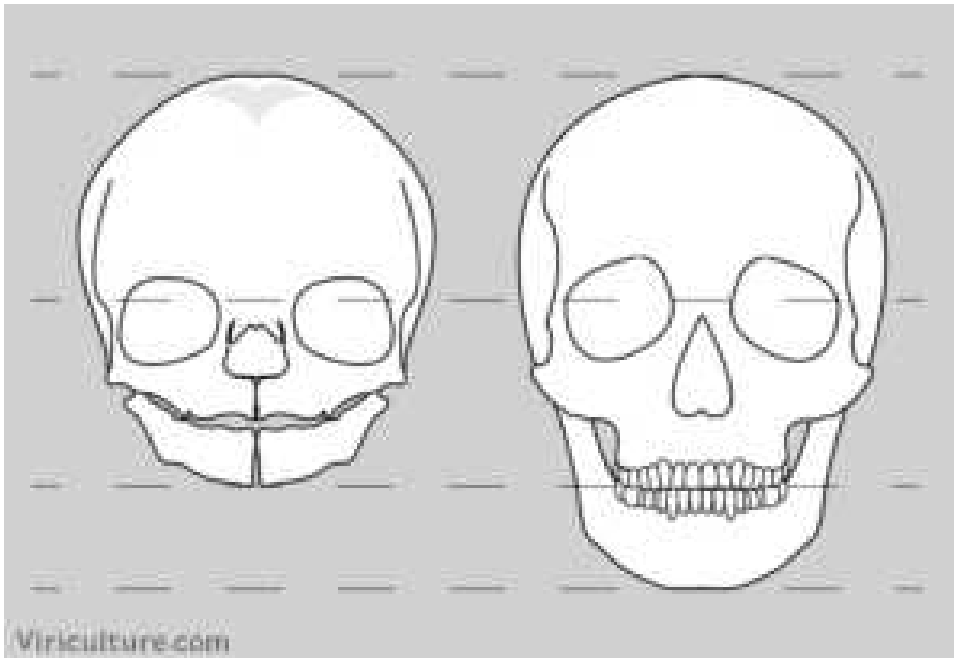
The face is a study of symmetry and beauty of proportion in the fully developed nose and nostril, the full rounded, finely curved lips, squarely chiseled chin, etc. Every feature is in balance with every other feature and all the lines are wholly incompatible with mutilation or malocclusion.

Treatment of the malocclusion of the teeth, Angle's System 1907

As we shall see, cephalometrics and jaw relationships are important to understanding facial degeneracy.

The Timeline of Facial Development

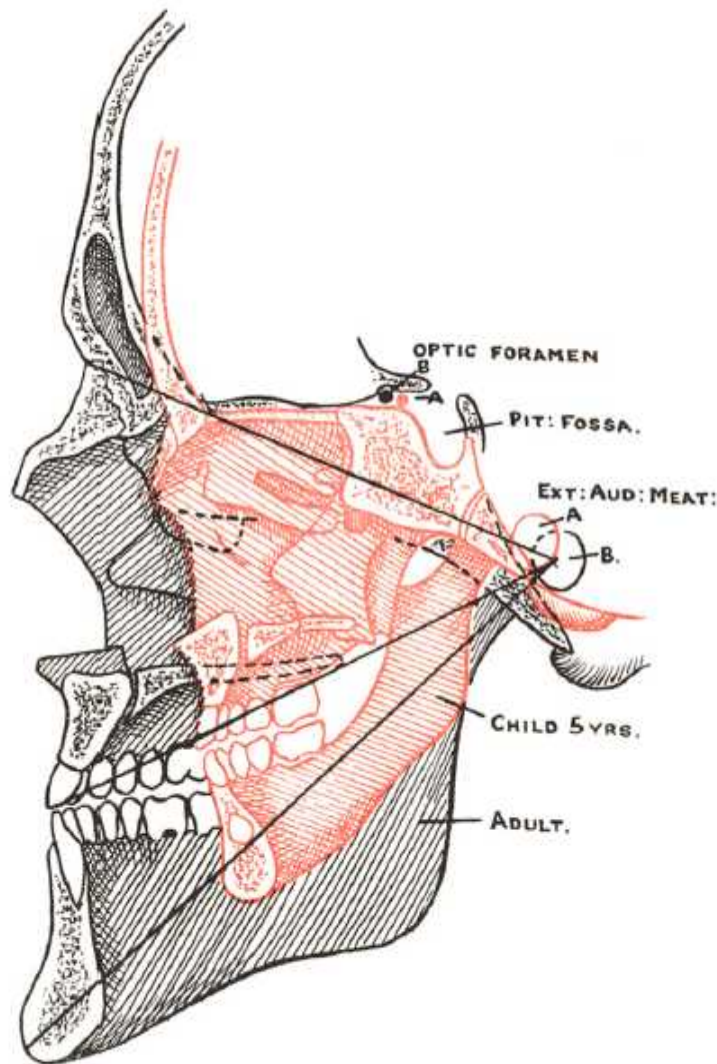
All parts of the human face do not grow at equal rates and at the same time. When we are born, the bony braincase (neurocranium) bony orbits are by far the most fully developed parts of the head. The lower facial two thirds, including the cheekbones, nasal bones, and especially the jaws, are hardly developed at all at birth. To illustrate this comparison, the skull of a newborn has been scaled to the width of an adult skull below.



The neurocranium is the first part of the skeleton to near its growth completion by five years of age, cranial capacity is typically at 90% of its adult maximum, with bizygomatic (cheekbone to cheekbone) width about 80%, facial height about 75%, and body stature about 65%. (Table IIB The Dental cosmos, *The Face in Its Developmental Career* Hellman,, 1935).

Throughout these posts I reproduce images from a 1922 article in the *International Journal of Orthodontia, Oral Surgery, and Radiography* by Sir Arthur Keith (about whom we will learn more later) titled *A Contribution to the Mechanism of Growth of the Human Face*. These images are special because they provide clear graphical overlays of a child and adult facial skeleton – allowing us to see the changes that occur in growth. Arrest of this normal growth leads to a stunted degenerate face with child-like structure into adulthood, while the fully developed adult face has all of the traits we find attractive.

In Fig. 3 is given a diagrammatic analysis of the sites of growth along line *E*. Growth occurs at three sites in the basal part of the “*E*” or naso-



($\frac{2}{3}$ natural size.)

Fig. 2.—A: Sagittal mesial section of skull of child with M^1 about to erupt, and estimated to be five years of age. B: Corresponding section of skull of adult Englishman. The skulls are superimposed so that the pituitary fossae and cribriform plates correspond. The sections show the amount of growth in the sagittal mesial plane from the 5th to the 25th years.

The jaws are the part of the face that develop latest, with the permanent canines and premolar teeth only emerging around ages 10-13. Faces are generally considered mature by 16 for women and 18-20 for men, although small amounts of facial growth continues indefinitely.

It should come as no surprise that the jaws, the part of the face least developed at birth and slowest to develop, would be the most important in the determination of facial attractiveness. This part of the face is more sensitive to the hormonal influences of puberty, making it a signal for sexual dimorphism. It is also of less functional importance than the brain or eyes, and therefore less subject to developmental canalization. While we know that eyes and the nose are important to facial attractiveness, the bone of the orbits, the nasal bone, and even the midfacial width are intimately tied to jaw development and function.

Despite the late development of the jaws, the patterns for their growth and development are laid down early, likely prenatally. The most consequential prenatal environmental influences of facial

development are factors that the mother controls prior to and during gestation. Once the child is born, functional influences also play a role.

[Up until birth] the need for functional activity of these muscles does not exist, and consequently the bony projections for the attachment of the muscles of mastication are but feebly developed. Soon after birth, however, the mandible requires to be used in sucking. The muscles attached to these processes and the tongue, together with the processes themselves, augment in size and begin to change the shape of the mandible in such a way as to make it approach that of the adult...

Variations in the Form of the Jaws, James Sim Wallace, 1927

When the infant breastfeeds, mechanical influences of sucking impact jaw development. Dentists will routinely treat children displaying sure signs of future malocclusion, even at a young age – this is one area of medicine in which early detection actually does have a positive effect on outcomes (although if the kids faces were correctly grow in the first place we wouldn't need orthodontic intervention). The primary dentition is usually complete by the age of three, and crowding in the baby teeth predicts crowding in the permanent dentition.

As we will see later, the facial deformity does not reach its maximum severity until the eruption of the second dentition and the development of the adult face, usually at from nine to fourteen years of age. In cases of extreme injury, however, we find it appearing in the childhood face during the period of temporary or deciduous dentition. These children will, doubtless, be much more seriously deformed when their permanent dentitions and adult faces develop.

Nutrition and Physical Degeneration, Price, 1939

Although the jaws are the slowest and latest developing part of the facial skeleton, damage to their proper development can be plainly visible by three years of age. This was recognized long ago, and in the 1920s Sim Wallace encouraged “traditional” levels of function for growing jaws even before the teeth emerge.

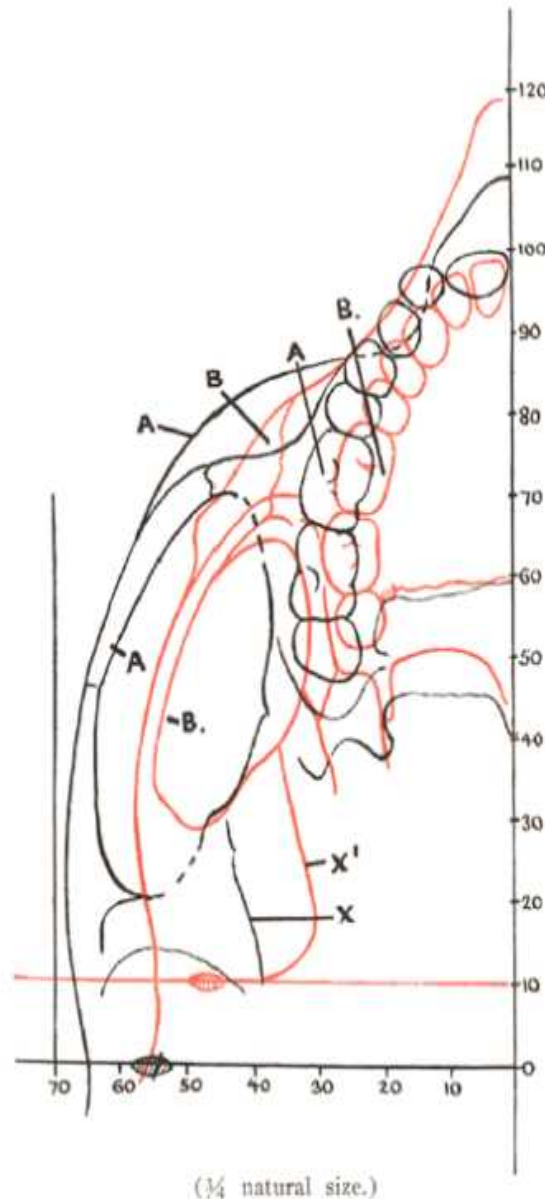
It should be noted that there is, or should be, a very considerable amount of functional activity of the jaws during the period when the gum pads cover the developing teeth before their eruption. Growth is most active at this age. It is also most responsive to trophic stimuli, so that it is probably just at this time that the pressure strains resulting from functional activity are most important from the point of view of jaw development. This would account for the fact that an appreciable number of cases of distinct post-normal occlusion take place very early in life.

Variations in the Form of the Jaws, James Sim Wallace, 1927

This observation has implication for nursing and teething practices that we will explore later.

As our faces grow, the neurocranium develops first, and the jaws develop slowest and latest. Despite this timeline, the patterns of growth are laid down early, and the trapping or inadequate facial development may be visible in children two or three years of age. In terms of non-surgical interventions to improve the face, the earlier the better. It is generally believed that by about 18 years of age, non surgical interventions to correct facial inadequacy will be ineffective – although this is disputed and at least one practitioner sells an appliance for the non-surgical correction of

adult facial deformity (the Homeoblock). However, there is not doubt that facial structure is more malleable at an early age. It is because of the increased power we have over the development of faces early in development that viriculture is best considered well before the child is conceived.



($\frac{1}{4}$ natural size.)
 Fig. 17.—Left half of temporo-maxillary region of skull of prehistoric Englishman (A) with primitive, well-developed palate and jaws, drawn on the plane of the alveolar margin. On this primitive palate is placed that of a modern adult Englishman (B) in which the face was narrow and elongated, the palate contracted and the jaws imperfectly grown.

Faces Part 2: The Poorly Developed Face

Posted on [admin](#) Posted in [Book](#)

What new disgrace

Deforms the manly features of thy face?

Aeneid, Virgil / Dryden, 19 BC

When practitioners identify “dentofacial deformity,” affected individuals are implicitly placed along a vague continuum of deformity severity. Interventions are warranted only if the patient has a severe enough problem. I want to expand the notion of dentofacial deformity, since I believe such an expansion is a more honest way of looking at ourselves. According to me, the majority of modern Americans have some degree of dentofacial deformity. Generally when the definition of a disease is expanded and made more inclusive, it is a trick used to sell medical interventions. My current expansion is rather a paradigm shift to help parents see the reality around them, and remove preemptively those modern factors which seem to have such a disastrous effect on the facial development of their children.

There are a set of characteristics that are associated with poor facial development, and taken together may even be said to constitute a syndrome. A guy writing the calmingpower.com blog calls it “cranial facial dystrophy.” Dr Shanahan, in her book *Deep Nutrition*, calls it “second-sibling syndrome.” While not every case shows every one of these characteristics, they are generally allied together, and constitute the stigmata of poor facial development.

The first characteristics of a poorly developed face are visible in the teeth. Tooth size seems less subject to environmental influences than jaw size, and therefore issues of inadequate space arise in children whose jaws develop poorly. Although the public generally considers **dental crowding** somewhat normal and hereditary, it is in fact an indication of poor facial development. Poor facial development also typically leads to **dental class II** relationship between the teeth (mandibular teeth relatively posterior to normal occlusion). The mandible grows later and slower than the maxilla, and may be more sensitive to environmental influences. However, there is no question that both jaws are underdeveloped in these cases. Another explanation for the occurrence of class II occlusion in cases with bimaxillary insufficiency is that maxillary insufficiency tends to occur in the coronal plane (width), while mandibular insufficiency tends to occur in the sagittal plane (length), although both jaws are typically inadequate in all planes. The next dental sign of poor facial development is the **narrow dental arch**. Narrow arches are secondary to inadequate jaw development. Narrow arches tend to form a V-shape, instead of the natural human U or digital-U shaped form. Narrow arches tend to occur with a **vaulted palate** on the maxilla. This “vaulted” or high palate allows the teeth and hard palate to “fit” in the jaw in spite of inadequate width. The lack of jaw development also leads to **impacted teeth**, teeth that will never erupt into their normal position. The most common impacted teeth are the wisdom teeth and the maxillary canine teeth, both of which are good indications of poor facial development. Another associated tooth problem is the **congenital absence of teeth**, notably the wisdom teeth or maxillary lateral incisors. The lateral incisors may also be unusually small, termed “peg laterals.” Permanent tooth buds begin developing in the jaw at about 20 weeks of gestation, and therefore these congenital errors in tooth development are likely due to prenatal influences. Congenitally missing laterals is a relatively common dental abnormality, and despite great efforts to identify a genetic cause, no satisfactory answer has been found. This is likely because most cases of congenitally missing teeth are due to environmental disruption.

In addition to tooth deformities, a poorly developed face has defects of the jaws themselves. A **skeletal class II** relationship is common, for the same reasons we typically see a dental class II relationship. Although both jaws are underdeveloped, **mandibular hypoplasia** is often more

notable. The mandible and lower face is inadequate in the saggital plane (retruded), and the gonial angle of the mandible and the “posterior facial height” does not grow sufficiently, leaving the angle of the mandible too close to the ear. Consider image A below, the **gonial angle** of the mandible of a man (drawn in black) with a “narrow, deeply arched palate” (on the upper jaw) **is more obtuse** angle, poorly defined, and forms more superiorly then that of the normal subject. This suggests that both jaws are inadequately developed, and as we shall see this partly due to lack of function, and partly to inadequate body growth in general.

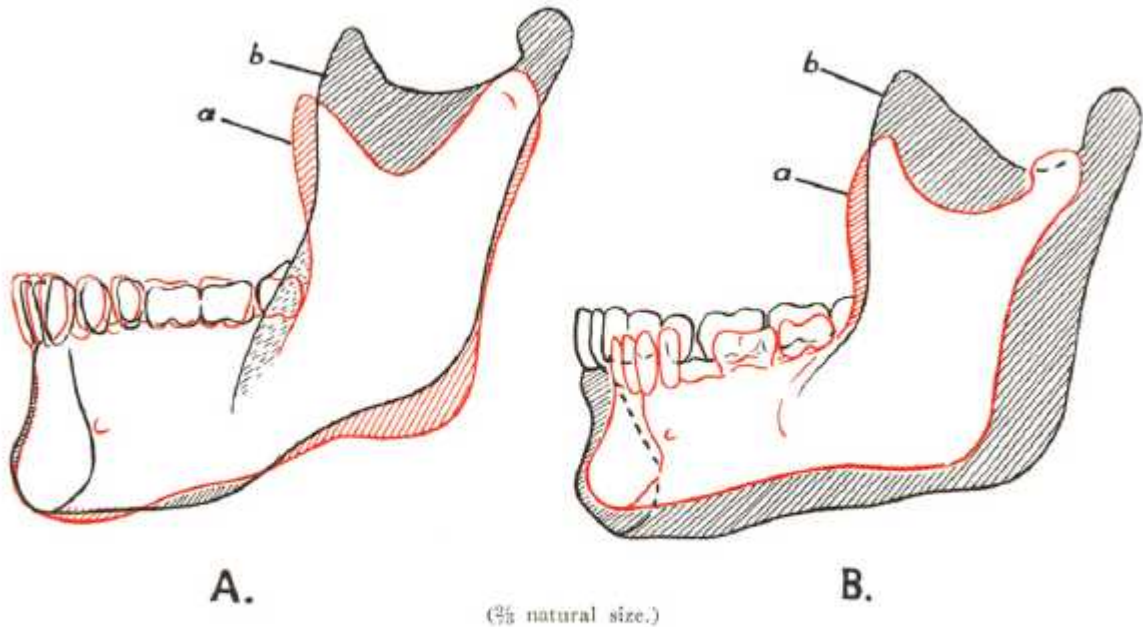
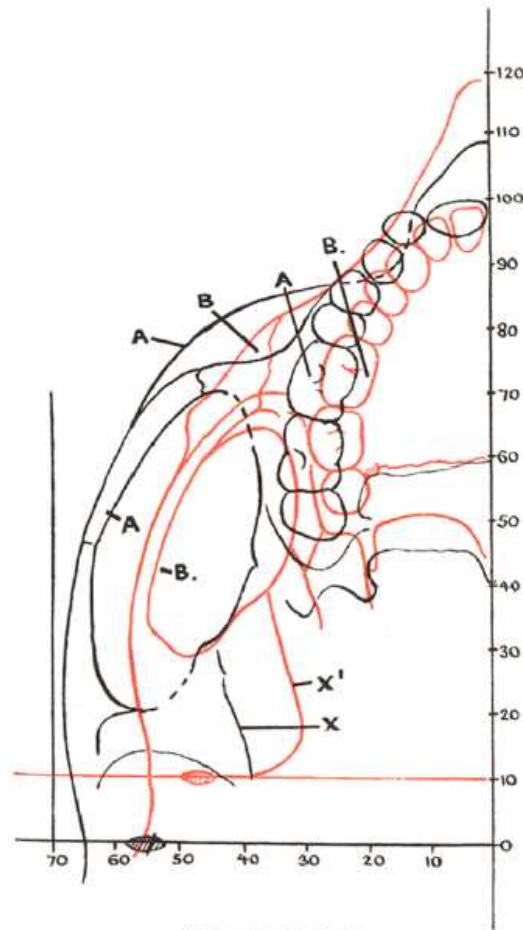


Fig. 12.—A: The mandible of a man with narrow, deeply arched palate (b) superimposed on a specimen from a man with normal palate (a). B: the mandible of a woman (a) superimposed on that of a man (b) to show the difference in development of all three elements of the mandible—alveolar, supporting, and muscular or ramal. Their difference depends on the growth influence of the sexual glands.

Inadequacies of mandibular development may also be associated with poor development of the joint that moves the lower jaw. **Disorder of the temporomandibular joint** may arise over time as a consequence of poor jaw development.

In the maxilla, the growth inadequacies are not so much a result of insufficient anterior-posterior length, but rather of medial-lateral width of the jaw. Consider the image below super imposing the well developed primitive and poorly developed modern upper jaws.



($\frac{1}{4}$ natural size.)

Fig. 17.—Left half of temporo-maxillary region of skull of prehistoric Englishman (A) with primitive, well-developed palate and jaws, drawn on the plane of the alveolar margin. On this primitive palate is placed that of a modern adult Englishman (B) in which the face was narrow and elongated, the palate contracted and the jaws imperfectly grown.

The alveolar ridge is significantly wider in the “normal” primitive specimen, allowing suitable space for the maxillary teeth. The zygomatic arch, or cheekbone, especially is deficient in projection, known as **malar deficiency**, on the “high palate” specimen, by as much as 10mm in the above study. Compare this to standard malar implants for patients who want to improve facial aesthetics with silicone cheekbones, which typically have a projection of no more than about 5mm, won’t look as good, require surgery, and cost \$5000. Malar deficiency contributes to the **dark circles under the eyes**, that bother many people, as well as a **sunken face** appearance. This is just part of the cost of ignoring traditional wisdom, as the bible tells us.

For thou hast smitten all mine enemies upon the cheek bone; thou hast broken the teeth of the ungodly.

Psalm 3, King James Version, 1611

In addition to inadequate jaw growth, poor facial development is obvious in the rest of the face. Typically, the face will appear “long,” not because the actual superior-inferior measurement of the face is greater than the ideal, but rather because the **face is narrow**.

Thin hairs bestrew’d his long misshapen head.

Iliad, Homer/Pope, circa 800 BC

In Greece she perfected man to the highest degree; – for what the Scholiasts assert respecting the long heads or long faces of the inhabitants of the island of Euboea is an absurd dream.

History of Ancient Art, Winckelmann, 1764

This narrowness is related to the inadequate zygomatic and gonial projection in the coronal plane, but is also due to poor growth of the face between the eyes. The poorly developed face has **close set eyes** and a **narrow alar base** (base of the nose). One experienced surgeon I know even swears there is a higher rate of “unibrows” among his jaw surgery patients. The decreased growth of this bone, combined with the vaulted palate impinged on the nasopharynx, decreases the volume of the airway. Inadequate jaw growth, combined with a need to move air into the nasal passages, leads to a **nasal hump**. The nasal bones grow preferentially to allow air flow, but the supporting maxillary development is inadequate to support the soft tissues of the nose where the nasal bones end inferiorly. **Malar and genial (chin) deficiency** is expected in a poorly developed face.

This condition has been found in many degenerates. Almost invariably in connection with the arrest of development of the face occurs arrest of the bones of the nose. The diameter of the nasal cavities is much smaller than normal. Owing to the unstable condition of the nervous system there is also hypertrophy of the turbinate bone and mucous membrane of the nose and throat, tonsil hypertrophy, arrested development of the chest walls and lung tissue, and unstable mucous membranes throughout the lungs. Such a degenerate face, body, and unstable nervous system is a fruitful soil for the germs of tuberculosis. In these cases even a casual glance will show that the two halves of the face and head are not symmetrically developed. It looks as though the two halves were made separately and joined together, one half higher than the other...

Deformities of the nasal septum, deflection, hypertrophy and atrophy of the turbinate bones, deformities of the maxillary sinus, hypertrophy of the mucous membrane and polypi are common. Deflection of the external nose is a very common stigma of degeneracy. Not only is the septum involved, but also the outer plates of the nasal cavity. So unstable are the bones of the face in their development that it is not an uncommon thing for the nasal process of the upper jaw on one side to be much more developed than the other. Not only is the nasal septum involved, but also the bones of the face as well, producing a fulness on the long side of the face. This stigma is very common among criminal youth... Therefore two factors are common: first, the arrest of development of the bones of the nose, and second, the clogging of the cavity, both active agents in producing a closure, resulting in mouth-breathing...

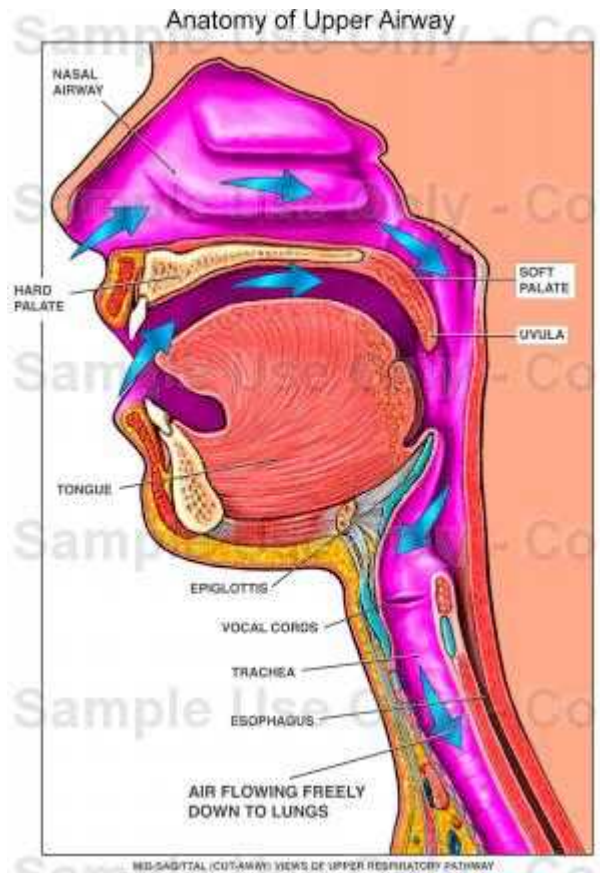
Arrest of the lower jaw is common among degenerates. This consists of a shortening of the body of the jaw. Sometimes it is arrested to such an extent that there is apparently no chin. About 50 per cent. of criminals of Elmira, New York, have this deformity.

Degeneracy: Its Causes, Signs, and Results, Eugene ((Solomon)) Talbot, 1898

The poorly developed face appears triangular in all three planes. Additionally, the poorly developed face has **asymmetrical ears**.

Frequently, in the degenerate classes, the ears of the same individual differ as much as one inch in height.

Inadequate facial growth often leads to airway and breathing problems, such as sleep apnea. I once heard a useful analogy that illustrates the different surgical approaches to treat sleep apnea. Imagine “the airway” as a room with furniture.



The size of the room is the skeleton of the head and neck. The amount of furniture is the soft tissue. In order to create an effective path through the room either of two methods can be employed – furniture can be removed, or the size of the room can be increased. The “removal of furniture” corresponds to treatments that remove soft tissue from the airway, typified by the “uvulopalatopharyngoplasty” performed by otolaryngologists. The “increase in the size of the room” corresponds to treatments that cut the bones of the face and bolt them into a new location, typified by orthognathic surgery performed by maxillofacial surgeons. I use this story simply as an illustration of a more central point – that inadequate development of the facial bones (the airway “room” is too small) leads to functional restriction of one of the most critical physiologic systems of the body.

Before surgery, anesthesiologist routinely place a breathing tube in patients to keep them safe during the operation. Getting this tube in is not always easy, and medicos have developed heuristics to gauge the “difficulty” of an airway. Difficulty refers to how challenging it will be for the operator to maneuver an 1 cm diameter plastic tube past the vocal cords and into the trachea. These predictors overlap with traits of the poorly developed face listed above – retruded mandible, short thyro-mental distance, low Malampati score. Although we may be lucky enough to never need to have a breathing tube placed, airway “difficulty” has a broader significance for viriculture – it

corresponds to the native patency of an airway. In other words, does one's airway structure allow adequate ventilation?

Of course, this question depends of how much oxygen one requires at the moment. During peak physical exertion such a long run, most people will switch from nasal to open mouth breathing, in order to open the airway and allow greater ventilation in response to increased oxygen demand and carbon dioxide production. While open mouth breathing is obvious, more subtle adaptations occur in individuals with restricted airways that may have chronic deleterious effects.

In medicine there are two common mechanical methods to manually open a person's airway – the head-tilt/chin lift, and the jaw thrust. In both cases, the chin (and the connected soft tissue) is essentially moved anteriorly. These maneuvers are temporary solutions, however; orthognathic surgery with mandibular advancement is the permanent “jaw thrust.” But people with a restricted airway have managed engage in these airway-opening positional changes instinctively.

For the airway restricted person, the “jaw thrust” is functionally achieved by the so-called “forward head posture” and maintained at night with pillows under the back of the head. The “head tilt/chin lift” is achieved by maintaining an exaggerated sniffing position, where the eyes are looking slightly superior when “straight ahead.” These postures undoubtedly feedback with the greater musculoskeletal system. Although the chronic musculoskeletal consequences of this posturing is unknown, we can see clearly that is is unaesthetic, and appears to the untrained eye as pathologic.

In addition to the physical shape of the resting face, a poorly developed face is also associated with certain signs, symptoms, and disorders. A long face and retruded jaw are associated with **incompetent lips** at rest. The diminished nasopharynx volume, combined with insufficient anterior position of the mandible and the associated bulk of the tongue musculature decreases the size of the airway. This is associated with breathing disorders, notably **mouth breathing, snoring, adenoids, and sleep apnea.**

Adenoids and mouth breathing are generally and correctly supposed to cause narrowing of the palate, and I believe with Dr. Campbell that one of the predisposing causes of adenoids is insufficient mastication. Some rhinologists maintain that narrow nasal fossae are predisposing causes of adenoids, and if the explanation of the cause of the narrowness of the nasal fossae which I have just given is correct, then this predisposing cause of adenoids comes about from insufficient mastication.

Essay on the Irregularities of Teeth, Sim Wallace, 1904

We will read much more about this in later posts. The definitive treatment for sleep apnea is surgical advancement of both jaws anteriorly, to compensate for growth that never occurred. In CPR training we are taught the “head tilt / chin lift” maneuver to open a patient's airway when giving rescue breaths. People with poorly developed faces naturally adopt this same chin lifted “**slightly sniffing**” **posture**, as well as **forward head posture**, in order to open the airway just while walking around.

Poor facial development also correlates with **asthma and allergies, myopia**, and facial **asymmetry**, although the causes may not overlap in all of these cases. For example, close reading at an early age may cause myopia even in the most well developed face.

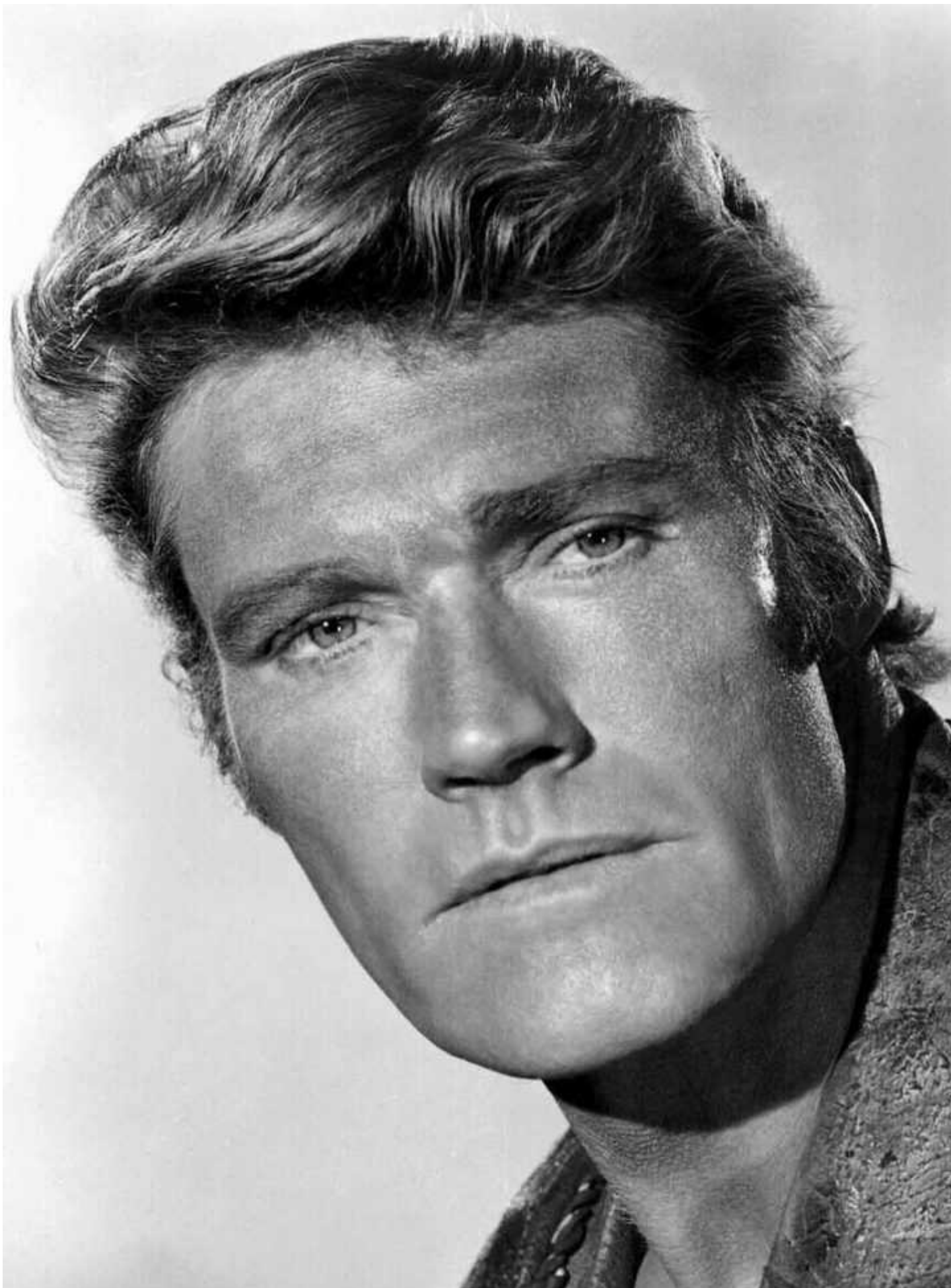
Not surprisingly, the features of the “well developed” or “normal” face are preferred aesthetically. In the modern world, the public pays medicos billions a year for interventions to achieve straight teeth, high cheekbones, a defined jawline, and snoring solutions. It is therefore reasonable to say that good facial development is correlated with facial beauty. In fact it seems clear to me that faces are beautiful at least in part because they are well developed.

“Things in nature that are not beautiful have a problem”

Unknown

Ugliness therefore is not just a misfortune, doled out at random by the Fates, or as part of a divine reckoning – ugliness as a disease, an abnormal condition of organismal structure. Ugliness has physical stigmata, and the constellation of stigmata are related in their ultimate causes.

Myopic government-funded Poindexter scientists struggle to find “the genes” for ugliness, but they will never succeed, as ugliness is usually not due to some genetic problem, but rather a variety of environmental stressors, which, over the life of the organism, culminate in structural deformity.



Faces Part 3: The Well Developed Face

Posted on [admin](#) Posted in [Book](#)

Having described the stigmata of the poorly developed face in [a previous post](#), we can now contrast the specific characteristics of the well developed face. Recall that in chapter 8, the traits of human beauty were explored in general, and these included averagedness, symmetry, and sexual dimorphism. Here we explore further details of facial beauty, as well as its teleology.

In a well developed face, the **teeth are straight**. There is no evidence of malocclusion, and further the **teeth are not crowded**, as the jaws have grown to adequate size to house them. In a well developed mouth, the incisor teeth will generally not be in contact with one another along their entire length, but touch only at toward the coronal 1/3. In contrast, orthodontically straightened teeth are generally straight but crowded, as the underlying problem of inadequate jaw space remains. Orthodontically straightened teeth play a trick on our evolved psyche, and allow us to rate as attractive men and women who, without the intervention would appear repellant on the basis of their obvious dental deformity. Orthodontics has gone a long way in allowing degenerate adults to hide their flaws even from themselves, as they often have their teeth straightened in teenage, and never think of themselves as deformed. However, orthodontically straightened teeth and the face which houses them, are never as beautiful as the truly well developed face with straight teeth in accordance to the will of Nature.

The well developed face has **no impacted teeth**, as the most common proximate or clinical cause of impacted teeth is “they don’t have enough space to erupt”. This means that a well developed face adequately houses all 32 teeth as an adult. ” In the modern world, many adults with ostensibly “straight” teeth once had numerous impacted teeth that were either extracted or dragged into the proper place using a combination of minor surgery and orthodontics. Indeed, these are common procedures, and many adults must wear metal and plastic retainers bonded to the back of their teeth for life just to keep their teeth in a position that does not repel potential mates. Similarly, there are **no congenitally missing teeth**.

Full jaw development leads to a **dental class I** relationship, where the mandibular front teeth are just behind the maxillary front teeth. Both **the maxilla and mandible have adequate projection** in all three dimensions. Well developed faces can have a sort of bimaxillary prognathism, where both jaws fall anterior to the forehead, basically the opposite of the sleep apnea bone structure. In other words, this is a orthognathic face with anterior divergence. One way to identify this type of structure is to take a profile view and drop a vertical line from the glabella. In well developed faces, both jaws will terminate anterior to this line. In poorly developed faces, one or both jaws will fall posterior to the line, or the jaws will fall anterior to the line but are not orthognathic.



The **dental arch is wide**, shaped like a U or digital U, instead of the degenerate V-shaped pattern found in the poorly developed face. The maxillary hard palate is not vaulted but wide and in the horizontal plane. Adequate skeletal growth of the jaws leads to a **skeletal class I** relationship, also known as “orthognathic” or straight profile. This means that the lower jaw nor the upper jaw is retruded relative to each other or to the bones of the cranial base. In addition proper jaw relationship, there will also be **adequate genial projection**. The **gonial angle of the mandible approaches 90 degrees**, and the temporomandibular joint is less liable to disorder than in the poorly developed face.

Just as the bones of the jaw are fully grown in a well developed face, so too are the other bones of the face. The cheekbones have a beautiful full appearance, known as **adequate malar projection**, and giving rise to the “high cheekbone” aspect of facial beauty. Full cheekbones create a vivacious and youthful appearance for a face, and prevent the “dark circle” or sunken-in skeleton monster face appearance – especially as the youthful subcutaneous fat of the face diminishes in adulthood.

While the exact dimensions of a full-grown face are genetically (that is racially) determined, a well developed **face is relatively wide**. The **eyes are wide set** with plenty of bone between them.

A duke there was, his name was Falfarun,

Brother was he to King Marsiliun,

He held their land, Dathan's and Abirun's;

Beneath the sky no more encrimed felun;

Between his eyes so broad was he in front

A great half-foot you'd measure there in full.

Regardless of family resemblances, a child's eyes should be widely spaced and there should be width of bone from the outer part of the eyes to the ears. The chest, the forehead, and the middle and lower thirds of the face should likewise be wide.

Let's Have Healthy Children, Davis, 1951

In fact this characteristic is such a good predictor of facial beauty that it is actually used as a heuristic criterion by experienced professional model recruiters during their trips to Siberia, where only a handful of the most beautiful girls are selected from a line up of hundreds of hopefuls.

[We look for] the photogenic qualities. Certain geometry of the face... if you take the distance between the eyes, the distance between the nose and the eyes... it is a science.

Reggie Yates' *Extreme Russia* – 3. Teen Model Factory

This width includes the bones of the nose itself, which is relatively wide for the race, **wide nostrils**, and ends with a relatively **wide alar base**. The full growth of the upper jaw deep to the nasal base provides plenty of support of the nasal soft tissues in the sagittal plane, preventing nasal humping, or nasal tip sagging – although the exact shape of the nose is influenced by heredity. However, the **nasolabial angle is acute**.

The wide airway allows for excellent ventilation without the need for subtle postural adjustments to breathe. The well developed face is not liable to mouth breathing, snoring, or sleep apnea, unless the person has become quite obese.

Now that we have enumerated the specifics, let us consider examples of beautiful faces as a whole. The reader should begin to realize that the well developed face is also the beautiful face, as the specific classical features of facial beauty are also those of good facial development.

The best source of pure facial beauty, un-altered surgically or orthodontically, and captured in images of high enough resolution to warrant proper analysis, is in the faces of the stars of the Golden Age of Hollywood. Before the 1900s, photography was limited, and the paintings we have from the 1400s onward cannot be counted on for their verisimilitude (although we can see from them that degenerate faces have been present in Europe for hundreds of years). A similar problem arises if we try to consider only lifelike sculpture of faces, which we have going back to at least the sixth century BC. While sculpture and painting provide valuable information about faces of the past, they are not a rich enough source of information for a systematic analysis.

The reader may think that I am being unscientific in cherry picking the most beautiful people in order to illustrate excellent facial development, and I am. Additionally, still photographs from this era make use of makeup to affect the appearance of facial structure. However the general conclusion – that essentially *all* very beautiful people have well developed faces in the sense I have described above – should become clear in spite of these difficulties. This makes good facial development a prerequisite for real facial beauty, and a highly relevant aspect of viriculture.



This profile view of Katherine Hepburn circa 1940s demonstrates excellent jaw growth and a beautiful orthognathic relationship. Her mandibular angle is robust, and is approximately 90 degrees. Notice how both jaws are so fully grown that they are anterior to the forehead.



Drawing the Head and Hands, Andrew Loomis, 1956

In this classic educational guide to correctly illustrating the face, we see the same beautiful facial pattern displayed by Hepburn.



Maureen O'Hara circa 1940s, displays excellent facial development as well. The eyes are very widely spaced, and the nostrils are fully developed. Notice how the lower facial 2/3s do not taper like a V, but remain fully grown in the coronal plane (width) down to the bottom of the mandible. The fully grown jaws allow plenty of width, making many teeth visible in the smile – we can easily see her maxillary 2nd premolars. This is an attractive feature sought in vain by orthodontists trying to correct crooked teeth, however only someone with truly superior facial development can achieve this. Makeup, and even photoshop cannot easily fake this real beauty.



This photo of Ingrid Bergman from 1939 demonstrates an incredible degree of facial development. Not the width of the eyes. Despite the “soft” look of the photograph, we can see that her mandibular angle is very robust, and looks to be 90 degrees. The nasal root and dorsum, along with the nostrils themselves are well structured and fully grown. The fully developed bony orbits creates the angular appearance of the eyebrows.



Just like Ingrid Bergman, Grace Kelly has an astonishingly well developed face. In both cases the mid face is actually the widest aspect of the face – meaning that there was a superabundance of bone building energy and material, since the superior 1/3 of the face takes precedence in development. The shadows under the cheekbones, which we degenerate paint onto our faces with makeup, are actually real shadows due to the excellence of her malar region. There is plenty of bone lateral to the eyes, and the nasal root and eyes are very widely spaced. The face does not taper, and the mandible is very wide, giving her a full mouth as well.

It is important to understand that the main reason that Grace Kelly actually became princess consort in real life is that she genuinely has the face of a princess – and that this same facial bone growth is under our control.



Robert Mitchum

While a properly developed female face is full and well structured, the properly developed male face is extremely robust, with copious thick symmetrical bone growth in the jaws, cheekbones, and nasofrontal region.



Burt Lancaster

This bone growth of course comes at a metabolic cost to the possessor, and therefore functions as a honest signal of mate fitness. The best human corporeal analogy to the stag's antlers or the elephant's tusks is the bony development of the male face.



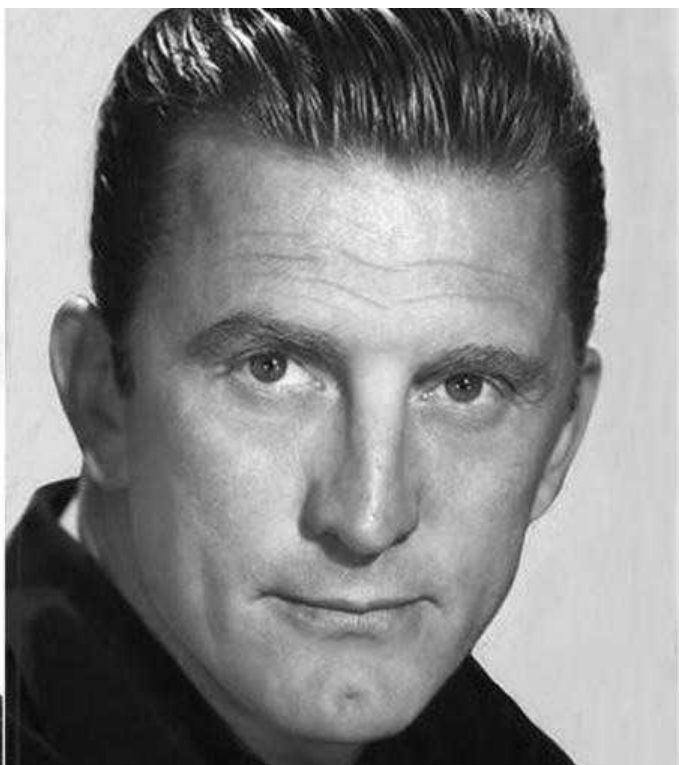
Remember that James Dean was dead by age 24, meaning that his incredible facial structure had to be laid down early in life. Indeed, he looks essentially the same at age nineteen. This facial structure is a consequence of early life developmental influences.



((Kirk Douglas))



(((Michael Douglas)))



Fresh from prison, Cameron Douglas is now a ripped and tatted version of (((Kirk Douglas))), LA Times, August 2016

With the Douglas family we can see degeneration in action, since they have been in the public eye over seventy years. The *LA Times* made this comparison easier with side by side photos they published in 2016. While the family resemblance is maintained, the extremely robust well developed structure of the grandfather softens in the father Michael, and by the grandson Cameron is essentially spent.

Iniquitous Time! What has it not made worse?

Our grandfathers sired feeble children; theirs

Were weaker still – ourselves; and now our curse

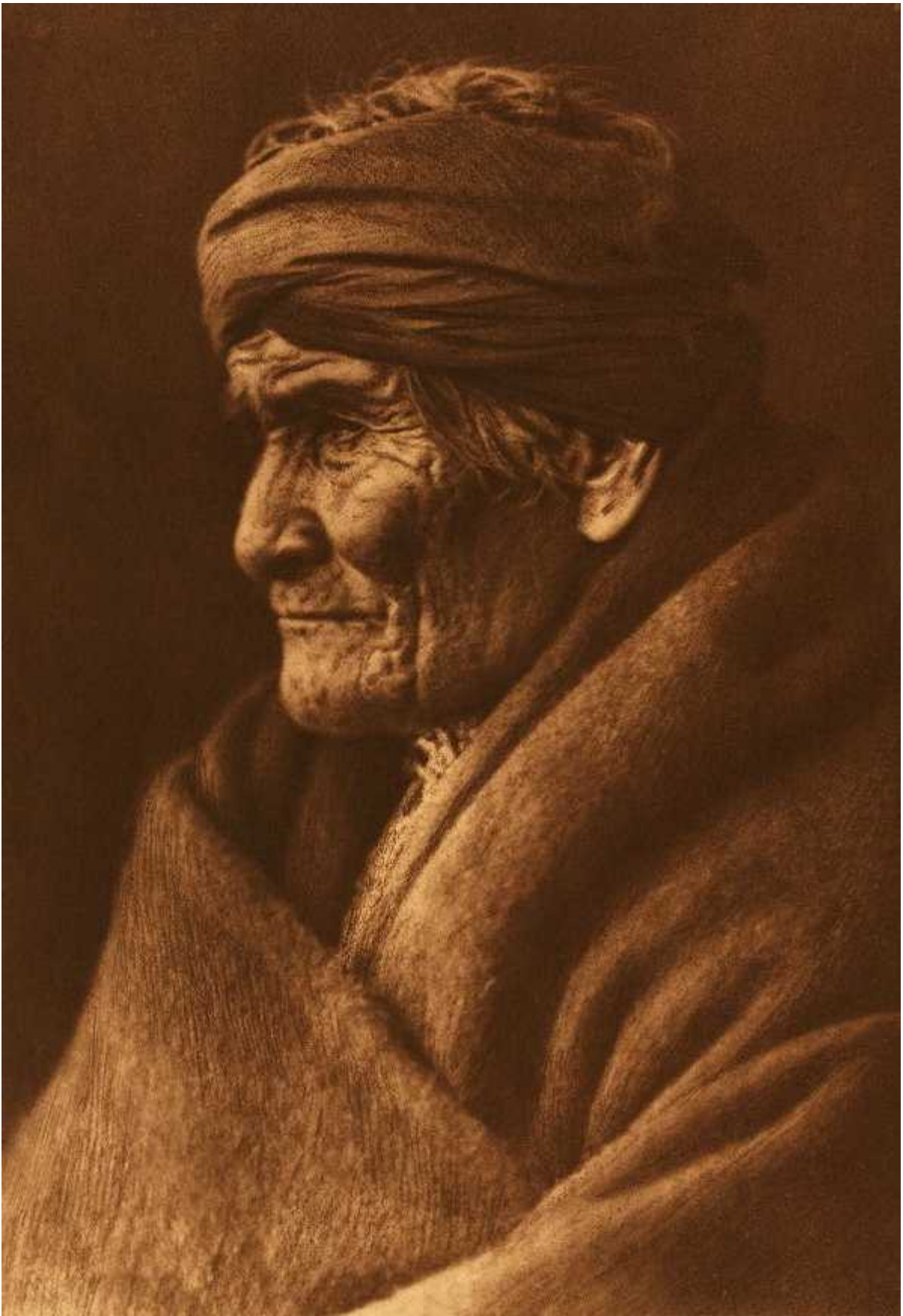
Must be to breed even more degenerate heirs.

Odes, Horace, BC 23

To see the changes, look at the nose bone between the eyes, the angle of the jaw, and the cheekbone projection. In Cameron the nasal bones are pinched, there is a significant nasal hump, and the eyes are too close together, while Kirk has a broad, flat and straight nasal root and dorsum, with properly spaced eyes. The nostrils also display superior development in the grandfather. Kirk has robust mandibular angles, while these are very soft in Cameron, and the cheekbones follow a similar pattern, leaving the eyes. In spite of this degeneration, Cameron is still considered a decently attractive man by modern standards, and the LA Time article was attempting to make a complimentary comparison between grandfather and grandson.

I have a feeling that Cameron's mother, Diandra Luker, who was by 1978 the wealthy wife of a movie star in California, had very different environmental influences during gestation than Kirk's mother Bryna Sanglel, an immigrant from the Russian Empire who gestated her son in 1916.

For all their beauty and excellence, let's try to think of the well developed faces of beautiful Golden Age actors not as different in some special way from the average face at the grocery store – but simply very much better developed. In other words, movie stars are just normal people with properly developed faces.



Faces Part 4: Traditional vs Modern Faces

Posted on [admin](#) Posted in [Book](#)

The noteworthy fact emerges that the dental arches [of prehistoric skulls] show remarkable absence of those irregularities which confront the dental practitioner or the anthropologist in civilized races at the present day.

Variations in the Form of the Jaws, James Sim Wallace, 1927

When one has watched for days the childlike in those high Alpine preserves of superior manhood; when one has contrasted these people with the pinched and sallow, and even deformed, faces and distorted bodies that are produced by our modern civilization and its diets; and when one has contrasted the unsurpassed beauty of the faces of these children developed on Nature's primitive foods with the varied assortment of modern civilization's children with their defective facial development, he finds himself filled with an earnest desire to see that this betterment is made available for modern civilization.

Nutrition and Physical Degeneration, Price, 1939

Over the past two hundred years, antropological evidence has been mounting that suggests that the face of modern "civilized" man is very different than his "savage" ancestors. Modern skulls have more cavities, more malocclusion, more impacted teeth, and less pronounced development of the bones of the face. In some instances, the change between these two types of face occurs within a few generations in the same genetic stock around the switch to modern modern lifestyles. We will now review the changes to faces that occur with the shift to modernity.

The first dentofacial change that accompanies a shift from primitive to modern lifestyle is an increase in dental caries, that is cavities.

It is now universally admitted that dental caries is to a great extent a disease accompanying civilization, and that its numerical incidence is largely proportionate to the state of civilization to which a particular race has attained.

The Prevention of Dental Caries and Oral Sepsis, Pickerill, 1919

Gatherer-hunters generally have caries rates of less than 2% of permanent teeth, mixed economies have more variable ratea with a mean around 5%, and agricultural economies have higher and also more variable rates, from 2% to over 25% with a central tendency around 10%.

They have been taught little regarding the use of tooth brushes. Their teeth have typical deposits of unscrubbed mouths; yet they are almost completely free from dental caries, as are the other individuals of the group they represent. In a study of 4,280 teeth of the children of these high valleys, only 3.4 per cent were found to have been attacked by tooth decay. This is in striking contrast to conditions found in the modernized sections using the modern foods.

“Hunter-gatherers had really good teeth,” says Alan Cooper, director of the Australian Centre for Ancient DNA. “[But] as soon as you get to farming populations, you see this massive change. Huge amounts of gum disease. And cavities start cropping up.”

“We brush our teeth and we floss, and we think that we’ve got good oral hygiene. But [we’re] completely failing to deal with the underlying problem,” he says... As for right now, Cooper suggests that one way to help return your microbiome to a healthier, more balanced state might be to cut out all of those processed carbs and start eating like our ancestors.

Ancient Chompers Were Healthier Than Ours, NPR, 2013

This shift is seen not only in physical anthropology studies which compare ancient and modern skulls, but is also reported among contemporary groups living in different conditions. Price’s *Nutrition and Physical Degeneration* is full of such evidence, below is a small example:

Notwithstanding the wide range of physical and climatic conditions under which primitive Indians had been living, their incidence of tooth decay while on their native foods was always near zero; whereas, the modernized Indians of these groups showed very high incidence of dental caries. A summary of percentages follows: *Primitive Indians*: Pelly Mountain, 0.16 per cent; Juneau, 0.00 per cent; Florida Pre-Columbian, 0.00 per cent; Florida Seminoles, 4.0 per cent. *Modernized Indians*: Telegraph Creek, 25.5 per cent; Alaska Frontier, 40.0 per cent; Mohawk Institute, 17 per cent; Brantford Reservation Public School, 28.5 per cent; Brantford Reservation Hospital, 23.2 per cent, Tuscarora Reservation, 38.0 per cent; Winnipeg Lake Reservation, 39.1 per cent; North Vancouver Reservation, 36.9 per cent; Craigflower Indian Reservation, 48.5 per cent; Ketchikan, 46.6 per cent; Juneau Hospital, 39.1 per cent; Sheldon Jackson School, 53.7 per cent; Sitka, 35.6 per cent; Eklutna, 14.6 per cent; Jessie Lee Home, Seward, 27.6 per cent, and Florida Seminoles, 40.0 per cent.

The dominant theory of the cause of cavities in dentistry is described as “multifactorial,” meaning that the correct constellation of conditions must be present for cavities to occur, and is usually phrased in dental textbooks like:

Dental caries is a multifactorial disease that results from the interaction between the bacterial biofilm (i.e., dental plaque), the environment (e.g., diet, saliva composition and flow rate, fluoride exposure), and the tooth structure. The disease process involves a shift in balance between protective factors that aid in tooth remineralization (i.e., gaining of minerals back into the tooth) and destructive factors that aid in tooth demineralization (i.e., loss of minerals from the tooth), resulting in demineralization over time.

ohiodentalclinics.com

While this is often repeated to dental students, professors never assign a weight to the relevant factors. Neither do they recognize that some of the “factors” that “cause” caries are inadequate exposure to medication (fluoride). What other disease is considered to be “caused” by not enough medication?

Dentists understand that bacteria cause caries by eating sugar and excreting acids which erode the teeth. But they rarely recognize that the type of bacteria (which can be either benign or cavity-

causing) present in the mouth are constantly being selected for by the ecology of the oral environment, as the famous microbiology saying goes:

Everything is everywhere, but, the environment selects.

Baas Becking

We should realize that not all dental plaque and bacteria is actually harmful – indeed the bacterial profile of plaque depends on the oral environment, and that in turn, for most people, depends chiefly on the diet. When we eat sweets and starches, there is evolutionary pressure in our mouths to select for those types of bacteria which eat these as food. Unfortunately those are the very type which are so harmful to oral health. Just like any evolved ecosystem, the mouth and its bacteria are in a delicate balance, one which modern foods seem to disrupt in a horrific way. In a truly healthy mouth, there is essentially no risk of caries, whether or not one brushes his teeth.

In my opinion there is one and only one course of action which will check the increase of dental disease and degeneration which may ultimately cause the extinction of the human species. This is to elevate the dental profession to a plane on which it can command the services of our best research minds to study the causes and seek for the cures of these dental evils. . . . The dental practitioner should equip himself to become the agent of an intelligent control of human evolution, insofar as it is affected by diet. Let us go to the ignorant savage, consider his way of eating, and be wise. Let us cease pretending that tooth-brushes and tooth-paste are any more important than shoe-brushes and shoe-polish. It is store food which has given us store teeth.

EA Hooton quoted in *Nutrition and Physical Degeneration*, Price, 1939

Most dentists either don't understand this, or are too busy to explain it to patients. Furthermore, patients can rarely be counted upon to actually follow advice about strict dietary changes (we have become moral weaklings in the modern world). And the majority of patients a dentist sees have dental decay that has progressed so extensively, with so many missing teeth, and a honest explanation that this was all avoidable may really hurt the patients feelings (not something modern medicos like to do, in Plato's words much of modern "medicine" is often a flattery not truly an art). Therefore in practice most dentists apply the rule "they are not going to get in the lifeboat, so sell them a bucket," and scrape teeth, drill fillings, and paint the teeth with fluoride varnish – instead of really removing the cause of decay.

Cavities are not the only dental issue that arises with the shift to modern lifestyle, periodontitis, which refers to how well the teeth are held in the jaw bones, is another important aspect of dental health that has degraded in the modern world.

"We were very struck by the finding that severe gum disease appeared to be much less common in the Roman British population than in modern humans, despite the fact that they did not use toothbrushes or visit dentists as we do today," said Professor Francis Hughes, the lead author of the study at King's College London.

Extensive tooth wear from a young age may have been caused by a diet rich in coarse grains and cereals. Theva Molleson, a co-author of the study from the museum, said the results showed a "major deterioration" in oral health between Roman and modern times.

Experts blame smoking and diabetes as skulls show

Romans had better gums than modern Britons, Culture 24, Miller, 2014

Unfortunately, the “experts” jump to the conclusion that smoking and diabetes caused this change, probably hampered by the dominant theory about why people get periodontitis (too much plaque), although older theories, such as inadequate function, may better account for the phenomena.

Crooked teeth, called “malocclusion” by dentists, is another disease of modernity. Malocclusion is a consequence of our poor facial development, and an excellent marker of facial degeneracy. Primitive people, both ancient and contemporary, tend to have beautifully well developed dental arches, in which the teeth are naturally straight, and come together appropriately.

These results suggest a different pattern of inter-population variation in dental and mandibular dimensions, hinting at the fact that the lack of correlation between dental size and mandibular form that is associated with various types of malocclusion among modern-day populations, began to arise with the shift towards sedentism and agricultural subsistence practices several millennia ago.

Incongruity between Affinity Patterns Based on Mandibular and Lower Dental Dimensions following the Transition to Agriculture in the Near East, Anatolia and Europe. Ron Pinhasi, et al. PLOS ONE, 2015

These differences were still present, although to a lesser degree, when moderns are compared to medieval populations.

This study indicates a significant increase in both prevalence and severity of malocclusions during the last 400 to 700 years in Norway. Furthermore, although no sex differences were found in the present-day sample, females showed both higher prevalences of malocclusions and more severe malocclusions than males in the past. Only 36% of the medieval group had a professionally assessed need for orthodontic treatment, compared with 65% of the modern sample.

To help illustrate their findings, the authors of this study included an excellent image of the skull and dentition of a characteristic medieval skull. It is plainly evident that many of the hallmarks of a well developed face are present in this sample.

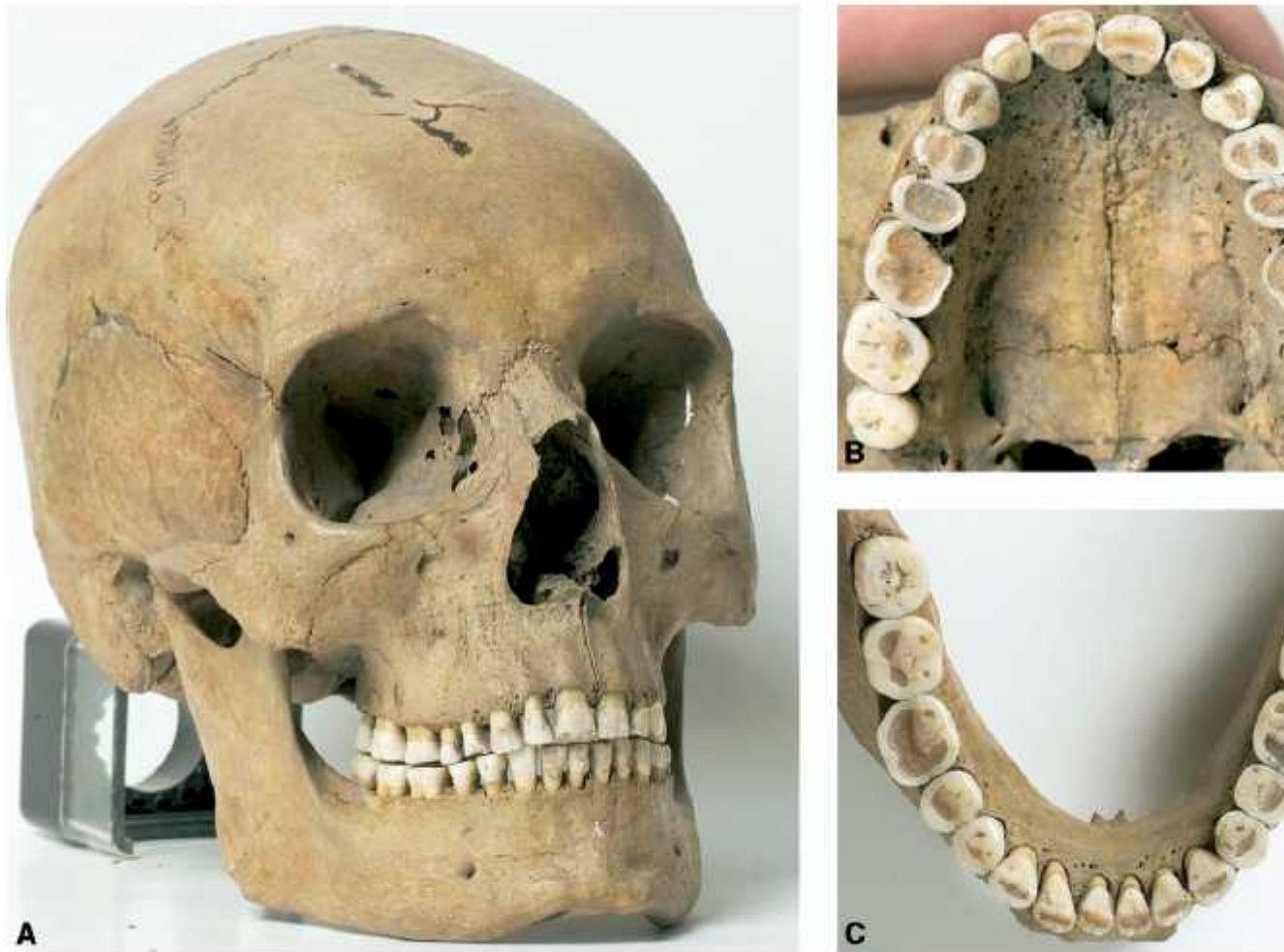


Fig 1. Male skull from 14th century from St Nicolaus church in Oslo. Note broad, well-aligned arches without crowding and severe occlusal attrition into dentin and some approximal attrition. **A,** Skull with jaws in occlusion; **B,** maxillary arch; **C,** mandibular arch.

Are malocclusions more prevalent and severe now?

A comparative study of medieval skulls from Norway

Jon Petter Evensen and Bjørn Øgaard, 2007

A prolonged and minute comparison of human remains found in ancient and modern graves in England has convinced me that structural changes of a minor kind are affecting certain parts of the skeleton in at least one-third of modern instances. The narrow bony opening to the nose, with its gill-like nasal spine, its raised and sharp sill, so often seen in modern English skulls, are conditions never present in the Englishmen of pre-Roman periods. Contracted palates, crowded and defective teeth, deformed jaws, sunken cheek bones, do not become common in English graves until we reach the eighteenth century. The appearance of these structural changes in Englishmen cannot be attributed to the introduction of any new racial element from abroad. No doubt these facial changes are due in part to the soft nature of our food, and to the disuse of our muscles of mastication.

Concerning Man's Origins, Keith, 1927

The same pattern of malocclusion among those engaging in modern lifestyles emerges when living contemporary groups are compared:

About 70% of aboriginal subjects show a Treatment Priority Index of less than 4.0 (signifying relatively classic, ideal occlusion), and 60% of the moderately acculturated subjects, but only about 40% of industrialized peoples fall within this range.

How Anthropology Informs the Orthodontic

Diagnosis of Malocclusion's Causes, Corruccini, 1999

The lack of malocclusion of the “primitive” skull is closely related to another aspect of their superior facial development, the lack of impacted teeth. The above image for instance plainly show that the third molars, the troublesome wisdom teeth that so many moderns must have removed, are perfectly upright and positioned as functionally as any other teeth. Similarly, the congenital absence of teeth is a related aspect of poor development, to which moderns, but not primitives, are subject.

Two serious defects from which many individuals in our modernized civilization suffer are impacted teeth and the absence of teeth due to their failure to develop. It is significant that in the arches of the primitive races practically all teeth form and erupt normally, including the third molars. In the modernized primitives and among our modern whites with deformed dental arches many teeth are impacted and often several of the permanent teeth have never formed.

Nutrition and Physical Degeneration, Price, 1939

Of course, the proximate cause of impacted and crooked teeth is inadequate space for the teeth in the the jaws themselves.

While the main point of difference between the teeth of primitive and modern man is to be noted in the amount of attrition registered on these organs, what distinguishes the jaw-bones of the above two classes of mankind from each other is their difference in size and quality. The jaws of the primitive are larger, heavier, more rugged, and more compact than those of the modern European.

The Human Masticatory Apparatus, Klatsky and Fisher, 1958

Until recent times there was, in addition to this wonderful adaptation of the lower and upper arches, and equally perfect correlation between the jaws and the teeth. The exact correlation in civilized races is not the exception rather than the rule, as most people have crowded arches; in other words, the jaws do not correspond in size to the teeth. It is obvious that the possibility of this correlation is a property resident in the embryonic tissues – at least when environmental conditions as regards the species are favourable – and it is difficult to believe that this important power of adaptation should be lost, since no conceivable benefit could be derived from the loss, either from the point of view of use or beauty.

Variations in the Form of the Jaws, James Sim Wallace, 1927

The jaws are a critical aspect of facial structure, and as we have seen the same faces that demonstrate fully developed jaws are generally examples of good facial development and beauty.

While the primitive groups constantly presented well-formed faces and dental arches reproducing the tribal pattern, the new generation, after the adoption of white man's foods, showed marked changes in facial and dental arch form.

Nutrition and Physical Degeneration, Price, 1939

The human face is shrinking. Research into people's appearance over the past 10,000 years has found that our ancestors' heads and faces were up to 30% larger than now... The shrinkage has been blamed for a surge in dental problems caused by crooked or overlapping teeth. "Over the past 10,000 years there has been a trend toward rounder skulls with smaller faces and jaws," said Clark Spencer Larsen, professor of anthropology at Ohio State University... He said: "Many men then would have had the shape of Arnold Schwarzenegger's head while women might have looked more like Camilla [the Duchess of Cornwall]."

Scientists show we've been losing face for 10,000 years, Leake, 2005

It is important not to get carried away in our enthusiasm of the quality of faces of all primitive groups, as many agricultural primitives did in fact have "modern" facial deformities prior to contact with the West.

While it is assumed that jaws and teeth, as well as the rest of the body, tend to develop normally under strictly healthful conditions, an example of a perfect dental occlusion in man is seldom realized. It has become customary for investigators to conclude that early man more closely approached this ideal occlusion; that ideal occlusion is common in most healthy primitive peoples; that tissue disharmony is more frequently found in modern civilized man. Archeologic excavations in Peru and in other parts of the world have produced numerous testimonies to the contrary. I have examined hundreds of early skulls from the Old World and from South America, as well as the dentures and records of many more of primitive peoples, some of whom have had no contact whatsoever with civilization. I found, among those examined, malocclusions of the teeth and malformations of the jaws closely simulating deformities to be found today, although the environments appear to have been vastly dissimilar.

Anthropologic Aspects of Dentofacial Deformities, Wright, 1938

Indeed, the distinction between pre-agricultural and post-agricultural is likely of more consequence in predicting quality of facial development than modern or primitive. People subsisting on monoculture grain based diets, and the destitute poor of any culture never seem to have proper facial development – whether European, Native American, or African. However, all these groups have, in their pre-agricultural environments, exhibited vastly superior facial structures, and superior in the same characteristics that make the famous faces of the Golden Age of Hollywood beautiful.

For example, when photographs of the primitive farming Himba tribe were trending on reddit.com, commenters were struck by their facial beauty, leaving popular comments such as:



That's some good looking people

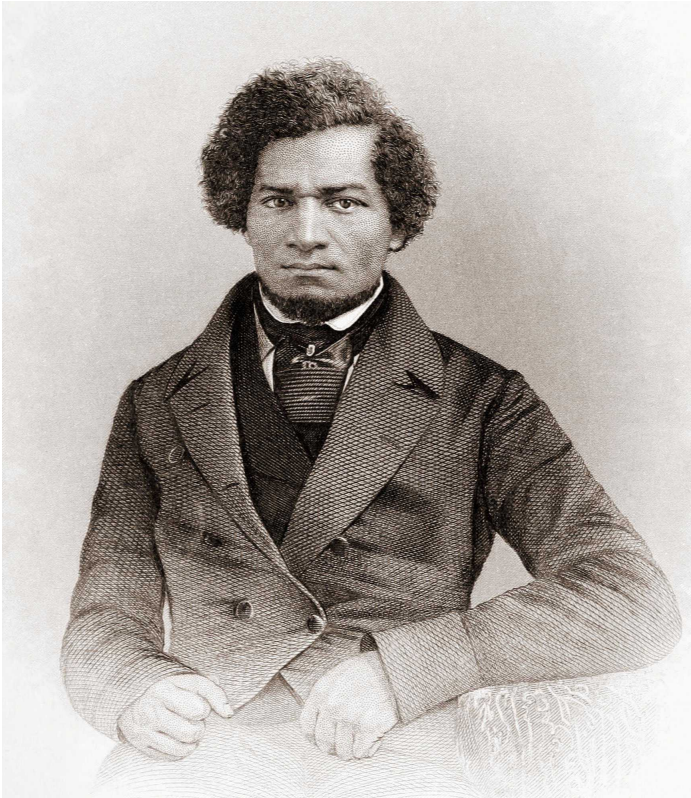
It's like a tribe of models what the hell?

Good lord, these women are beautiful

I was in Eastern Africa in October. All of the children there had BEAUTIFUL teeth. One of the physicians I was with said that it is a combination of a diet with no added sugar, and their water is naturally fluorinated.

Certainly, that last commentor was misled, but that is hardly the physician's fault. True facial beauty, what it is, and how to achieve it is completely absent from medical school (doctors learn about disease, not health), and it is only mentioned in passing in dental school.

When traditional Africans were enslaved and shipped to the New World, they brought their excellent faces with them. It seems that the critical factors for good facial development were at least occasionally achieved among the American slaves, as the extremely well developed face of Frederick Douglass, born into slavery in Maryland, testifies.



Douglass escaped slavery around the age of twenty, and went on to work as a preacher and abolitionist in the Northeast. Douglass is a useful example because he was so famous that we have photographs of his children as well. In his freedom, Douglass went on to live an exciting, but much more bourgeois life than his own childhood. This change is plainly evident in the delicate bone structure of his children's faces.



Charles Redman Douglass, son



Lewis H. Douglass, son



Frederick Douglass Jr., son



Rosetta Douglass, daughter

These faces have a very different character than the massive and robust face of the father. The vastly different lifestyle seems to, in one generation, produced faces that are as different in character as possible, while still maintaining a family resemblance. As a direct comparison, are not two of the sons faces as wide as one of the father?

This discrepancy within a family suggests that genetics is of little consequence in facial development. We see the same trend in all races, whenever examined. The “father of orthodontics”

in his famous book commented on the incredible development displayed in photographs of native american chiefs:

Figs. 45 and 46 show the faces of two North American Indians, vastly different in type, and yet how perfectly the law of balance applies to these faces. It will be noted that the mouths are in perfect balance with the rest of their features, making certain that their dentures must have been normal.

Treatment of the malocclusion of the teeth, Angle's System 1907

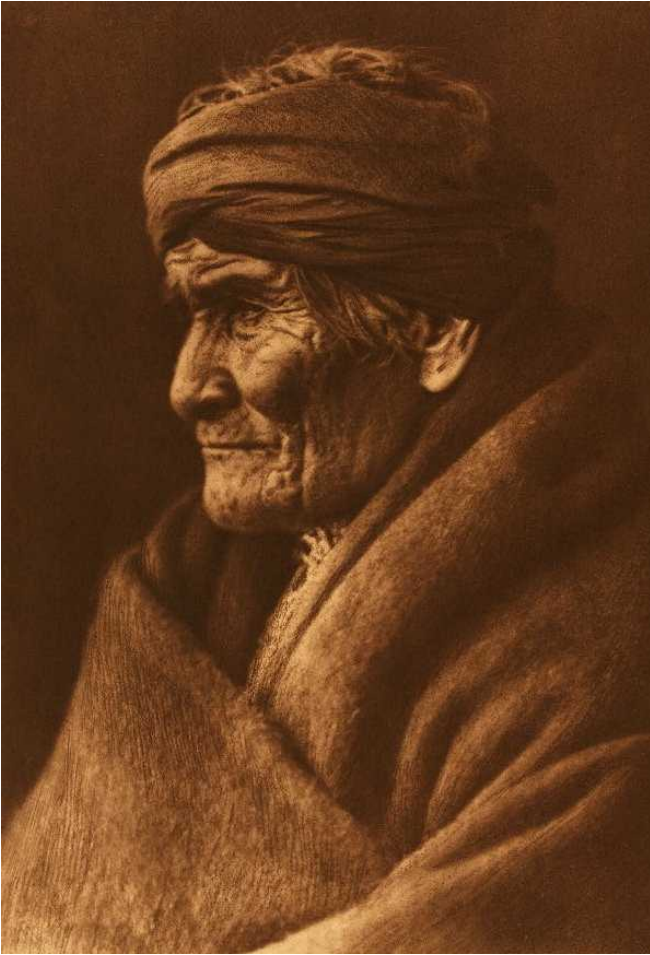




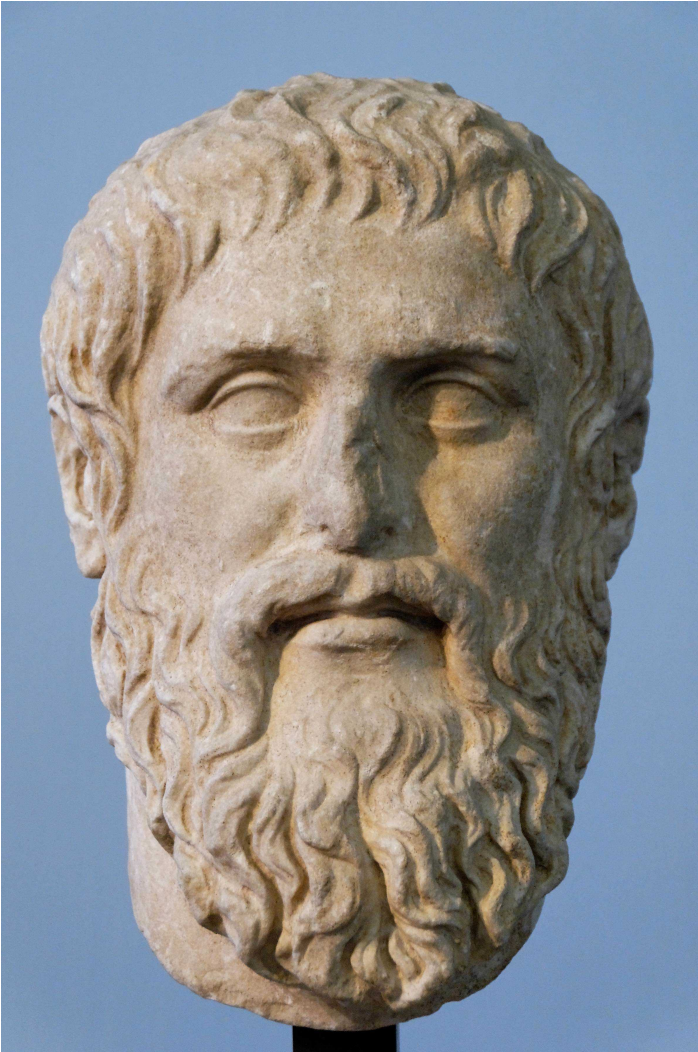
And is not Geronimo (who lived through the same era as Douglass), seen below in his famous 1887 photograph, not a paragon of excellent facial development among the indigenous Americans?



They just dont make faces like that anymore! We are lucky to have another image of Geronimo in profile, which only further emphasizes the point.



Even among Europeans, beautiful, well developed faces abound in the primitive aristocratic, and traditional peasant classes. Consider Plato's massive head, and you can hardly be surprised at his profound mind.



And does not Plato's very name refer to the broad "plateau" of a Hellenic forehead that he has? The relationship between cranial size and genius is one of those old academic discoveries that may have been tossed aside before it could be ultimately validated. Consider a single individual – would he not be smarter if his brain, *ceteras parabus*, were much bigger?

We will return to this speculation in the next chapter. Let me just add that Europa herself, after whom the continent is named, seems herself to have been named for her having a broad face.



This can especially be said of the story of Europa. Her name occurs in the list of daughters of Okeanos and Tethys, together with the names of other wives of Zeus. It means “she of the wide eyes” or “she of the broad countenance.”

The Gods of the Greeks, Kerényi, 1951

At any rate it should be clear that facial changes seem to affect all human (and even non-humans) groups once a critical environmental shift occurs. The patterns of degeneracy are constant, and they form the modern “poorly developed face” syndrome.

It is worth considering who exactly is liable to facial degeneration, as that brings us closer to our goal of viriculture for our own children. Certainly primitives are less susceptible than moderns. It also seems that, in a more limited way, the rich are less susceptible than the poor – but this observation is not without qualification.

There are essentially two narratives which relate to facial development, and both have some truth:

- | | |
|----------------------|----------------|
| 1) Noble aristocracy | Destitute poor |
| 2) Moral peasants | Depraved rich |

These narratives hold some weight in our understanding of faces, especially if we consider the period before modern industrial food-like products took over the world. City vs country lifestyle played a role as well, with city dwellers more likely to be degenerate. Consider the table below:

Pre-1900s Stereotypes of Degeneracy by Location and Class

	Rich	Poor
City	Mildly Physically Degenerate Morally Deficient Decadent Atheists Depressed Cultured <i>Example: Dickens' Scrooge</i>	Severely Physically Degenerate Morally Deficient Depressed Ill <i>Example: 19th Century London Factory Workers</i>
Country	Physically Robust Religious/Moral Happy In Rude Health Cultured Noble <i>Example: 13th Century Vassal Knight</i>	Physically Robust Religious/Moral Happy In Rude Health Simple/Philosophical In touch with Nature <i>Example: Tolstoy's Serfs</i>

This chart is not “true,” but rather a way of getting thing straight in our minds. Classes have generally differed in relevant physical ways.

First there comes difference of diet and its effects. In the habit, common among primitive tribes, of letting the women subsist on the leavings of the men, and in the accompanying habit of denying to the younger men certain choice viands which the older men eat, we see exemplified the inevitable proclivity of the strong to feed themselves at the expense of the weak; and when there arise class-divisions, there habitually results better nutrition of the superior than of the inferior. Forster remarks that in the Society Islands the lower classes often suffer from a scarcity of food which never extends to the upper classes. In the Sandwich Islands the flesh of such animals as they have, is eaten principally by the chiefs. Of cannibalism among the Fijians, Seeman says—“the common people throughout the group, as well as women of all classes, were by custom debarred from it.” These instances sufficiently indicate the contrast that everywhere arises between the diets of the ruling few and of the subject many. Naturally by such differences in diet, and accompanying differences in clothing, shelter, and strain on the energies, are eventually produced physical differences. Of the Fijians we read that “the chiefs are tall, well made, and muscular; while the lower orders manifest the meagerness arising from laborious service and scanty nourishment.” The chiefs among the Sandwich Islanders “are tall and stout, and their personal appearance is so much superior to that of the common people, that some have imagined them a distinct race.” Ellis, verifying Cook, says of the Tahitians, that the chiefs are, “almost without exception, as much superior to the peasantry...in physical strength as they are in rank and circumstances;” and Erskine notes a parallel contrast among the Tongans. That the like holds of the African races may be inferred from Reade’s remark that—

“The court lady is tall and elegant; her skin smooth and transparent; her beauty has stamina and longevity. The girl of the middle classes, so frequently pretty, is very often short and coarse, and soon becomes a matron; while, if you descend to the lower classes, you will find good looks rare, and the figure angular, stunted, sometimes almost deformed.”

Simultaneously there arise between rulers and ruled, unlikenesses of bodily activity and skill. Occupied, as those of higher rank commonly are, in the chase when not occupied in war, they have a life-long discipline of a kind conducive to various physical superiorities; while, contrariwise, those occupied in agriculture, in carrying burdens, and in other drudgeries, partially lose what agility and address they naturally had.

The Development of Political Institutions, Spencer, 1881

And the physical beauty of the nobility generally is the more structured, refined, and elegant.

...the character and bearing so unlike that of one in a servile condition

History of Rome, Livy, 9 BC

The head is noble, well-sized, broad, and large behind the ears.

Dracula, Stoker, 1897

Se bocca più bella

Se aspetto più nobile

Così fan tutte, Mozart / Da Ponte, 1790

We saw that human height was reliably associated with social standing in historical societies, and that aristocrats tended to be taller on average. Faces also followed the a pattern of social stratification – although not always the same pattern.

Knights were not just taller and stronger than their inferiors. Popular chivalric romances constantly drew attention to the fine features and fair complexions of noble heroes and heroines. Fiction often reflected reality. Sir Thomas More described Arthur Plantagenet, Viscount Lisle (an illegitimate son of Edward IV), as ‘princely to behold, of visage lovely, of body mighty and strong; and clean made.’ His contemporary Edward Stafford, third Duke of Buckingham, was likened to ‘a Paris and Hector of Troy’ as he performed in the tiltyard. Aristocratic manners would have been impeccable, their movements graceful and their speech fluent. In 1483, when Buckingham’s father tried to persuade Londoners to accept Richard III as king, his unconvinced audience noted that his words were ‘well and eloquently uttered with so angelic a countenance.’

Aristocrats on average had straighter teeth with less decay, as well as better developed faces. This trend shows up in literature often enough.

But Priam bade [Helen] draw nigh. “My child,” said he, “take your seat in front of me that you may see your former husband, your kinsmen and your friends. I lay no blame upon you, it is the gods, not you who are to blame. It is they that have brought about

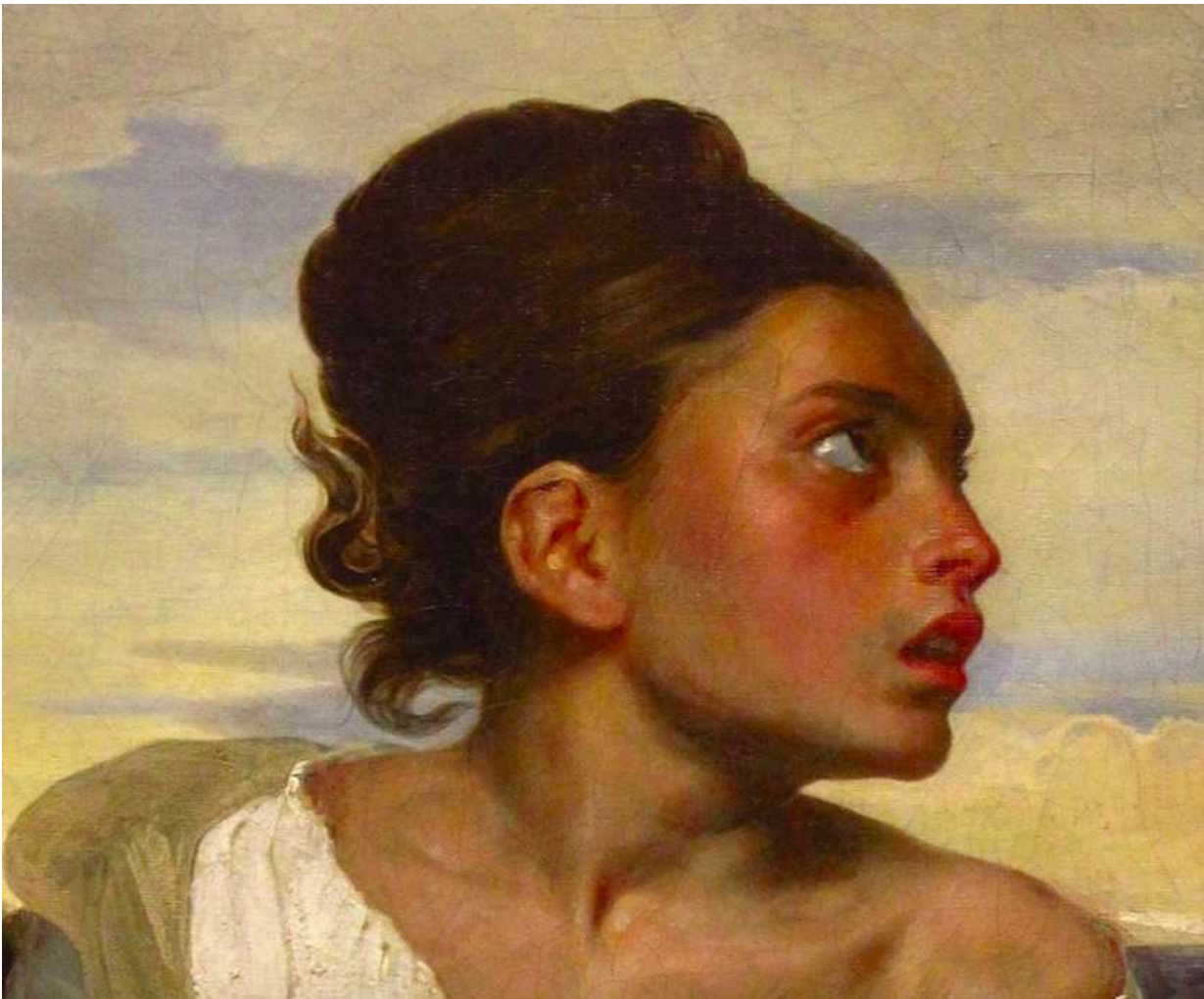
this terrible war with the Achaeans. Tell me, then, who is yonder huge hero so great and goodly? I have seen men taller by a head, but none so comely and so royal. Surely he must be a king.”

Iliad, Homer / Butler, 800 BC

We see a similar notion in Victor Hugo’s description of the wealthy old Parisian Monsieur Gillenormand, who lived off his private fortune, in the chapter titled “Ninety Years Old and All Thirty-two Teeth.”

He was a peculiar old bird and a genuine specimen from another age, a true and complete bourgeois, a trifle haughty, from the eighteenth century, wearing his goof old bourgeoisness as marquiseses wear their marquisates. He was past ninety, walked tall, spoke loudly, saw clearly, knocked back his drink, ate, slept, and snored. He has every one of his thirty-two teeth and he wore glasses only to read.

Although we see the opposite did occasionally occur, such as in Delaceoix’s painting of an orphan girl – we might assume she was a peasant.



Orphan Girl at the Cemetery, Eugène Delacroix, 1824

And in Montaigne’s borrowed story about Philoemen,

It is a great annoyance to be addressed in the midst of your servants with the question: "Where is the master?" and to get only the tail end of the salute made to your barber or your secretary. As happened to poor Philopoemen. He was the first of his company to arrive at a house where he was expected, and his hostess, who did not know him and saw his rather unimpressive appearance, set him to work helping her maids draw water and stir up the fire in honor of Philopoemen. The gentlemen of his suite, having arrived and surprised to see him busy at this fine occupation (for he had not failed to obey the command given him), asked him what he was doing there. "I am paying," he answered them, "the penalty of my ugliness."

Essays, Montaigne, 1580

But Montaigne's story only emphasizes the unexpected nature of an ugly aristocrat.

Two youths approach, whose semblant features prove

Their blood devolving from the source of Jove

Odyssey, Homer /Pope, circa 800 BC

This is corroborated in a 2012 reddit.com thread titled *Are beautiful people more present in higher/richer social classes?*

Several little weird correlations:

If I am at a party with rich people; it seems that there are more of the classic standards of beauty: tall, thin, cheekbones, nice teeth, small nose, good hair... — and no matter the race, people just seem to be beautiful — also it's not only about how to present yourself (expensive dress+makeup) but very much about genetic traits: tall, face...

when i'm driving on the highway, and pass up an expensive looking car, if the driver is a woman, very often she will be hot/pretty

i did a year abroad in an ivy league univ and I sometimes meet up with old classmates and friends: everybody (from all around the world; african, south american, european...) jut seem to be hotter than the plebs.

I suspect that, since ever, richer men are sucking away the beauty from the general population (rich man marries pretty woman) and thus beauty gets away from the lower classes... then pretty kids... who are rich and thus have more chance to be rich (good studies + advantages).

Is it true?

Also, even you're poor and beautiful, there will be a possibilities to move up (sadly, it's still mainly for the women by marrying rich), and then again, even in modern times, beauty moves up and leaves to go have fun with the Riches.

With time, do you think that only the bad genes stay in the lower classes?

I am not saying that all the riches are beautiful, or that there is no pretty girl among the poors... but that among the higher social classes, you see more of the beautiful

And the top rated comments:

Well, some of that is because of money – nice teeth, makeup, expensive hair products.

Yeah and things like diet will give you nicer skin. Teeth make a massive difference to how you look, you can have them straightened, whitened etc. Expensive clothes tend to look/fit better, showing off your figure better or hiding/exaggerating positive/negative features.

I don't doubt there are other reasons as OP has mentioned, but I think money has a big role to play here.

We can forgive the commentators for somewhat missing their mark. Remember, it is not just that beautiful people become rich, but that *beauty is a signal of wealth* -environmental wealth in the sense of our evolved ancestral norms. In many cases, the poor lack these means. Even *Urban Dictionary* defines “peasant features” as:

Possessing facial features common among poor rural people, such as receding chins, lazy eyes, low brows, horsey face, etc. Possibly the result of centuries of living in a shallow gene pool.

In contrast, peasants, especially if they work outdoors, are often illustrated as “robust” and healthy, with strong bodies and wide faces – most classically in *Anna Karenina*. This is the sort of description Price had for the traditional Swiss farmers he investigated. And other researchers have found a similar trend:

The lower the position, the coarser the diet, and therefore, the better the occlusion.

Occlusal variation in modern India, Nelson, 1997

A major precursor to the modern face was the “aristocrat character” or “super-modern character” found by anthropologist Hiroshi Suzuki. Suzuki discovered, during his research in the early 1960's, that the skeletons of Edo Era lords were extremely different from other skeletons. Here are the findings of Suzuki as quoted by Hanihara:

1. Short stature and large skull. Skull Index is medium to small.
2. Facial height is significantly taller and facial width significantly narrower than local populations,
3. Extremely aquiline nose, high nose bridge
4. Large and vertically elongated eye socket (orbit)
5. Smaller upper and lower jawbone, with highly protruding chin (mentum)
6. High levels of malocclusion, low levels of dental attrition

Suzuki hypothesizes, in his follow up book “*The Bones Speak: The Tokugawa Shogunate and Daimyo families*” (骨が語る：徳川将軍と大名家の人びと) that the root cause of aristocratic character is poor development of the mandible and mastication muscles. Aristocrats ate softer foods than the lower classes at the time, more similar to the current (Westernized) Japanese diet.

The name “super-modern” comes from the fact that compared to commoners, trends that have occurred due to modernization have not only started but have preceded even further than they have at present. Hanihara backs this argument, stating that these trends

have continued, and that many “normal” Japanese people now have the “aristocratic character.”

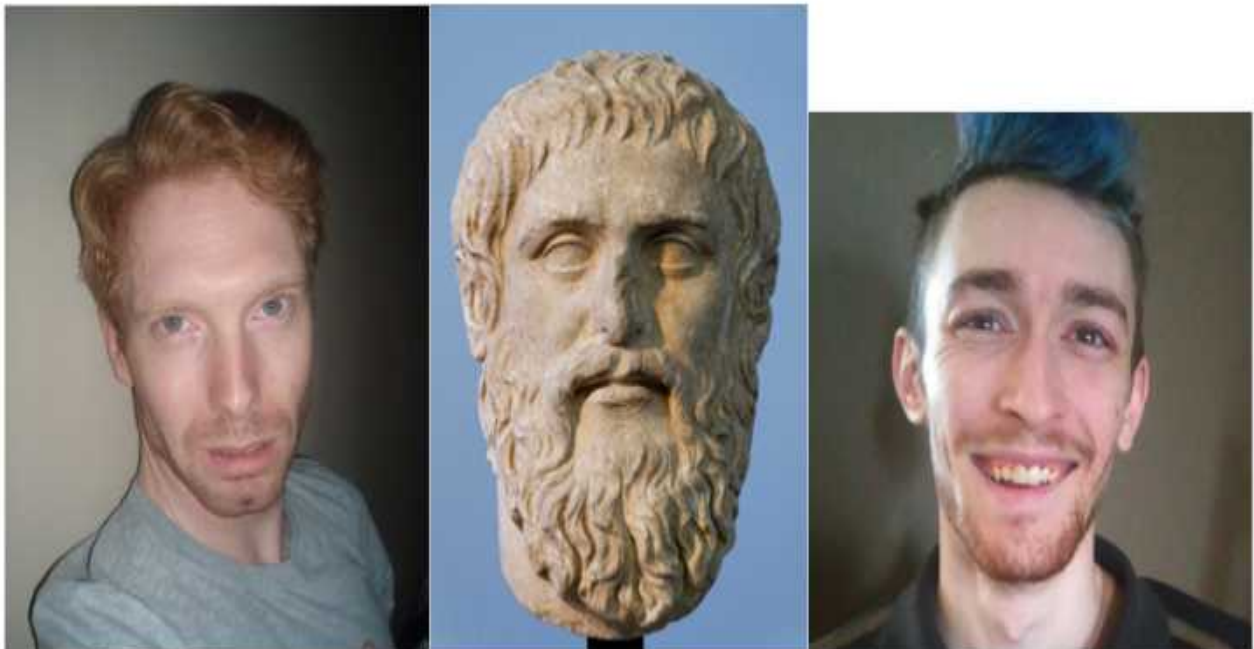
Modern faces, on the other hand, are in general inferior to the faces of the past. All of the stigmata of poor facial development occur more frequently in industrial, urban settings.

Dietary refinement and, to some extent, respiratory allergy are conditions of Westernization; prevalence of malocclusion, maxillary and facial “collapse syndrome,” long face syndromes, and oral breathing all soar in rapidly modernizing, urbanizing societies.

How Anthropology Informs the Orthodontic

Diagnosis of Malocclusion’s Causes, Corruccini, 1999

Modern faces are smaller. especially in the lower two-thirds, with delicate bone structure – and all of the stigmata of poor facial development discussed above.



These two degenerate modern faces are contrasted with Plato. Note the lack of bone lateral to the eye socket in the degenerate faces. Straight teeth in this type of face can only be achieved with aggressive dental intervention. And modern faces differ in other more subtle ways as well. Our modern faces rarely fully mature fully anymore.



Stunted permanent adolescent boy face vs full grown man face

Rather than growing to have the face of a man or woman, modern faces are stunted in adolescence. Note the absence of facial development in the lower 2/3 in the above example – and this is a normal looking modern “man.” These faces are more androgynous as well. Men especially have far more delicate and feminine faces than their ancestors. The difference is so striking that laypeople swear that something has been put into the water to cause such a change (generally estrogen from birth control, or similar endocrine signaling hormones), a topic which we will explore later.

In all important ways, the fully developed face is culturally preferred, especially in men. Looking at the above faces, which is noble and which ignoble; which the hero, and which the villain; which is honest and which a liar; and which is the CEO and which the employee? Even more primal – which of these men is dominant to the other? Remember there is no actual behavior here to judge, so to a purely rational computer, these would be unfair questions. But our evolved minds are prejudiced by instinct – in an accurate, if imprecise, way.

The outcomes of our most important social decisions (e.g., which political leaders to elect, which person to marry, etc.) depend on our ability to draw accurate inferences about other people’s tendencies, motivations, and qualifications. Unfortunately, these judgments are often influenced by superficial and weakly diagnostic cues. In particular, our impressions of people are heavily shaped by their facial appearances. The face is a rich source of information about a target person’s age, gender, ethnicity, and emotional state, yet face-based social inferences also fuel judgments about personality, behavioral intentions, and cognitive abilities. As a result, facial traits can bias human choices. The potential for faces to influence social decisions is illustrated by their ability to predict a wide range of important outcomes.

Social attributions from faces bias human choices, Olivola et al, 2014

Not only do we think fully developed faces make better people – they actually did, at least in the somewhat narrow context of our evolved environment – that is why such a preference evolved in the first place.

Once the adult face is formed, various factors contribute to its maturation. Just like facial development, facial maturation can be good or bad. And don’t think that “wrinkles” is all there is to

bad facial maturity. On the contrary, many of the most beautiful Hollywood faces look like “an old catcher’s mitt,” from decades of California sun and pipe smoking.



Many factors play into facial aging, including diet, but possibly unexpected factors such as social status as well. The best imagery with which to understand facial aging is a maturing stag. In the final scene, Bambi, although an adult who has already reproduced, is still far inferior to the Great Prince of the Forest in secondary sex characteristics such as antlers and deer-beard.



The animators lead the audience to believe that one day Bambi himself will be so mature. However, it is important to realize that a unhealthy stag could never mature in this excellent way. Indeed, as far as deer are concerned, good development is beauty – and in a more realistic deer movie, the Great Prince would have fought Bambi away from his harem, and kept Bambi’s girlfriend for himself.

In considering humans, there are essentially four ways facial maturation can play out.

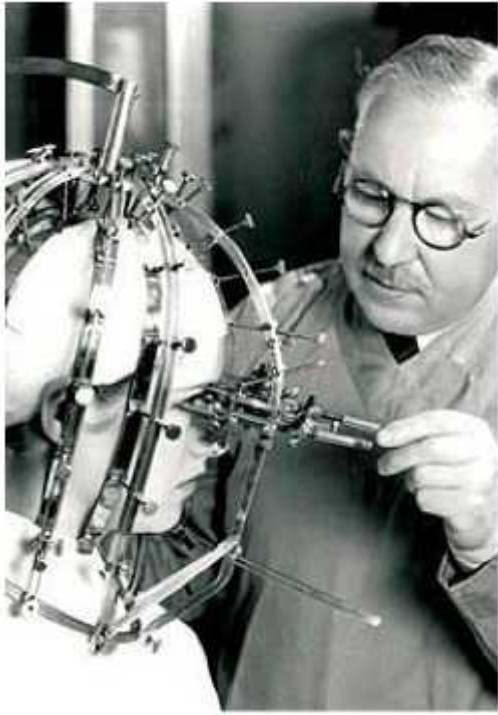
	Well Developed	Poorly Developed
Well Aged	Good bone structure Maintained musculature Youthful skin Maintained subcut fat	Poor bone structure Maintained musculature Youthful skin Maintained subcut fat
Poorly Aged	Good bone structure Weakening of musculature Wrinkled sagging skin Loss of subcutaneous fat	Poor bone structure Weakening of musculature Wrinkled sagging skin Loss of subcutaneous fat

As the modern poorly developed face continues to age, it is generally subject to the same environmental factors which led it to poor development in the first place, and these cause poor maturation as well – so that in our decrepitude we become the horrific poorly aged face on a stunted adolescent bone structure. This is in direct contrast to Price’s observations of traditional people.

The hardihood of the people was splendidly illustrated by a woman of 62 years who carried an enormous load of rye on her back at an altitude of about 5,000 feet. We met her later and talked to her, and found that she was extraordinarily well developed and well preserved. She showed us her grandchildren who had fine physiques and facial developments.

Nutrition and Physical Degeneration, Price, 1939

By now the reader should be able to appreciate the general differences between the poorly and well developed face. Also, we should recognize that the primitive, traditional face is generally better developed than the modern. Further, the most beautiful faces are well developed. This information is our foundation for understanding how to achieve good



Faces Part 5: Teleology of Facial Beauty

Posted on [admin](#) Posted in [Book](#)

Teleology of Facial Beauty

The manner in which a beautiful face is developed looms as quite an important factor in the understanding of beauty itself!

Ricketts

Why do we see beauty in faces? The answer lies in evolutionary psychology. Beautiful faces, like beautiful bodies, convey information. This information is the sum of many years of environmental and genetic influences on the individual. It is very difficult to falsify this information. Some of this information can be reliably correlated with outcomes in terms of survival and reproduction of offspring. Our ancestors who found beauty in these honest signals would have been more likely to pass on those preferences.



16 likes

thatkguy__ How ya teeth got exponents?



There is, however, an alternative, partially overlapping belief about the ultimate reason some faces are beautiful. This belief is grounded in mathematics, and states that certain ratios and proportions in faces are the cause of their beauty. This is of course true in some sense, and these ideal proportions can be useful for surgeons trying to “fix” a face. However, saying that a face is beautiful because of its proportions is a tautology. Even if we could objectively measure facial beauty, this would not help us in viriculture. We want to know *why*, ultimately, a beautiful face developed to have the proportions that it does, not so much what those proportions are.

There is an interesting emphasis on the so called “golden ratio” as the be-all-end-all of dentofacial aesthetics. This ratio has been denoted with the Greek letter ϕ (phi), and is defined as the ratio of two quantities that is equal to the ratio between the sum of the two quantities and the larger quantity. In math:

The golden ratio ϕ is defined as $a/b = (a+b)/a$

If we say that b has a value of 1.0, and solve for a , we get

$$a = 1/2 (1+\sqrt{5})$$

which is approximately 1.618

and since ϕ is defined as a/b and b is 1.0

ϕ is approximately 1.618 to 1

The role of the ϕ in dentofacial beauty was explored in a famous article by Ricketts in 1982. Ricketts had previously developed some rules of thumb for identifying characteristics of facial beauty and planning maxillofacial surgery. By 1982, he had developed a belief that ϕ was at the center of understanding the true nature of beauty in general. He claimed that ϕ , as well as some related geometric ratios, correspond to the ratios on the features of beautiful faces.

In order to understand the mathematical importance and the nature of development on this spiral and other laws of growth, we return to mathematical properties known to the

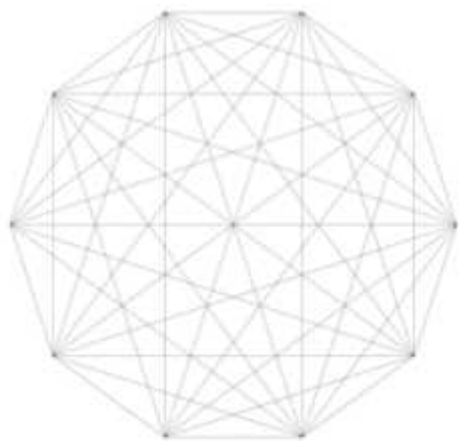
Greeks and even the Egyptians and probably even before – the Golden Section... Very simply, it deals with a certain kind of proportion that is most appealing, soothing, or attractive to the human psyche, but its implications extend to encompassing space or time and the very foundations of physics and abstract science.

Ricketts 1982

Ricketts presents corroborative evidence by showing that ϕ appears in the faces of professional models. While Ricketts does identify the role of evolution in facial beauty, he seems to suggest that the face is constrained by some natural law to grow in such a way that it corresponds to ϕ . In theory, this is not unprecedented, as “Murray’s law” famously uses a mathematical formula to predict the branching patterns of vessels and lumen in biological systems. However, Rickett’s underlying evidence is rather weak. Furthermore, his musings on the topic are grandiose and quasi mystical – in the same article of facial beauty he touches of the “golden rectangle and the space-time link.”

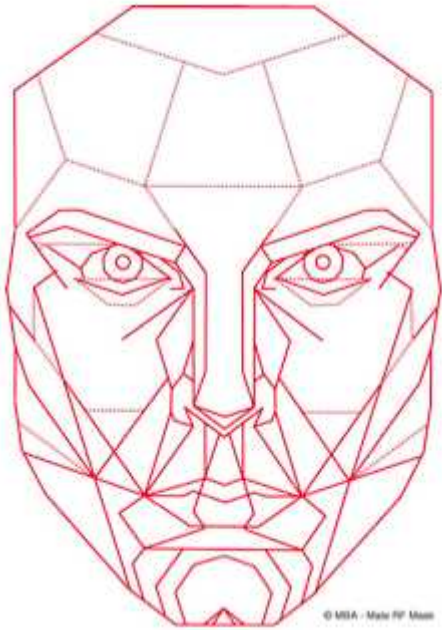
No matter its truth-value, Rickett’s work made a splash in the dental profession, and is taught as a part of the standard curriculum in dental schools. As a student I had a clinical instructor tell me that the secret to good dentistry is in “Pythagoras’ golden rectangle.”

In recent years another oral surgeon, Stephen Marquardt, has built upon Rickett’s theory, and now believes that he has found the secret to a beautiful face. Just like Ricketts, Marquardt claims that ϕ is central to understanding facial beauty. Instead of simply using the golden ratio, Marquardt constructs what he calls “the most complete two dimensional structure formed” from ϕ , the “golden decagon matrix.”



By arranging a number of “golden decagon matrices” of different sizes into the approximate shape of a human face, Marquardt produces his “golden facial mask,” which he takes to be the objective standard of human facial beauty.

In order to construct the face, forty two (42) “secondary” Golden Decagon Matrices, which are exactly the same shape as the Primary Golden Decagon Matrix but smaller by various multiples of phi, are mathematically and geometrically uniquely positioned in the Primary (or framework) Golden Decagon Matrix. It is these forty two (42) Secondary Golden Decagon Matrices which ultimately form the various components of the face.



While it is certainly an interesting goal to have an objective standard for facial beauty rooted in mathematics, Marquardt's explanation seems too independent of evolutionary psychology to be valid. It might be apparent to the reader that Marquardt simply resized and relocated "golden decagon matrices" until they sort of looked like an attractive face. If we are going to use a wireframe drawing to predict facial beauty, why not cut out the pseudo-mathematical middleman ϕ , draw a beautiful face, and use that as the "objective standard?"

However Marquardt's work has attracted some attention. Dr Shanahan, whose book *Deep Nutrition* is good, spends a whole chapter discussing the perceived merits of Marquardt's work. Even the image on the cover of her book is a reference to ϕ .

The real problem with the ϕ theory of facial beauty is that it does not stand up to empirical testing. After Ricketts' article was published, a number of groups actually tested beautiful faces to see if they contained golden proportions.

Few golden proportions have a significant relationship with facial esthetics in adolescents. Moreover, the explained variance of the significant variables was too small to be clinically important.

Rosemie M. A. Kiekens, *et al.* *Putative golden proportions as predictors of facial esthetics in adolescents.* 2008

A number of direct facial measurements taken from the laser scans of the professional models were compared to test whether their proportional measurements matched the "Golden proportion" described by the ancient Greeks and popularized in orthodontics and surgery as the divine proportion by Ricketts. Proportional measurements of this esthetic group did not match the Golden proportion.

JP Moss, *The Use of Three-Dimensional Techniques in Facial Esthetics.* 1995

According to some authors, in beautiful faces, the values of the proportions measured are likely to approximate the divine proportion (1.618:1)... No correlations were found between changes in esthetic ratings and changes in the proportions. While most subjects were considered more esthetic after treatment than before, the proportions were equally likely to move away from or toward the divine proportion.

Baker BW, Woods MG. *The role of the divine proportion in the esthetic improvement of patients undergoing combined orthodontic/orthognathic surgical treatment*. 2001

Neither treatment method was more likely to result in a greater number of divine proportions, and the achievement of divine proportions seemed to have little, if any, influence on overall aesthetic outcomes.

Shell TL, Woods MG. *Facial aesthetics and the divine proportion: a comparison of surgical and non-surgical class II treatment*. 2004

On the basis of the actual evidence, Ricketts' ϕ theory can be said to be unsubstantiated. The Marquardt face mask is simply a more sophisticated version of Ricketts, but ultimately not more true.

An excellent 2005 PhD thesis by Mounir Bashour titled *Is an Objective Measuring System for Facial Attractiveness Possible?* explored the merits of the Marquardt face mask as an objective beauty standard. Bashour clearly identified superfluity of the backfit ϕ geometry.

The phi mask we feel is essentially a schematic of a high component number composite consisting of highly attractive female faces that has been given mathematical credence by fitting the golden ratio to it. Is the mathematical association of the golden ratio necessary for the schematic mask to correlate to attractive ratings for faces? Most likely it is not and we believe any schematic derived from a high component composite would work just as well, but it would not have the precise reproducibility that only a mathematically derived model can have.

No one has bothered to, as Bashour suggests, create a symmetrical schematic from a composite image of many averaged beautiful faces, and use that as a beauty standard. Alternatively, Marquardt should have performed the control of having a face mask created from random non- ϕ ratios as a benchmark of comparison with his ϕ mask. It seems to me more reasonable to empirically test face masks of every ratio to identify which is the most beautiful. The ϕ theory of facial beauty seems to rely on what Taleb calls "backfit explanations concocted ex post."

While no such study has been performed, such an epically derived set of ideal facial and body proportions has long been established in art and sculpture. Indeed human sculpture was one of the first Western arts to fully mature, around 500 BC in Greece (with gardening, hairdressing, and arguably poetry having been perfected earlier), and it seems unlikely that the art could reach such a degree of excellence without such guiding knowledge. From greats of this era, such as Myron and Phidias, nothing has come down to us in the way of writings. Even their original sculptures – perhaps the best ever to be created – are nearly completely lost or destroyed.

In the reign of Caesar Augustus however, empirically derived proportions of the ideal human bodies were described clearly in a text that has been passed down to our present day. Vitruvius composed his literary masterwork *De Architectura*, from which the famous Man of da Vinci was drawn fifteen centuries later.

For the human body is so designed by nature that the face, from the chin to the top of the forehead and the lowest roots of the hair, is a tenth part of the whole height; the open hand from the wrist to the tip of the middle finger is just the same; the head from the chin to the crown is an eighth, and with the neck and shoulder from the top of the breast to the lowest roots of the hair is a sixth; from the middle of the breast to the summit of the crown is a fourth. If we take the height of the face itself, the distance from the bottom of the chin to the under side of the nostrils is one third of it; the nose from the under side of the nostrils to a line between the eyebrows is the same; from there to the lowest roots of the hair is also a third, comprising the forehead. The length of the foot is one sixth of the height of the body; of the forearm, one fourth; and the breadth of the breast is also one fourth. The other members, too, have their own symmetrical proportions, and it was by employing them that the famous painters and sculptors of antiquity attained to great and endless renown.

I expect that this old, empirically derived heuristic for beauty in the human form is more accurate than those that emphasize the golden ratio or the Marquardt Mask, despite their mathematical and technological pretensions.

At any rate, while knowing the ideal proportions of a face is useful for a sculptor or a surgeon, it is hardly useful for a mother. A mother neither carves a face like marble, nor adds wax in due proportion as in a bronze casting. Neither does she crudely reshape and add gross quantities bone itself, as we surgeons do to achieve our results, which can only at best approximate the natural ideal. The biological process governing the sculpture of our youth by their mothers is quite distinct from our artificial processes.

The growing body must make many compromises to achieve the best use of its limited resources in its own construction. The raw materials for the initial body pattern are drawn from the mother's own body early in the first trimester of gestation. From here the organs, bones, nerves, muscles etc. grow in size, with their constituent molecules being leeched from the mother's own body. The recipe of their child's development is encoded in the genes, but this does not ensure a proportional child, anymore than Thomas Keller's recipe for soufflé ensures that you will manage to get yours out of the oven without having it collapse. Thermal, mechanical, informational, and material influences during gestation and child development are the critical factors that influence the "sculpture" of an adult, and these factors – not some pseudo-mystical "golden ratio" should justly be considered the "key" to human physical (and indeed even to some degree mental) beauty.

Why are faces the most important aspect of human physical beauty?

/u/ Provel – No chick cares that you have a 6-pack if you look like Donkey Kong.

Before we exhaust the evolutionary reasons behind why we see beauty in only certain faces, let's take a step back. We previously discussed the primacy of facial beauty in human good-lookingness.

Why is this? Why don't we judge human beauty on the basis of knees, or feet, or hands, or necks? Why do faces even convey the message of attractiveness at all? Of course, the answer to these questions is evolutionary, related to honest signals and sexual selection.

But, although you do not know his name, I am sure that you must know his face, for that is quite enough to distinguish him.

Lysis, Plato, circa 380 BC

Why are faces the most important aspect of human beauty? To understand this we must consider the relationship of the developmental stability of a trait to its functional importance.

Traits with high functional significance may be constrained into symmetrical development, whereas the developmental stability of less function traits can be relaxed a little cost.

Asymmetry, Developmental Stability and Evolution, Møller, Swaddle, 1997

The face (not the brain or of eye, but the face itself) is a less functional trait than our arms, legs, or organs. Because of this, it is not constrained into strict symmetrical development. Precisely because of this lack of constraint, it is a useful trait by which potential mates can evaluate minute perturbations in developmental history. Compared to legs and arms, whose symmetry is strictly constrained by the evolved need for coordinated locomotion and manipulation, the face is relatively free of selective pressures that would constrain its development symmetrically. This lack of constraint therefore makes the same magnitude environmental stressor of development much more evident on a face than a leg, for example. Most moderns have asymmetrical faces and still manage to date successfully, but when we notice arms and legs it is considered extremely ugly.

And as her eares so eke her feet were odde,

And much vnlike, th'one long, the other short,

And both misplast; that when th'one forward yode,

The other backe retired, and contrarie trode.

The Faerie Queene, Spencer, 1590

Faces plainly display this history of developmental stressors to the world. In humans, the fact that they are the part of the body least likely to be clothed increases their relative importance for signaling to mates. This signaling information has been proven to correlate reliably with traits valuable for survival and reproduction. Race horses with symmetrical faces are more likely to win races, for example:

Manning and Ockenden found that all of their measures of asymmetry correlated negatively with handicap rating, although only one of these was significant (the distance between the cheekbone and the mouth). As all their traits were negatively associated with performance, a composite index of asymmetry across these traits was highly negatively related to performance.

Perhaps the most surprising element of this study was that asymmetry of foreleg features was not significantly related to performance, **only facial features were**.

Asymmetry, Developmental Stability and Evolution, Møller, Swaddle, 1997

Part of the reason that symmetry in faces is a more relevant quality than symmetry in arms or legs for potential mates may be because the face, lacking the locomotive functional significance of the extremities, has lower developmental stability. This means that the negative influences on symmetry are more distinctly realized in the face.

The degree of developmental stability observed in a morphological character may be related to its functional importance. Traits that are functionally important, such as skeletal characters that are maintained throughout life, exhibit extremely stable developmental trajectories and hence very small levels of fluctuating asymmetry.

Asymmetry, Developmental Stability and Evolution, Møller, Swaddle, 1997

In other words, faces are a more sensitive indicator of developmental influences, since the tolerance allowable for faces to function correctly is greater than that of locomotive extremities. If measurements of a race horse's face is reliably correlated to handicap rating (and therefore speed), which other meaningful information about valuable traits for survival and reproduction might be hidden in the face as well? Evolution would favor mates who can read this information at a glance and respond appropriately.

There may be some traits that are particularly sensitive to external factors due to the differential intrinsic genetic stress that their developmental processes experience. Identification of these traits may be extremely useful when employing fluctuating asymmetry as a bioassay technique of monitoring habitat quality as **these traits will be very sensitive indicators of environmental conditions**.

Asymmetry, Developmental Stability and Evolution, Møller, Swaddle, 1997

The human face is one of these "sensitive indicators of environmental conditions." The information of our historical "habitat quality" is reflected in our faces. Although this information is present in other parts of the human body, the face is the most concentrated, sensitive, and visible source.

Traits under directional selection, such as secondary sexual ornamentation, will have less stable developmental trajectories, as increasing (or in some cases decreasing) size is selected for and genetic modifiers, which control development, are selected against. This results in sexual ornaments having far greater levels of asymmetry than traits under stabilising selection. There may also be a trade-off between size and symmetry in these ornaments, as individuals will have to optimise both size and symmetry to maximise their sexual advantage. Cheating is prevented as fluctuating asymmetry directly reflects the ability of an individual to buffer development against genetic and environmental stresses. Only individuals of high quality will be able to develop large secondary sexual ornaments that are also symmetric.

Asymmetry, Developmental Stability and Evolution, Møller, Swaddle, 1997

The face is a secondary sex characteristic, especially the lower facial 2/3rds. The sensitivity of the face to influencers of development means that a developmental perturbation which may only result

in a small asymmetry or deformity in the extremities or the torso would result in a large asymmetry in the lower facial 2/3rds (or breasts, etc.). Faces (along with other “non-functional” secondary sexual characteristics such as breasts and butt in women) are so important in communicating beauty because their “functional” importance is low, their developmental stability is low, and therefore even slight environmental stressors may reveal themselves in facial asymmetry. Asymmetrical legs and arms are unusual, asymmetrical faces are commonplace. Symmetrical legs and arms are commonplace, but a symmetrical face, – a face that in spite of its low developmental stability can honestly demonstrate to the world that it has survived its developmental history free of stress, or in spite of stress – is beautiful. This is ultimately why the face is the most important factor in assessing human physical beauty.

Why are straight teeth beautiful?

I don't understand it when people automatically write someone off as “undateable” after seeing that they don't have perfectly straight teeth. “It's unattractive and shows bad hygiene,” is something I have heard. What is so unattractive about it? Bad hygiene? What if that person just didn't want to pay for a teeth straightening procedure? That doesn't mean that person doesn't brush his/her teeth. I don't deem crooked teeth a turn off, unless it is to the point where you teeth always cut me while I am making out with you.

datingish.com

It is, furthermore, a law so plain and so simple that all can understand and apply it. It is that the best balance, the best harmony, the best proportions of the mouth in its relations to the other features require that there shall be the full complement of teeth, and that each tooth shall be made to occupy its normal position—normal occlusion. The correctness of this rule will be better appreciated if we will but remember that in those cases where Nature has succeeded in building a normal denture—teeth in normal occlusion — she has also succeeded in building it so as to be in best harmony with the lines of the face, or, conversely, the lines of the face to best harmonize with, this denture, and that the teeth in these cases are noticeable marks of beauty. And as malocclusion is but the perversion of normal occlusion, it invariably will be noticed that inharmony in the balance of the mouth with the rest of the lines of the face exists just in proportion to the extent of the malocclusion.

Edward Angle *Treatment of the malocclusion of the teeth and Fractures of the Maxillae.*
1900

We have seen that the mathematical explanations explaining facial beauty are unsatisfactory. We now turn to evolutionary theory to better understand why straight teeth are beautiful. Teeth are a useful in our discussion because 1) deformities are easy to identify, 2) many “normal” “healthy” people have dental deformities, and 3) interventions are routinely used to alter these deformities.

Despite some people's attempts to rationalize or deny it, it is plainly evident that crooked teeth are unattractive. In the US, billions of dollars are spent on orthodontics each year.

Of course, whiteness on a crooked smile is like lipstick on a pig. Over the past two decades, the number of North American teenagers in orthodontic treatment has nearly doubled, so that 80 percent are currently in an orthodontist's care, with the recommended average age of a first visit now 7. So it was perhaps inevitable that the population pool of potential customers would expand to include parents. Adults now make up roughly a quarter of all orthodontics patients in the U.S. and Canada, and dental hardware has come to constitute fashion: Models wore braces at Hood by Air's runway show in February, the same month they sparkled on the cover of Carine Roitfeld's Fashion Book.

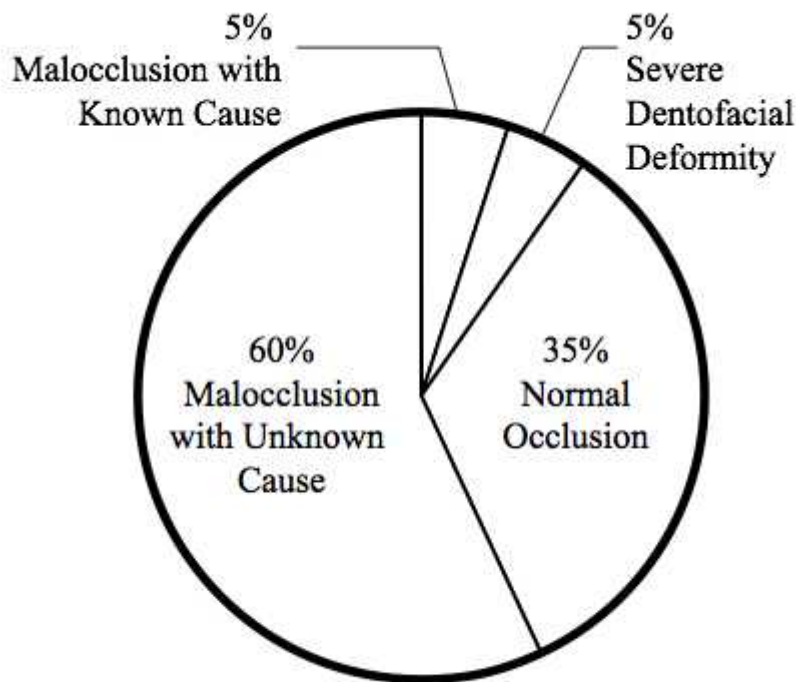
Studies, mostly sponsored by dentists and orthodontists, regularly claim that life basically sucks for those with imperfect smiles. According to one from 2012, 38 percent of Americans would rule out a second date with someone with misaligned teeth, and those with straight teeth are 38 percent more likely to be perceived as smart. Americans supposedly prefer a nice smile to clear skin and are willing to go to great lengths to get one, even giving up dessert (39 percent) or vacations (37 percent).

America's obsession with perfecting its teeth. NY Magazine, Lee, 2015

Using evolutionary reasoning, we can hypothesize why we care so much about straight teeth: Straight teeth are attractive to mates because they were an honest signal of an increased ability to produce surviving offspring. Being attracted to crooked teeth decreased our ancestors' evolutionary fitness. Selective pressures must have caused proto-humans (indeed probably all toothed animals) who felt attracted to crooked teeth to have fewer surviving offspring who went on to reproduce. These pressures must have been large enough to spread this trait to nearly all humans, regardless of race or culture.

How is it that being attracted to straight teeth would increase our ancestors' evolutionary fitness? In an ancestral environment, straight teeth are an honest signal of health, and mate quality.

Today it is questionable whether those selective pressures which pushed our ancestors to prefer straight teeth still exist. People with crooked teeth may no longer be less likely to produce surviving offspring. However, even if the honest signal is no longer being selected for, it is still an honest signal of *something*. If we are able to identify what straight teeth are an honest signal of, we may be able to use this information to influence viriculture in our children.



Adapted from *Surgical Orthodontics*, chapter 2 , William Proffit

When we consider how intimately the etiology of irregularities is associated with the art of regulating the teeth, we must feel inclined to think that those who vaunt their methods while ignoring etiology, are surely trying to sell mechanical appliances rather than advance the science of orthodontia.

Science and Empericism in Orthodontia, James Sim Wallace, 1908

Although we cannot claim to know everything with regard to the etiology of such malocclusions, yet we possess data which are of the greatest service in arriving at conclusions with regard to the many deviations from the normal which present themselves all too frequently.

Variations in the Form of the Jaws, James Sim Wallace, 1927

As we saw with the debate over the cause of development of the structure of the face, the question of what causes crooked teeth is controversial among dentists. We can illustrate a pervasive misunderstanding of the cause of crooked teeth with a practice-question for the *National Dental Board Exam*. This test must be passed to become a dentist in the US. “Class 1 malocclusion” in this context means crooked teeth.

The most common cause of Class I malocclusion is:

- An abnormal frenum
- Uneven growth of the arches
- Mandibular incisor crowding

“Correct Answer” – **Discrepancy between tooth size and supporting bone**

Certainly this answer true, as Wallace pointed out a hundred years ago.

Indeed, the great majority of the types of irregularities of the teeth met with in daily practice result from subnormality of the jaws.

Variations in the Form of the Jaws, James Sim Wallace, 1927

But while Wallace explored this detail in depth, the answer to this multiple choice question is as far as many dentists look into the issue. They really think that it is meaningful to say that the *cause* of crooked teeth is “the teeth are too big for the jaws.” Of course this is true, but it is a tautology, and does not provide any real explanation about the underlying reason a person has crooked teeth. While there are exceptions, a good proportion of the dental profession has ignored the practically important *causes* of malocclusion, instead falling back on proximate explanations like “your teeth are too big for your jaw.”

Orthodontists typically realize that saying “your teeth are too big for your jaw” immediately raises the question “Why are your teeth are too big for your jaw?” The standard textbook answer to this question usually begin with genetics.

There are several reasons why some people’s teeth grow in crooked, overlapping, or twisted. Some people’s mouths are too small for their teeth, which crowds the teeth and causes them to shift. In other cases, a person’s upper and lower jaws aren’t the same size or are malformed, resulting in either an overbite when there is excessive protrusion of the upper jaw, or an under bite, when the lower jaw protrudes forward causing the lower jaw and teeth to extend out beyond the upper teeth. Most often crooked teeth, overbites, and underbites are inherited traits just as the color of your eyes or size of your hands.

webmd.com

“Genetics” is a plausible explanation on the face of it. But it is well known that wild animals, as well as ancient human fossils, consistently demonstrate very straight teeth. If genetics is the cause of crooked teeth, then why do other animals not share in our deformity? A reddit.com user chrs_1979 has the classic answer for us at the ready:

There has been an evolutionary trend for our mouths to get smaller, lower jaws in particular. So we have smaller mouths than our ancestors, but the same teeth. Teeth come through crooked as there isn’t the room for them. This explains why some people have terrible trouble with their molars, and have to have them surgically removed sometimes.

This incorrect assertion approximates the typical practicing orthodontist’s level of understanding of the causes of malocclusion: “Many people today have crooked teeth because human jaws evolved to be smaller due to less demand for powerful mastication in our recent evolutionary history.”



But is this the whole story?

For many years, orthodontic texts indicated belief that the genetic factor is most important, thereby rendering any preventative measures impossible... Personal experience in communicating these ideas to audiences of dental clinicians occasionally indicates persistence of the attitude... A “simple” explanation is considered improbable, interest in corrective approaches greatly outweigh interest in prevention, and it is considered unsophisticated to ponder environmental versus genetic variables since it is so well known that the two interact. This tends to protect the genetic causation inclination.

How Anthropology Informs the Orthodontic Diagnosis of Malocclusion's Causes,
Corruccini, 1999

Genetics is certainly one ultimate cause of why some people get crooked teeth. Certain genetic conditions will predictably lead to malocclusions. But there are a number of reasons why genetics alone is an insufficient answer to explain the *majority* of cases of crooked teeth – the type of malocclusion commonly seen in “normal” healthy people.

In considering the causes of the irregularities of the teeth one naturally directs attention to those two great fundamental forces, Heredity and Environment, which go to build up the human organism. It will be convenient to consider those two forces separately, and first we may consider Heredity. In works on the irregularity of teeth, heredity is put forward as one of the main general causes, but this cause is so frequently introduced when the causation is obscure, that one feels inclined to think that it is introduced in order to make a pretence of knowing, when in truth the authors neither know the cause nor perhaps what they mean by heredity. The cause is in any case attributed to an unknown quantity. With regard to the irregularities of the teeth, if we consider any of them hereditary, we are placed face to face with the stumbling-block that our ancestors a few generations back were free from them.

Essay on the Irregularities of Teeth, Sim Wallace, 1904

Here we ought to take a moment to honor an exceptional historical character in the context of this work. James Sim Wallace (1869-1951) is remembered as a pioneer in preventative dentistry, but unlike his modern pro-intervention (fluoride, sealants) counterparts, Wallace sought to remove the health hazards of modernity. At a time when college degrees mattered, Wallace held DSc, MD, and LDS degrees (essentially the equivalent of a DDS, MD, PhD). He was an early practitioner to describe the true causes of caries, malocclusion, and maxillary deformity, and if dental and medical orthodoxy had taken his advice to heart, this present book wouldn't need to be written. His three page obituary in the *Journal of the American College of Dentists* sums up his life's work, which is referred to extensively in this book, saying "He built up a tradition which will live, for it is true."

Returning to the genetics/environment debate in the context of malocclusion; the first objection to the genetic hypothesis of crooked teeth is that large changes in the rates of malocclusion have been observed in just a few generations. As we saw in a [previous post](#):

The questions whether genetic factors or environmental factors may be the primary agents causing dentofacial maldevelopment has been widely discussed in the past... In certain populations the transition to predominately good to predominately bad occlusion occurred within one or two generations. This evidence throws the weight of suspicion toward environmental, non-genetic etiologic factors... A genetic change of any kind can be ruled out as a factor in this change, as the change is simply too rapid.

Rolf Fränkel

I assert that these results serve to modify two widespread generalizations: that imperfect occlusion is not necessarily abnormal, and that prevalence of malocclusion is genetically controlled so that preventative therapy in the strict sense is not possible. Cross-cultural data dispel the notion that considerable occlusal variation is inevitable or normal. Rather, it is an aberrancy of modern urbanized populations. Furthermore, the transition from predominately good to predominately bad occlusion repeatedly occurs within one or two generations' time in these (and other) populations, weakening arguments that explain high malocclusion prevalence genetically. Cumulatively, over these study samples, there is not chance for consistent inbreeding, racial mixing, or genetic change accounting for the transition.

How Anthropology Informs the Orthodontic Diagnosis of Malocclusion's Causes,
Corruccini, 1999

At the same time, careful measurements have demonstrated that the teeth themselves have not varied much in size:

We found no radical differences in the general pattern, design, or even size of the teeth between ancient or primitive man and those of modern civilized races... Such physical traits like tooth pattern, design or size, being of genetic origin, are more or less stable and do not change radically from generation to generation. The [individual teeth themselves], which consist mainly of inert matter, are also unaffected by environmental conditions, such as differences in climate, nutrition, etc., after their eruption.

The Human Masticatory Apparatus, Klatsky and Fisher, 1958

Attempts have been put forth to explain how genetic changes could have caused the tremendous rise in dentofacial deformity which accompanies the transition from traditional to modern societies. One popular attempt at a genetic explanation suggests that “racial admixture” leads to genes for small jaws being carried in the same genome as genes for big teeth. However, Sim Wallace challenged this theory many years ago:

If we assume that the maxilla is not developed on account of a “hereditary tendency” for bone not to be developed by the stimuli which do develop bone, then we may believe this. However, the hypothesis need hardly be discussed, as the idea is preposterous. Then as regards the idea that a small jaw may be inherited from one parent and the large teeth from the other, it is evident that the size of the crowns of the teeth determines the amount of development of bone on the posterior borders of the body of the maxilla, and provided there is adequate forward translation of the maxilla by the developmental stimuli mentioned, then the size of the maxilla will necessarily correspond in size to that of the teeth.

Essay on the Irregularities of Teeth, Sim Wallace, 1904

As did Price,

If the change in facial form were the result of racial admixture, we should not have the types of deformity patterns that these cases show. Indeed, in the same family we should not find several different deformity patterns. The lack of development downward of the upper anterior incisors and the bone supporting them is illustrated for the younger child, in Fig. 103 lower right. It will be noted that when this girl’s molar teeth are in contact her front teeth still miss occluding by a considerable distance.

Members of the white race are affected in a similar manner. In Fig. 104 (lower) are shown two sisters; the younger to the right reveals strikingly the lack of development of the middle and lower third of the face. The fact that this condition so frequently shows a progressively severe injury in the younger members of the family is a matter of great importance in tracing the causative factors. It is important to keep in mind that when the injury shows in the face of the young child it becomes worse when the adult face forms. This increase in deformity occurs at the time of the development of the permanent dentition, at from ten to fourteen years of age.

Nutrition and Physical Degeneration, Price, 1939

Secondly, physical anthropology has demonstrated that malocclusion was rare in humans before agriculture...

Following the study of the original group of skulls, I reviewed an additional... prehistoric skulls, some dated at 70,000 years old... Those skulls also exhibited positive occlusions, minimal decay, broad hard palates, and “U-shaped” arches.

The Influence of Breastfeeding on the Development of the Oral Cavity, Palmer

Heredity is obviously not the causative factor, because heredity is more conducive to organic stability and balance than to change and disharmony... When we note the structural changes like the palpable diminution in the size, and the loss in quality of the jaw-bones in the people of modern times in comparison with people of the same racial

stock of preceding generations, we must look for other factors, eliminating heredity as a contributing cause.

The Human Masticatory Apparatus, Klatsky and Fisher, 1958

...but the modern pattern of malocclusion increased in prevalence in many old societies after the introduction of farming:

Malocclusion in both adults and children appears to have been no less prevalent than in our present American civilization... Ground corn, pulverized in large rock mortars by rubbing the corn between rocks, was one of the principal items of diet enjoyed by these ancient people.

Some casual observations of the dental architecture of a prehistoric civilization,
Pollock, 1923

The remains were found at the archaeological site of Roaix located in the south of France. Radiocarbon dating indicated that the lower layer was from 2150± 140 years BC and the upper level from 2090 ± 140 years. The graves were estimated to contain the remains of 150 adults and 50 children. Forty-three intact mandibles were used for this study.

All of the mandibles presented incisor crowding with a majority of minimal and moderate irregular but in seven cases there were extreme irregularities and in two canine impaction was observed.

Dental crowding in a prehistoric population, Mockers, 2004

Thirdly, wild animals rarely exhibit malocclusion, but animals raised in captivity sometimes often do have crooked teeth.

Fourthly, mechanical, “functional” environmental influences are well known to affect occlusion, regardless of genetics. This is not controversial, and implicitly accepted by practicing orthodontists. Standard orthodontics textbooks do include some environmental factors among the causes of malocclusion, but these tend to be ones which cannot explain the rapid rise in malocclusion when populations switch from traditional to modern societies. Examples include *habits* such as thumb sucking, tongue thrusting, and mouth breathing.

My Bonnie sucks her thumb. I can't make her stop it.

You should make her stop it. It'll ruin the shape of her mouth.

Gone with the Wind, 1939

There is not much reason to think that these habits arise suddenly and concomitantly with the move away from traditional societies. Furthermore, it seems more reasonable that these “oral habits” are not the ultimate cause of the malocclusion, but rather a symptom (like the malocclusion itself) of some ultimate cause further upstream.

Other causes of misaligned bites are early loss of baby or adult teeth; improper fit of dental restorations (for example, fillings or crowns); gingivitis (gum disease); undue

pressure on the teeth and gums; misalignment of the jaw after an injury; tumors of the mouth or jaw; or common oral health problems in children such as thumb sucking, tongue thrusting, pacifier use beyond the age of three, or prolonged use of a bottle.

webmd.com

While the above common view demonstrates the role of environmental factors in the development of malocclusion, it may not be correct in its details.

We may here refer to thumb-sucking and toe-sucking which loom so largely in some books as causes of superior protrusion. It is possible that they might act as secondary factors in determining the kind of irregularity when crowding had already taken place, but that they produce such deformities as anterior protrusion is extremely improbable. Thumb and toe sucking is common among infants and exceedingly rare about nine years when the irregularities begin to appear. Moreover, regular teeth are perhaps quite as common among the children addicted to these habits as they are among those who are not. Some writers... had not the knowledge requisite to interpret the case properly, [and] probably never knew nor even asked how the patient was fed, nor examined the size of the patient's muscles of mastication or tongue. And that even although he had known such things he was liable to error... I have no doubt that cricket balls or horses' hoofs and thumbs or toes and ill-conceived regulation plates, can all and have all produced irregularities or displacement of the incisor teeth, but to say they produced superior protrusion, a complex irregularity associated with definite structural changes and arrangements, would only show that "the most absurd dogmas readily find lodgment where no knowledge has been acquired of the order of nature."

Essay on the Irregularities of Teeth, Sim Wallace, 1904

Furthermore, traditional peoples with generally excellent occlusion often engage in these very behaviors.

Prior to the development of the data I have gathered in these studies of primitive racial stocks which deal with the causes of dental arch deformities, the dental literature has given as the principle causes thumb and finger sucking, faulty breathing habits and wrong sleeping postures, etc. It is of particular interest that in all these racial groups thumb and finger-sucking were found to be universal habits and studiously encouraged by the mothers.

Studies of the Relationship Between Nutritional Deficiencies, Price, 1935

Fifthly, as we saw with the work of Dr Moss in chapter 6, the "genetic" thesis of craniofacial development is inadequate to explain how the bones of the face, including the jaws, grow and develop. Genes do not ultimately determine bone growth and morphogenesis so much as environmental influences do – although both are important. As great as environmental influences are to the development of the head and face, their effects on the dentition itself is even greater.

In overview, this work reveals a fundamental dichotomy in the genetic contribution to the development of malocclusions: Craniometric measures have comparatively high heritabilities, while occlusal variables of tooth position have low genetic contributions that, generally, are not significantly different from zero... Malocclusion, defined in the strict sense as tooth malpositions, is essentially an acquired condition. These results

highlight the need to explore further the range of underlying maternal, “cohabitational,” and other environmental causes of occlusal variation.

Heritability of craniometric and occlusal variables: A longitudinal sib analysis, Harris, Johnson, 1991

And lastly, specific *non-functional* environmental conditions reliably correlate with the skeletal growth of the face and jaws, notably hormonal diseases such as acromegaly.

These above facts suggest that crooked teeth are caused by not only genetic factors, but also by environmental factors. In fact, a fair assessment of data leads most investigators who make a serious consideration of the issue to realize that environmental influences must be the *primary* cause of straight or crooked teeth.

A minority of dental practitioners have recognized the primacy of environmental influences on the development of crooked teeth, notably Sir Arthur Keith (long dead), James Sim Wallace (long dead), Kaltsky and Fisher (both probably dead), Moss, Robert Corruccini, and John Mew. In this camp, the belief is generally that the shift from traditional societies accompanied a “softening” of the mechanical consistency of our foods, and consequently a decrease in masticatory function. Theoretically, the masticatory forces required to consume modern foods are no longer sufficient to stimulate the adequate bone growth in the jaws to accommodate proper occlusion. Furthermore, the decreased forces lead to different patterns of facial development. The paradigm of the orthodontic profession as a whole to tend ignore the ultimate causes of malocclusion has been criticized by this group for over one hundred years.

Leaving aside all this, I say would we be acting scientifically if we allowed the cause which brought about the irregularity to continue to act during our efforts to regulate the teeth, or even after we had corrected the malocclusion?

Science and Empiricism in Orthodontia, Sim Wallace, 1908

The problem is that it is relatively easy to straighten teeth and many orthodontists prefer to concentrate on an empirical correction rather than the application of science to the etiology of malocclusion.

Science versus Empericism, Mew, 2005

While I disagree with their derogatory use of the term “empirical,” it is interesting that these two men separated by so much time are making basically the same criticism of the profession.

Orthodontists who appreciate the role of function and other environmental factors in the origin of malocclusion seem to have a somewhat different philosophy when it comes to treatment of malocclusion. This philosophy is vaguely associated with the terms “functional orthodontics,” “dentofacial orthopedics,” and “orthotropics.” The goal of these therapies is not only to align the teeth, but to alter the jaws and face sufficiently to make up for developmental deformity. These branches of orthodontics may attempt to use non-surgical mechanical influences to correct facial deformity. As we discussed earlier, maxillofacial surgeons are routinely involved in the correction of dentofacial deformities. However, the philosophical approach of most surgeons is to ignore the

teleology of the problem (outside of cases of clear cut genetic syndromes), and focus on how to fix the problem.

Orthotropics is a science that has developed by going back to a blank canvas and assessing what we do know, to generate a science bases on the evidence that has aetiology, epidemiology, pathology and cure, as well as just treatments. Although the genetic contribution to facial growth is undeniable is also undeniable that the environment can also have an influence and Orthotropic's works on influencing this component to gain permanent changes.

orthotropics.org

For reasons I don't understand, this approach to orthodontia is not universal, with some orthodontists content to move the teeth into the right place, glue a retainer to the back of the teeth, and ignore the bigger picture.

Now that we see that importance of environmental factors (mechanical consistency or nutritional content of food, breastfeeding, thumb sucking, etc) in the development of malocclusion, we can reassess why we have evolved to be drawn to the beauty of straight teeth. As we know, straight teeth are attractive because they were an honest signal of a increased ability to survive and reproduce. In an ancestral environment, straight teeth are an honest signal of health and mate quality. In detail:

Mechanical consistency – If the mechanical consistency of food is the primary factor influencing straight teeth, then proper occlusion is an honest signal to mates of a history of eating tough, fibrous foods, and frequent masticatory exercise. It is also a signal of the possession of a dentition capable to pulverize even the most difficult to chew foods. In ancestral environments, selective pressure to find beauty in a mate's ability to eat hard foods may have been valuable enough to push the evolution of our aesthetic sense to favor straight teeth. It may also be that, in an ancestral environment, heavy masticatory function was an honest signal of being well fed during development, which might translate to an increased ability to provide food for offspring. Lastly, robust jaws may simply be an indication of a resistance to trauma in a dangerous environment.

Nutritional content – If the nutritional content of food is the primary factor influencing straight teeth, then proper occlusion is an honest signal to mates of a history of high quality nutrition during an individual's development. In ancestral environments, the ability to consistently secure high quality foods would be extremely valuable. Selective pressures to find beauty in a mate with an honest history of being able to secure valuable food supplies would be immense. For our ancestors, the best indication of future ability to find high quality food would be past success. Women, who typically select their mates, would prefer a man who demonstrates an honest signal (visible in his straight teeth) that he has, throughout the twenty years of his development, had abundant high quality nutrition. This honest ability would be of great value to a prospective mother for herself, to be fed during pregnancy, and for her children, to be supplied with food after birth. Men, who typically provide food for themselves, would be even more concerned with straight teeth in a mate – as crooked teeth in a women would be an honest signal of her inability to secure adequate high quality nutrition during her development. Since she must carry and nurse his child, a preference for women who have a history of adequate nutrition would be very important to men. If straight teeth

are honestly correlated with high quality, abundant nutrition, the selective pressures to find beauty in straight teeth would be immense.

While the application of orthodontic procedures for the improvement of the facial form and arrangement of the teeth will make a vast improvement in facial expression, that procedure will not modify disturbances in other parts of the body, such as the abnormal underdevelopment of the hips and pelvic bones. If an improvement in nutrition for the mothers-to-be is adequately provided in accordance with the procedures of the primitives, it should be possible to prevent this progressive lowering of the capacity of our modern women to produce physically fit children.

Nutrition and Physical Degeneration, Price, 1939

In addition to the two “pure” theories of nutrition and function, blended cases exist. Breastfeeding is an example of an environmental factor that influences both mechanical function and nutrition. It is beyond question that breastfeeding is an essential component of viriculture, as we will explore in detail later, but it is very difficult to identify which of these two factors is more important.

Another possibility exists to explain the honest signal of straight teeth, and it is genetic – even though the majority of malocclusion is caused by environmental factors:

Developmental canalization – No matter the environmental cause of malocclusion, straight teeth could be a honest signal of a genetic ability to successfully withstand the exposure of environmental stressors to proper development (soft foods, bottle feeding, poor nutrition, etc.).

When could this curious state of affairs have become typical for our species? When did the condition of malocclusion arise to plague humans, and could it have always been so widespread? It is logical that humans (or for that matter, other animals) could always have had such frequent disorder of the correct tooth-to-tooth relation during biting? In fact, such prevalent malocclusion is not natural in nonindustrial human populations, and any detectable occlusal malalignment in nonhuman animals is quite rare. Therefore we are presented with a mystery concerning the inception, rampant increase, and cause of the disorders that have today spurred a multi-billion dollar orthodontic industry.

How Anthropology Informs the Orthodontic Diagnosis of Malocclusion's Causes,
Corruccini, 1999

Why are beautiful facial characteristics beautiful?

Faces communicate beauty instantaneously, and we know that facial beauty ratings are consistent between observers. Proto-humans who felt attracted to “beautiful” faces to have more surviving offspring who went on to reproduce, and these preferences live on in us. Our ancestors who found beauty in what we would consider an ugly face had fewer reproducing offspring.

This research has shown that facial attractiveness is related to longevity, which we suggest is an objective, though admittedly not perfect, measure of health in humans. By establishing that ratings of adolescents’ facial attractiveness are predictive of their future longevity, this study has lent support to the contention that not only are facially attractive people perceived to be healthier, they are in fact physically healthier.

Facial attractiveness predicts longevity, Henderson, Anglin, 2003

This selective pressure must have been strong, since humans are in cross-cultural consensus about which faces are beautiful. But why might being attracted to beautiful faces increase our evolutionary fitness? The answer is that in an ancestral environment, beautiful faces are an honest signal of health, fertility, and mate quality.

Averagedness – is not how much a face looks “average.” Instead, it is how much a face looks like “the average” of many different faces combined. The reason why we prefer faces that look like “the average” of many people in our population has to do with genetic diversity. In short, the most “averaged” looking faces are honestly signaling diversity of genes. Genetic diversity in mates is valuable. There are many reasons that a preference for honest signals of genetic diversity in a mate could evolve.

Firstly, mates with genetic diversity are less likely to carry homozygous alleles that could be harmful for survival or reproduction. Secondly, genetic diversity correlates with diversity of the genes which determine immune function. In this way, facial averagedness provides an honest signal to mates of the past and future health status of the individual. Health would not only be important in the short term, (in terms of resource control for males, and ability to gestate and care for a baby in females), but also in the long term, as these diverse genes are passed on to offspring. It seems that the “averagedness” dimension of facial beauty may be *primarily* influenced by genetics rather than environment.

That said, an interesting finding among investigators who went to go live “among primitives” was that well developed faces looked similar.

The respective member of the racial group reproduce in homogeneity from one generation to the next. There are few deviations from the standard anthropological prototype. One individual resembles the other in facial form, looking much like sisters of brothers, with the chief differences in appearance being in size.

Primitive Man and His Food, Arnold Paul De Vries, 1952

As we saw in [another post](#), Price found that the “tribal pattern” was disrupted when the natives switched to modern diets. If these is any truth to these observations, it suggests that perhaps the beauty we see in averagedness is because of more than just genetic heterogeneity.

Symmetry – Beauty is correlated with symmetry of body and face. As we have already discussed, symmetry has a special relationship with an organism’s history of exposure to environmental stressors of development. Because the face is the most sensitive and visible corporeal indicator of these stresses, it provides the most information about developmental history. Evolution has shaped our aesthetic sense to take advantage of this information, and today we can make critical judgements relevant to the mate choice on the basis of glance at a face. A woman with a symmetrical face can easily garner the commitment and support of a successful man, as he has

evolved to favor a woman who honestly signals her stress free development (or ability to buffer stress), and super-abundant body resources to gestate a healthy child.

Sexual Dimorphism – Simply put, this means that women think masculine looking men are beautiful, and men think that feminine looking women are beautiful. Our preference for sexually dimorphic mates stems from the fact that the same hormones that control the presence of these corporeal features also regulate sexual function. Individuals with well regulated sexual function are more likely to produce healthy offspring. Furthermore, sex hormones themselves are considered a honest signal of health. Testosterone, for example, is stressful to the immune system. Therefore, a man with the corporeal markers of chronically high testosterone must have had superabundant healthy to be able to support those levels. Testosterone influences the attractive features of male facial structure, including a strong chin, jaws, and brow, which effectively serve as an advertisement to mates of a resource rich developmental history – providing the superabundant health needed to support dangerously high levels of sex hormones.

One study found that teenage testosterone levels in boys accurately predicted the “dominance” rating of their adult facial photographs.

At birth, for instance, and considerably later, it is difficult to tell by general appearances the face of the boy from that of the girl. But in the course of transition from infancy to adulthood certain facial characters appear which distinguish the males from the females as they do one individual from another.

The Face in Its Developmental Career, The Dental Cosmos, Hellman, 1935

Estrogen is similarly “unhealthy,” but it has a side effect of stunting bone growth – this is why men prefer women shorter than themselves. This “stunted” bone growth occurs in the face as well, which is part of why beautiful women often have “softer,” more gracile facial features than a beautiful man (the other reason being more subcutaneous facial fat in women).

Ancestral men who preferred the marks of high male sex hormones in women, such as facial hair, deep voices, and strong brows would have been less successful evolutionarily – partly because these women would have been less healthy, and partly because they would have been less fertile. This selective pressure was strong enough that today most men are actively repulsed by these traits. The presence of sex hormones that underlies the development of sexual dimorphism is a honest signal of superabundant health, and ability to provide for children.

There is another way in which sex hormones affect facial development – through their effects on musculature. Rats whose masticatory muscles were injected with anabolic steroids developed more robust facial skeletons. This may be due to sex hormones direct effect on bone, but it is likely also due to the influence of muscle function on facial bones. Healthy, high testosterone males with stronger muscles of mastication will have more robust faces to match.

Neoteny – Neoteny refers to the retention of juvenile features into adulthood. Women who are more neotenous are rated as more beautiful by men. The ultimate reason why men prefer neotenous

women is simple to understand. Youth is correlated with fertility and also healthy offspring. Men who find beauty in youthful looking women were more likely to have successful surviving offspring. Because of the greater importance of youth for female fertility compared to male fertility, the relative value of neoteny in women is greater. Women have actually evolved to be more neotenous than men because of this selective pressure. We would only expect to see this pattern (women more neotenous than men) in species where female fertility is more “time sensitive,” and possibly only in species that have long term relationships.

Our preference of specific features in faces, such as clear skin, and bright eyes in both genders; full red lips and large pupils in women, and strong brows and jaws in men, are all ultimately related to the above categories. In each case a story can be told to explain selective pressures leading to the evolution of our aesthetic preferences.

In a [previous post](#) we saw how adult height was partially attributable to genes, and partially due to environment. Women evolved preferences for tall men to take advantage of the information revealed by height. Height is an honest signal of an ability for a man to physically protect his mate, and is likely also a predictor of his intra-species social standing. But this is only aspect of what height says to potential mates. Relative height may mean that the tall man has superior genes that he can pass on to his offspring. But it may also mean that he has “average” genes that were exposed to a superior environment for growth during the many years of his development. This past exposure is likely a good predictor of a man’s ability to continue to control those resources valuable for growth and development (food, shelter, heat, sunlight, clothing) in the future. The female mate could use these super-abundant resources for the benefit of her and her children.

Just like height, the face reveals information about both genes and developmental history. But, as we saw the face may well be the most sensitive indicator of either genetic or environmental “stresses” to development. The profound human ability to read and judge based on the visual cues of a face alone is evinced in the popular hook-up app *Tinder*. No more than a couple seconds is required to judge a potential mate’s suitability based on his face. The reason we evolved this ability to such a refined degree is because of the *value* of the information honestly relevant to evolutionary fitness contained in faces.

There are a number of honest signals that a beautiful face may be sending to a potential, and even though the exact origin may be unknown to the mate, all of them would be fitness enhancing (relative to mating with someone with an ugly face) mate). There are a few ways we can look at the origins of facial beauty:

A beautiful face as an honest signal:

1. “Genetic Wealth” – A beautiful face is a signal of having good genes.
2. “Epigenetic Wealth” – A beautiful face is a signal of good heritable non-genetic influences, such as having healthy parents, or situationally ideal parents or grandparents.

3. “Resource Control” – A beautiful face is an honest signal of ability of obtain high quality resources over many years. This ability can be caused by:

- Genetics – people with these genes can obtain
- Epigenetics – their parents did obtain
- Nutrition – the individual himself can obtain

4. “Hard Foods” – Beautiful face as an honest signal of having consumed hard foods over many years, and therefore having a strong masticatory apparatus.

- Genetics – people with these genes can consume
- Epigenetics – their parents did consume
- Function – the individual himself did consume

Researchers often jump to the conclusion that beautiful faces signal *genetic* quality per-se. Let’s not make the same mistake. Beauty arises from a combination of genetic and non-genetic influences on development. Beautiful faces are more than an honest signal of good genes. They are an honest signal of the sum total of all developmental influences. Genes are relevant, but so are epigenetics, nutritional history, exercise history, hygiene, disease history, and many other factors.

Genes which have an ability to *buffer* the consequences of environmental stressors could be as valuable to a mate as the actual ability to avoid those stressors in the first place (by controlling high quality food and shelter, for example). In this sense, a mate who has “superior” genes might be indistinguishable from a mate with “average” genes, but who engaged in behavior that avoided environmental stressors of development.

Beauty is a signal of more than just genes. Beauty honestly signals the aggregate of all developmental influences in so far as they are consequential to evolutionary fitness to a mate.

Outside of mate selection, we have no control over the genetics of our children. However, we have tremendous control over their environment. My claim is that the environment is at least as important as genes in developing those characteristics required to honestly signal health, fertility, and mate quality. In other words, by controlling our children’s environment, we can develop them to be more beautiful.

What are the environmental factors that influence development of good lookingness?

Key environmental factors which will be explored in greater depth include:

Nutrition (pre-natal, gestational, childhood)

Early child hood care practices

Temperature

Exercise

Sleep

The aspects of a face that make it beautiful should be seen as primarily an object of sexual selection. Our faces are like the peacock's tail – they are a *signal* to the opposite sex of the adequate development of the mate's body and mind. In the *nutritional theory* the face itself is not particularly important, rather what the face indicates about the person. In the *functional theory*, the face itself is important, as robust jaws signal an honest ability to survive and reproduce in an ancestral environment (especially for men).

In the *nutritional theory*, the face is a *proxy* for saying “my body and mind are healthy as a result of my many years of consistent consumption of high nutrient density, whole traditional foods, shelter, clothing, and freedom from disease. Based on my history, I will be able to provide these resources for you and your offspring.” This is important for both males and females. Any individual that might have evolved unconscious extremely accurate and fast heuristics for assessing the nutrition history of our potential mates would see their genes spread at a proportionally higher rate. This is because optimal nutrition likely correlated with better chances of survival and reproduction of offspring.

We experience the emotion of love in response to a well beautiful developed face because we have evolved to be motivated by this emotion into engaging in the correct behavior in response to the visual cues that convey the valuable information about past developmental history and future performance as a mate (or as Diotima described it, Beauty stimulates Love in order to lead us toward the Divine).

Poorly developed faces and crooked teeth may be unattractive because they are a proxy for saying “my body and mind are poorly developed as a result of many years of inadequate resources. I won't be able to provide adequately for you and your children.” In women there is the additional implication that a poorly developed face will be less able to gestate and breastfeed a baby. This helps explain why men can overcome the disadvantage in dating of being unattractive with money, while women cannot. With men, ugliness signals an historic inability to control quality resources, but present control of those resources can supersede in the eyes of females (consider that an ugly billionaire would have no problem with women). An unattractive man's face may indicate his historical inability to provide himself with adequate food and shelter to develop optimally (an implicit indication of a lack of resources), but he can still demonstrate explicitly that he has the ability support a woman and her children with those very resources (by taking her out to Le Bernardin, driving a Lamborghini, jet-setting to Rome for the weekend, buying her jewelry, etc.).

With women, ugliness signals the same inability to control important resources. However, men do not care much about women's future ability to provide resources. They care about the current and future state of her body, and her ability to gestate his children. In the case of a women's body, no amount of conspicuous consumption can change the fact that she has experiences sub-par development, and may therefore be less able to gestate and nurse robust healthy offspring.

We have seen that women are more interested in the social status of a mate, while men are more explicitly interested in a mate's physical attractiveness. Why do the sexes differ in this way? Unlike men, women are responsible for the gestation, nursing, and infant care of their offspring.

Table 5.4 – Looks/Income Trade-Offs

Looks Rating	Additional Income Needed by Men (\$1,000)	Additional Income Needed by Women (\$1,000)
Average in 1 st Decile	186	Not Feasible
Average in 2 nd Decile	169	Not Feasible
Average in 3 rd Decile	159	Not Feasible
Average in 4 th Decile	151	Not Feasible
Average in 5 th Decile	143	Not Feasible
Average in 6 th Decile	128	Not Feasible
Average in 7 th Decile	86	Not Feasible
Average in 8 th Decile	37	Not Feasible
Average in 9 th Decile	25	Not Feasible
Average in 10 th Decile	0	0

Note: The table shows the additional annual income that a man or woman needs to be as successful as a man or woman whose looks rating equals the average rating in the (upper) 10th decile. The baseline incomes are \$62,500 for men and \$42,500 for women. For example, consider a man whose looks rating is average among the 41 to 50 percent best looking men in the population. In order to be as desirable to a woman as a man whose rating is the average in the top decile and who earns \$62,500 per year, he needs to have an additional income of \$143,000 (i.e., he needs to make \$205,500 per year).

Let's consider this data from Ariley's study of online dating. Whereas an unattractive man can be as "popular" with women as the most attractive men if he has enough money, no amount of money can put a homely woman on par with a beautiful one in the eyes male suitors.

Beauty is not an end in itself. Our aesthetic sense evolved so that we would behave in a beneficial way in response to information rich signals. An ugly man with a Ferrari might still be attractive to women, since the ultimate important question that determines attractiveness to women (can he protect me and my children *either* by the help of "good genes" or resource control?) is answered in the affirmative.

An unattractive woman's face may indicate her historical inability to provide herself with adequate nutrition to develop optimally (an implicit indication of a lack of resources). But unlike the man, no amount of income can make up for this. The woman is responsible for gestating and breast-feeding the future offspring. Her physical development is more intimately tied to the likelihood of a successful pregnancy and child rearing than his.

Because of the greater physical investment of a mother in the gestation and early care of a child, the inadequate physical development (signaled by an poorly developed face, and likely correlated with beauty) in a woman cannot be compensated for by increased income as in men.

I was once riding home with some of my religious classmates from a residency interview. They told me an interesting story which illustrates the embodied wisdom contained in ancient tradition. According to them, the Talmud, which forms the basis for Jewish law, has asymmetrical requirements for men and women before marriage. While it is not necessary for a woman to see the groom before marriage, it is necessary that the man see his potential bride. The religious analysis,

which represents a backfit explanation, is not important, since the religious prescription represents what Plato called “right-opinion.”

It is felt that humans do not discriminate levels of male facial attractiveness to the same amount as for female faces and have a more difficult time attempting this task when asked to do so. From an evolutionary psychology perspective, this makes sense as male facial attractiveness does not hold as much importance as female facial attractiveness for conveying signs of fertility, and as a result we have not evolved as discriminatory a system to evaluate it.

Is an Objective Measuring System for Facial Attractiveness Possible?, Bashour, 2005

“Never Look a Gift Horse in the Mouth”

An interesting nugget of traditional wisdom is that dental evaluations are useful tells about the health of an animal. This is summarized in the phrase “never look a gift horse in the mouth.” The modern interpretation of this quote is that we shouldn’t be critical of gifts. It is well understood that the age of a horse can be identified by its teeth. But as we saw earlier, the handicap rating of racehorses can be predicted by evaluating measures of dentofacial asymmetry. Buyers knew that not only age, but health in general could be assessed through the dentition. Why the teeth especially? As we saw before, since the dentofacial complex is not subject to strict developmental canalization required for locomotion, and because the lower facial 2/3rds are a secondary sex characteristic, the face and teeth are a very sensitive indicator of developmental history. It is likely that if we see well developed teeth and jaws, we can be confident of good general health and physical vigor.

Horses were not the only ones whose health was evaluated on the basis of their teeth. Spartacus was purchased on the recommendation his teeth made for his body.

Welcome, Lentulus Batiatus.

Welcome, indeed, my dear captain. Eleven miles through the disastrous heat... and the cost of hiring an escort — ruinous. Even so, I warrant you have nothing fit to sell me, have you, Captain? I’ve wasted my time and my money. Tell me the truth.

I think we have a few you might be interested in.

What, these? Carrion! The buzzards are late.

This one here’s not bad. He’s a Gaul.

I don’t like Gauls. Hairy. Can he come down from there unassisted?

Come down, you! Come down!

Be good enough to show me the teeth.

Open your mouth!

Thank you. **Yes. As the teeth go, so go the bones. This mouth is really impermissible. The fellow's made of chalk.**

We have others. Many others!

The sun's over there. I have to pay these people. Who's that?

This one's a Thracian. I'm making an example of him.

How?

Starve him to death. It's the only thing impresses slaves.

What a pity. He reacts. Good muscle tone. Can I see his teeth?

Open your mouth, Spartacus!

You smell like a rhinoceros. Captain, you asked him to open his mouth. He doesn't obey you?

His teeth are the best thing about him. He hamstrung a guard with them not more than an hour ago.

Hamstrung? How marvelous! I wish I'd been here. I'll take him.

Spartacus, 1960

Reports from slave auctions in America testify to the attention paid to the mouth as a signal of overall health, as well as age.

Show mas'r yer arm Molly – good arm dat mas'r – she do a heap of work mo' with dat arm yet. Let good mas'r see yer teeth Molly – see dat mas'r, teeth all reg'lar, all good – she'm young gal yet.

A Great Slave Auction in Georgia, The New York Tribune, March 9, 1859

Just before the doors are opened, it is usual for the keep to grease the mouth of the slaves so as to make it appear that they are well and hearty, and have just done eating fat meat; though they seldom, if ever, while in the custody of the keep taste a morsel of meat of any kind.

Narrative of Henry Watson, A Fugitive Slave, 1848

In the eighteenth century, an academic discipline called physiognomy had developed that which tried to predict a person's character and personality on the basis of his facial structure. Today physiognomy, along with phrenology, has been abandoned as quackery.

Smithers: Are you sure this is the woman you saw in the post office?"

Mr Burns: Absolutely. Who could forget such a monstrous visage? She has the sloping brow and cranial bumpage of the career criminal.

Smithers: Uh, sir, phrenology was dismissed as quackery a hundred-sixty years ago.

Mr Burns: Of course you'd say that, you have the brainpan of stage coach tilter.

Whether there is any real correlation between faces and character is unknown. For our purposes it is enough to see that we have always seen the teeth and the face as a signal of *something important* about our fellow humans.

Dishonest signals in Beauty

Cookery, then, I maintain to be a flattery which takes the form of medicine; and tiring, in like manner, is a flattery which takes the form of gymnastic, and is knavish, false, ignoble, illiberal, working deceitfully by the help of lines, and colours, and enamels, and garments, and making men affect a spurious beauty to the neglect of the true beauty which is given by gymnastic.

Gorgias, Plato, circa 380 BC

They who had heard men boast afore that such beauty had ne'er been seen as these two dames possessed, spied now with all their eyes and must confess the truth. Nor did one see upon their persons cheats of any kind. Those who wot how to judge of women and lovely charms, praised Gunther's bride for beauty; but the wise had seen more clear and spake, that one must give Kriemhild the palm before Brunhild.

Nibelungenlied, circa 1200

The artifices that disguise the imperfectly developed and the over-developed body, in so far as they are effective, are decidedly immoral...In a world of ill-formed women made passing fair by trickery of clothes, every woman appears better to some other man than to her own, for he knows her disguises...Fooling people is a waste of time and inefficient. By putting the energy we spend on makeshifts and artifices into acquiring the beauty we simulate, we can achieve real beauty, and be freed from the ignominy and ineffectiveness of deceit.

Physical Beauty and How to Keep it, Annette Kellerman, 1918

When discussing honest signals, it is important to remember that they are only honest in the context in which they evolved. Today makeup, braces, and surgery can trick our adapted aesthetic sense. Beauty in many cases is no longer an "honest" signal. By using technology to alter a human face to conform with our "ideals" of beauty, we do not change the underlying developmental history of that individual. These changes are therefore a way of tricking potential mates into commitment. Let's consider some examples:

Make up – Cosmetics have been used for thousands of years to improve the beauty of the wearer.

The Sabine dames of old under king Tatius would perchance have wished to cultivate their paternal acres rather than themselves: when the matron, sitting rubicund in her high seat, span assiduously with hardened thumb, and herself penned up the lambs her daughter had pastured, herself set the twigs and cleft logs upon the hearth. But your mothers have borne delicate girls. You wish your bodies to be covered with gold-embroidered gowns, you wish to vary the dressing of your perfumed locks, you wish to have hands that shine with gems: you adorn your necks with stones sought from the East, and so large that the ear finds two a burden to bear. Nor is that a fault: you must be anxious to please, for men love elegance in these times of ours.

Medicamina Faciei Femineae, Ovid, circa 1 BC

But cosmetics as we know them were likely not a major component of human culture during the hundreds of thousands of years during which our aesthetic sense evolved. In the West, most women wear makeup everyday. This helps conceal imperfections and blemishes, emphasize and visually enlarge eyes, and add color to lips and cheeks. These practices, refined over centuries, are designed to make the woman more attractive than she actually is, and trick men into committing to a woman who he might naturally not commit to. Deficient bone structure can also be masked with “contouring,” and the placement of artificial shadows that actual facial bone would cast if they were present. It may also trick rival women, and affect her intra-gender status. Cosmetics help women appear more youthful and fertile than they truly are, and as we know youth and fertility are valuable to our evolved aesthetic sense. Women as a whole run a cartel of female beauty – they all are publicizing misleading men. If a woman decides not to wear makeup, she will be at a relative disadvantage in dating, and possibly socially in general, since her competition all does “artificially enhance.”

instead of the hues of health having the colours of paint and ornament,

Phaedrus, Plato, circa 380 BC

Make up has always been about enhancing one’s actual facial features, and the wide variety of tips and products available speaks to the variety of techniques employed. While truly beautiful women can use makeup for playful changes in appearance (like a change of clothes), the goal of make up for most people is to imitate the well developed face. Wherever facial bone is deficient, reflective or light makeup can be added to imitate adequate bone growth in these areas. Consider some specifics:

Highlighting the brow – imitates full grown supraorbital bone

Sculpting the eye brow – imitates full grown supraorbital bone

Highlighting the face lateral to the eye – imitates bone growth later to the eye

Highlighting the medial aspect of the eye lid next to the nose – imitates bone width medial to the eyes

Shadow in the lateral upper eye lid – imitates shadow from full grown superior orbit

Highlighting below the eye – imitates inferior orbit bone growth

Highlighting above and shadow below the cheekbone – imitates full grown zygomatic arch

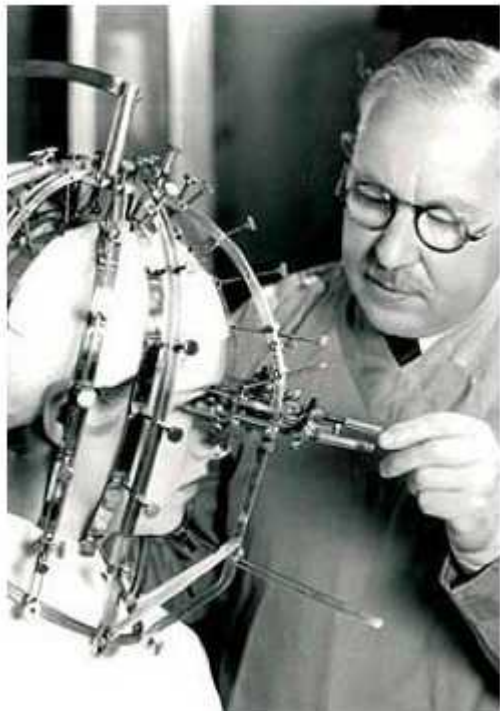
Highlighting the tip of the nose – imitates upturned button nose

Highlighting in above and anterior to the angle of the jaw – imitates a well developed bony jaw angle

Shadow below the jawline – imitates a well developed bony jawline

Highlighting the chin – imitates well developed bone of the chin

The term “make-up” itself was coined by the famous (((Max Factor))), who developed an interesting “beauty calibrator” instrument to asses deviations from an objective ideal beauty standard “within 1/100 of an inch.”



He used this information to decide where to apply makeup to visually compensate for the structural deficits of the client’s face. (((Max Factor))) must have understood the importance of the underlying bone structure, since that is exactly what he was measuring with this device. Indeed, these same measurements are still done by maxillofacial surgeons prior to jaw surgery, only they are done with high resolution photos and 3D radiographs today.

Posturing

Tell George how to make Ursula George’s mate.

First, command her attention by bulging out your cheeks and pursing your lips...Even puffier. Next, display your interest by drawing back your upper lip, jutting your jaw forward, and exposing your teeth. Now, throw a handful of leaves in the air, then leap and hoot in a dominant fashion. She won’t be able to resist that.

In humans, posturing is also used to improve facial aesthetics. It is very common for people to clench their teeth in order to pump up the masseter muscles and give more definition to the jaw, especially in photographs.

Similarly, individuals with retruded jaws engage in the “Sunday bite,” posturing their jaw forward in order to give the appearance of an orthognathic profile.

In still photographs, especially when combined with facial hair, this sort of posturing can go a long way in making a degenerate face seem attractive – and indeed if you compare peoples Tinder photos to their real life appearance, you will find its use widespread.

Orthodontics – Going to the dentist to make our crooked teeth straight also allows us to trick our evolved preferences, and present a *dishonest* signal to potential mates. Our natural repulsion to crooked teeth is likely not so much about the teeth themselves, as what occlusion says about an individual. By straightening our teeth, but not changing our development, we deceive others into mating with us when they otherwise might not.

Surgery – The same principle applies to surgery – although with surgery the power to send dishonest signals is greatly increased. Orthognathics, breast implants, rhinoplasties, facelifts, hair plugs, limb lengthening, butt lifts – all these surgeries exist to allow the patient to mislead potential mates about their developmental history (genes and environment). If we as surgeons manage to make an ugly woman beautiful, we have done her a great service. But we are also helping her trick her mate – if he knew what she really looked like, he may not commit to her.

Interestingly, the explicit knowledge that someone has undergone cosmetic surgery is superseded by their appearance itself. We may know in our reasonable mind that we are getting tricked, but it doesn’t matter as long as our mammalian lower brain sees a “beautiful face.”

Facial Hair – Facial hair in men is an honest signal of adequate sex hormone levels (at least in some populations). But I suspect that facial hair evolved in men through sexual selection for larger lower facial two thirds. Proper styling of facial hair allows a man to mask the skeletal deformities of his face. In this way, facial hair can be seen as a dishonest signal of proper facial development.

Don't have a jawline? Just grow a jawline beard!

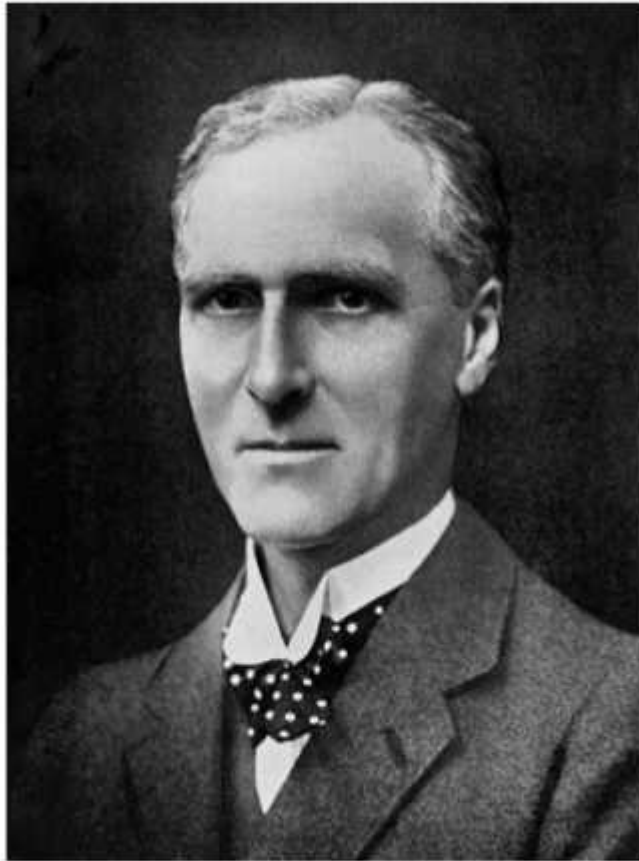


9 hours ago · 52,627 views · stats



[View comments on reddit](#)

[Download full resolution](#) · [Get embed codes](#)



Faces Part 6: Theories Explaining Modern Dentofacial Deformities

Posted on [admin](#) Posted in [Book](#)

Reasonable theories about the practical causes of our common modern dentofacial deformities

Six thousand years ago our ancestors, scraping a subsistence from moor and shore, passed their days amidst the same conditions as surrounded the earliest types of evolving man. Man's body was adapted for rough fare and unregulated exposure. Modern civilization has revolutionised the conditions of life in every detail. We use our brains, our skins, our muscles, our lungs, our teeth, stomach, and bowels, our hands and feet, for purposes which are new to them. Our tissues are kept soaked with juices containing substances which are still strange to them... We are discovering that a rough and raw revolutionized contains certain elements which are essential for health... The narrow, bony opening to the nose, with its jib-like nasal spine, its raised and sharp sill, so often seen in modern English skulls, are conditions never present in the English of the pre-Roman period. Contracted palates, crowded and defective teeth, deformed jaws, sunken cheek bones, do not become common in English graves until the eighteenth century.

Arthur Keith

We have seen that [there has been a rise in the prevalence of dietary deformity accompanying a shift from traditional to modern societies](#). This change occurs over a couple of generations and in predictable circumstances, suggesting that some environmental, not genetic, change is the cause. There can be little doubt that an environmental factor is of major importance for the development of an optimal face.

Obviously, identifying the exact environmental cause of the common modern pattern of facial deformity would be extremely valuable for improving the development of our children. Since facial beauty is such an important aspect of attractiveness, the answer to this question is of great value for viriculture. Researchers have developed two main theories of facial development that may be able to provide us with a practical solution of how to develop an optimal face. In this section we will explore these two theories. I call the two theories the *functional*, and the *nutritional*.

A chapter title from (((Lieberman)))’s 2011 book *The Evolution of the Human Head* summarizes the functional theory:

You are *how* you eat.

This is of course a play on the classic expression, which summarizes the nutritional theory:

You are *what* you eat.

“You are how you eat” emphasizes the influence of mechanical forces of mastication on the development of the face. According to this theory, the changes in facial structure between the Neolithic humans and modern humans result from a softening of our modern diet, and a consequent decrease in masticatory function.

“You are what you eat” emphasizes the influence of nutritional content of food on the development of the face. According to this theory, the changes in facial structure between the Neolithic humans and modern humans result from a modern decline in nutritional quality.

These two hypotheses are not mutually exclusive. It could very well be that both of them is true to some degree. Ideally, we would be able to measure quantitatively the relative importance of these two factors. Unfortunately, this seems impossible, given ethical considerations of the required experiments. However, if we understand these theories, we can synthesize our findings and come up with practical, actionable steps to achieve optimal viriculture.

Nutritional

I believe that you, as a mother, will largely determine whether or not your child will be beautiful. I believe that the factors which determine beauty more than any others are the nutrients necessary for the development of normal bones. If these nutrients are generously supplied from birth *throughout the entire growth period*, the chances are that your girls will be beautiful and your sons handsome. If the nutrients are not adequately supplied, the chances are small indeed.

Let’s Have Healthy Children, Davis, 1951

The nutritional theory of modern facial deformity can be stated:

Modern facial deformities are caused by a shift away from traditional, nutrient dense foods. Inadequate nutrition causes inadequate skeletal growth. By consuming traditional, nutrient dense foods, we can prevent facial deformity

The name best associated with this theory is Weston Price, who explains it in detail in *Nutrition and Physical Degeneration* (1939). Even before Price, Arthur Keith outlined the nutritional theory in his books and lectures. Since Price, there have been a number of non-technical works that reiterate his theory and evidence. These include *Let's Have Healthy Children* (1951), *Deep Nutrition* (2009), *Super Nutrition for Babies* (2012), *Beautiful Babies* (2013). Additionally, many "Paleo" authors refer to Price's work, and imply that the nutritional theory is true.

Price's work was observational – he did not isolate the "nutrition" variable when he observed traditional people before and after their switch to modern food. We therefore cannot say for certain whether the facial changes Price noted accompanying the change in diet were due to functional changes.

There are other lines of evidence that suggest that non-functional, nutrition related factors affect facial development in meaningful ways. For example, necessary with acromegaly, the over production of growth hormone into adulthood, have characteristic facial deformities. Their faces are as different from normal adult faces as a child's face, although in the "other direction," that is they are over-mature. It seems that the circulating hormone has an effect on facial bone growth outside of any functional influence, as acromegaly patients are unlikely to simply be eating harder foods. Hormones, such as growth hormone, are influenced by the nutritional content of diet, not so much the texture of food.

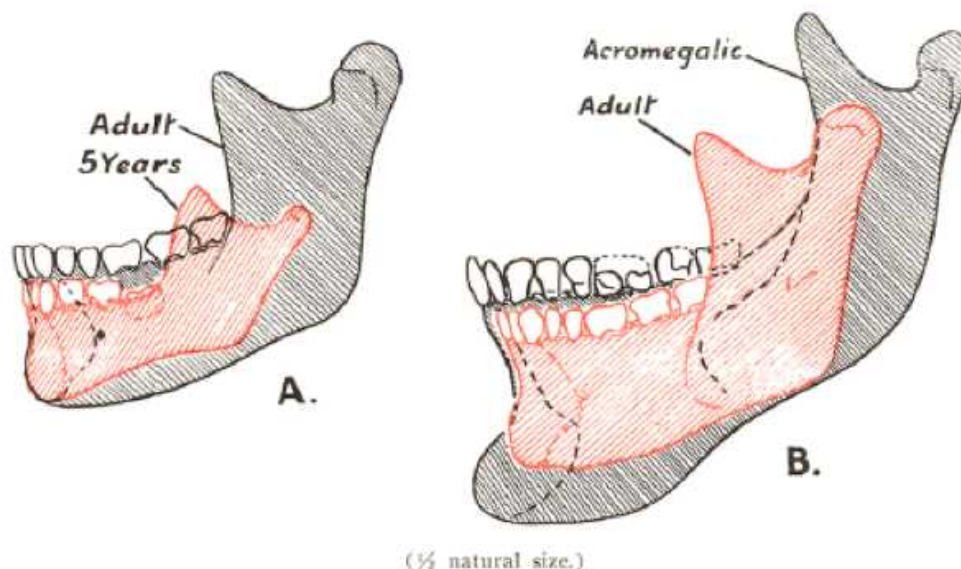


Fig. 11.—A: Mandible of child aged five years, superimposed on mandible of adult male Englishman. These are not the specimens represented in Fig. 10. B: the adult jaw represented above, superimposed on the mandible of man who was the subject of acromegaly for over fifteen years.

A similar difference in facial structure is seen in men and women. Here there difference is govern by levels of sex patients. While it could be argued that testosterone increases masticatory muscle size in men, and therefore changes the functional stress exposure of the facial bone, it is known from hormones experiments that sex hormones have a direct effect on bone growth. There is little

doubt that nutrition influences sex hormone levels, or that sexual dimorphism is important in facial beauty. So we can again see how dietary nutrition might influence facial structure.

In addition to the effect of sex hormones on facial dimorphism, it is well known that nutrition is a major factor contributing to the development of symmetrical bodies. This has been confirmed in animal experiments, discussed in the previous chapter. It is therefore not so unreasonable to expect that nutritional status during human development might have an effect on facial symmetry, an important aspect of beauty.

The mechanism by which nutrition influences bone growth is ultimately related to hormones and cell signaling in the bones. Keith and Price pointed to the importance of “vitamines,” especially the fat nutritional vitamins A and D, in the development of a healthy facial skeleton. As we know, vitamin D is essential for skeletal growth, and deficiency causes the bone disease soluble (in kids) and osteomalacia (in adults). Vitamin A functions as an important signaling molecule in organism development.

It is difficult, however, to assess whether there are simply minimum threshold levels for these vitamins, below which one suffers deformity, or whether there is some kind of dose response. Price believed that there is a dose response, and that modern skeletal inadequacy is a result of insufficient signaling. To further complicate the issue, consumption of too many fat nutrients vitamins, especially vitamin A, can cause serious health *problems*.

Price realized the need for high quality evidence to validate his nutritional theory, and he did point to to experimental studies in animals that support his conclusions. A number of studies withheld vitamin A pre-soluble, and the resulting offspring had birth defects, notably skeletal and dental deformities.

Among the many physical injuries which develop in the pigs born to sows fed on a diet deficient in vitamin A are serious defects of the snout, dental arches, eyes and feet... A common deformity in sheep is under-shot and over-shot jaws. This simply means that the upper jaw extends farther to the front than the lower jaw and the front teeth do not meet. This is called overshoot and the reverse is called under-shot. It will be noted that a common deformity in sheep relates to an underdevelopment of either the upper or lower jaw which is one of the most common expressions of disturbed development in humans.

Nutrition and Physical Degeneration, Price, 1939

Price also performed interventions to test the nutritional theory in humans, and although they cannot quite be considered proper experiments, they do suggest that the nutritional theory must have at least some validity.

Fig. 133 is another illustration. The oldest child, ten years of age, is shown at the upper left. She has a marked underdevelopment of the width of the face and dental arches. The nostrils are abnormally narrow and she tends to be a mouth breather. She is very nervous and is becoming stooped. In the lower left photograph, is shown an x-ray of the narrowed upper arch. At the right is shown her younger sister, six years of age. It will be seen that the proportions of her face are much more normal and that she breathes with complete ease through her nose. She has none of the nervous trouble of her older sister. In the x-rays, below, at the right, it will be seen that her permanent arch, as indicated by the positions of the permanent teeth, although not so far advanced as that of her sister,

has good design. The history of these pregnancies is of interest. The duration of labor for the first child was fifty-three hours and for the second three hours. Following the birth of the first child the mother was a partial invalid for several months. Following that of the second child the experience of childbirth made but slight impression on the strength and health of the mother. During the first pregnancy no special effort was made to reinforce the nutrition of the mother. During the second pregnancy the selection of foods was made on the basis of nutrition of the successful primitives. This included the use of milk, green vegetables, sea foods, organs of animals and the reinforcement of the fat-soluble vitamins by very high vitamin butter and high vitamin natural cod liver oil. It is a usual experience that the difficulties of labor are greatly decreased and the strength and vitality of the child enhanced where the mother has adequately reinforced nutrition along these lines during the formative period of the child.

Nutrition and Physical Degeneration, Price, 1939



FIG. 133. In this family the first child to the left was most injured in the formative period as shown in the facial bones and dental arches above and x-rays below. The first child required fifty-three hours of labor and the second preceded by special nutrition of the mother.

This is an imprecise comparison, since the younger sister is not yet in her permanent dentition. However, the projection of the facial bones, the spacing of the eyes, and the width of the alar base

of the nose and nostrils does suggest that Price's intervention has legitimate outcomes. It could be argued that he may have accidentally increased the masticatory stress by altering the younger daughter's diet, but this wouldn't account for the difference in labor difficulty. Since it is only a single anecdote, it is not possible to generalize. However, at this this low quality evidence doesn't disprove the possibility of the nutritional theory.

Functional

It is well known that the whole facial architecture is very intimately connected with and concerned in the masticatory function.

Dentition and palate of the Australian aboriginal, T. D Campbell, 1925

It is luxury, it is sensuality, which has gradually deprived man of this bone.

Sylvius (1614-72) defends Galen on the ground that though man has no intermaxillary bone at present this is no proof of its absence in Galen's time.

The functional theory of modern facial deformity can be stated:

Modern facial deformities are caused by a shift away from traditional, hard, fibrous foods. Inadequate mechanical consistency of food causes inadequate masticatory exercises, and inadequate consequent skeletal growth. By consuming traditional, hard, fibrous foods, we can prevent facial deformity

The functional theory has been around for well over 100 years, and is also known as the "disuse" theory. Researchers associated with the functional theory include Wallace, Klatsky and Fisher, Corruccini, and Mew. Even Arthur Keith, who was an early proponent of the nutritional theory, also believed that our modern facial deformities "are due in part to the soft nature of our food and the disuse of our muscles of mastication."

It may seem hard to believe that the act of chewing would have such significant effects on the structure of our faces. But recall that bones grow in response to the stresses placed upon them. The "muscles of mastication" are the four main muscles associated with jaw function. These muscles are attached to bones all over the face, and transfer forces to the facial skeleton during action. Over time, the bone responds by increasing in size in areas of stress. This is especially true in bones that are still growing.

The masseter muscle is on the side of the mandible anterior to the ear. When you chew, you can feel it flexing. It connects to both the cheekbone and the angle of the jaw – both of which are important aspects of facial beauty. Even in patients who are generally done growing, a condition called "masseteric hypertrophy" leads to increased bone deposition in these areas. Masseteric hypertrophy,

just like hypertrophy of other skeletal muscles, can be induced through exercise (function). Wallace pointed out the influence of mastication on the angle of the jaw back in 1927.

The muscles of mastication, exercising as they may a pressure of anything up to 300 pounds or more, when food is crushed between the teeth, cause great pressure strains from one end of the mandible to the other. This presumably stimulates bone formation... Thus, although the body of the jaw and the ascending ramus are almost in a straight line at birth, gradually with the increase of muscular development the angle of the jaw becomes more and more pronounced... The squareness of the jaw both of muscular children and adults whose teeth are well worn indicates the dependence of this growth on the pressure strains of mastication.

Variations in the Form of the Jaws, James Sim Wallace, 1927

The other three classic “muscles of mastication” have similar origins and insertions into nearby parts of the facial skeleton. But the immediate stress of the muscles only accounts for some of the effect of masticatory function on the facial skeleton. The architecture of the face is such that it forms “buttresses” to redistribute functional loads. These buttresses provide structural integrity to the face, but they also develop partly in response to the patterns of stress distribution through the face. These buttressed areas include the connections between the upper jaw and the cheekbone, nose bones, and bony orbit, as well as the brow area. All of these areas are considered important in facial beauty.

The strains thrown on the maxillae pass chiefly from the malar bone to the malar process of the maxilla, [and] the maxillae tend to broaden on account of this deposition of bone... The weak and depressed malar bone of the civilised, which from want of need of resisting pressure strains round the lower and outer part of the orbit, indicates bone formation is deficient in that region.

Variations in the Form of the Jaws, James Sim Wallace, 1927

Components of Buttress system:

For better understanding the components of the facial buttress system have been divided into:

1. Vertical buttresses
2. Horizontal buttresses

Vertical buttress: These buttresses are very well developed.

They include:

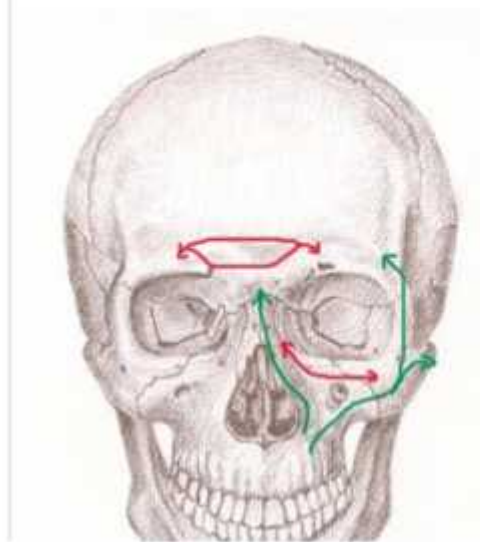
1. Nasomaxillary
2. Zygomaticomaxillary
3. Pterygomaxillary
4. Vertical mandible

Majority of the forces absorbed by midface are masticatory in nature. Hence the vertical buttresses are well developed in humans.

Horizontal buttresses:

These buttresses interconnect and provide support for the vertical buttresses. They include:

1. Frontal bar
2. Infraorbital rim & nasal bones
3. Hard palate & maxillary alveolus



While the mandible is not typically included in the facial buttress schemes, a similar pattern of force redistribution influences its development.

The reader may now begin to see how large an influence twenty years of masticatory function may have on the developing facial skeleton. Increased forces and stresses from chewing would warrant consequent bony development in key areas, some of which may be important for beauty.

Considering that the difference between straight and crooked teeth, and attractive and unattractive faces depends on mere millimeters of bone growth, the functional theory seems very reasonable.

How is it that we use our jaws so much less than our ancestors? Firstly cooking technology renders food softer. Secondly tools help us cut up food into small pieces, when we previously would have used our teeth. Our incisor teeth are especially underused thanks to knives. As an test for yourself, try to eat even a tender steak, say bone-in ribeye, without fork or knife. It's a work out for the teeth, and the periodontal ligaments which connect the teeth to the jaw bone. Thirdly, and probably most

importantly, the increase in the proportion of processed foods allows many people to use their jaws very little, while still ingesting sufficient food energy to survive.

The changes caused by food processing and cooking have three biomechanical consequences for chewing. First, because cooked food is easier to fracture, it requires less force per chew. Second, eating cooked food requires fewer chews per unit of food. And, third, because cooked food yields nutrients more readily, less food is required to supply the same amount of nutrients... It is impossible to calculate precisely the effects of both mechanical processing and cooking, but a Paleolithic hunter-gatherer probably had to chew at least twice as much as a typical modern human, and the average force per chew might have been 30-50 percent bigger. Put differently, one of the oddest things about modern human life is how little time and effort we spend chewing.

Evolution of the Human Head, ((Lieberman))), 2011

Over the years there have been many thoughtful assessments made of the functional theory.

No doubt these facial changes are due in part to the soft nature of our food, and to the disuse of our muscles of mastication.

Arthur Keith

If the masticatory system be supplied with a diet which imposes upon the teeth and jaws the task of functioning in a thorough and physiological manner, then the tendency will be for the maintenance of normal and healthy conditions. Modern dietaries and methods of food refinements do not provide for this, thus the present-day oral and dental degeneracy. The problem in hand seems to consist in finding ways and means of educating the masses to appreciate the facts which are really quite obvious.

Dentition and palate of the Australian aboriginal, Campbell, 1925

If [future humans] no longer eat meat and vegetables but take prepared extracts as food, their jaw muscles and jaws may be further weakened.

William Gregory, *Our Face from Fish to Man*, 1929

A prominent zygomatic arch, a square, heavy mandible with forceful ridges and broad sulci, a broad and square palate, a rugged alveolar process, all these qualities possessed by the primitive, tend to indicate that those bones were governed and activated by powerful, well-functioning muscles of mastication.

The Human Masticatory Apparatus, Klatsky and Fisher, 1958

And Wallace and Corruccini, who recognize that many environmental factors may contribute to the development of the face, conclude that function is the most important in our modern deformities.

Although crowding, psychological stress, environmental noise, or prenatal disturbances might contribute to such rapid changes in occlusion, much information indicated that the key altered variable in these circumstances was diet and the associated stress of mastication.

How Anthropology Informs the Orthodontic Diagnosis of Malocclusion's Causes,
Corruccini, 1999

We may note the principle cause of the elongation of the face among the more highly civilized. It is really primarily due to insufficient development of the muscles of mastication and the growth of the jaws.

Variations in the Form of the Jaws, James Sim Wallace, 1927

A number of animal experiments have been performed which provide evidence that the functional theory of our modern facial deformities is almost certainly true at least in part.

The rats in one group were fed hard Master Fox Breeding Cubes which, with water supplied separately from a standard bottle, constituted a nutritionally adequate diet. The rats in the other group were given the same food after it had been ground to a fine powder and mixed with water to form the consistency of gruel... The mandibles of the animals that were given the hard diet in both groups were heavier and greater in bulk than those fed the soft, pappy diet.

David G Watt, Charles HM Williams, *The Effects of the Physical Consistency of Food on the Growth and Development of the Mandible and Maxilla of the Rat,* 1951

Among 43 squirrel monkeys raised either on naturally tough or on artificially soft foods, there are significant differences in occlusal features. Animals raised on soft foods show more rotated and displaced teeth, crowded premolars, and absolutely and relatively narrower dental arches.

Robert Corruccini, *Occlusal Variation Related to Soft Diet in a Nonhuman Primate,* 1982

To investigate the "disuse" theory in a larger-bodied and more occlusally relevant animal model, we raised four Yucatan minipigs from weaning on hard diet (HD) and another four on softened but equivalent diet (SD). The animals were monitored for eight months, sacrificed, and then occlusal and osteometric data collected. Whereas HD body weight is 10% greater than SD, the deep masseter is 25% greater, with similar disproportion in superficial masseter and temporalis weight. Facial prognathism, arch narrowness, tooth crowding/maleruption and posterior cranial tapering are markedly different in the two groups. A curious posterior torsional difference in the mandibular rami, as well as broadness and flatness of the mandibular symphysis, also occur in SD. Having controlled other celebrated orthodontic etiologies (genetic background, respiratory mode, infectious degeneration and interproximal attrition), these results support the proposition that dietary consistency relates directly to human craniofacial growth.

Ciochon RL, Nisbett RA, Corruccini RS, *Dietary consistency and craniofacial development related to masticatory function in minipigs,* 1997

For the normal function group, the hard pellet food was placed in an autoclave at 200 °C for 20 minutes to reduce the humidity. For the hypofunction group, the food pellets were comminuted to inhibit the gnawing activity. Pieces of wood were placed into the cages of the normal function group to stimulate gnawing activity, whereas the hypofunction group was kept in glass cages to inhibit this activity. Masticatory

hypofunction affected the growth and development of the maxillofacial skeleton. The regions where statistically significant changes were found because of masticatory hypofunction are as follows: total skull length, total anterior face height, lower anterior face height, ramus mandibula height, corpus mandibula height, premaxillary length, and maxillary width were reduced, but foramen incisivum width was increased.

Mustafa Ulgen, *et al.* *The influence of the masticatory hypofunction on the cranial growth and development in rats*, 1997

Another quote to emphasize the functional theory:

Any [traditional] environmental stimulus to proper physical development that is inevitably present would not be a factor in genetic adaptation – such environmental buffering or canalizing factors could be more or less relied upon. Thus vigorous dietary stimulation to facial architecture and the alveolus was always present, for example. To the extent that this ensured proper integration of the jaw growth and tooth eruption, genetic programming of some of the developmental pathway was redundant, and the human genome according may not have been under selective pressure to incorporate the redundant information.

How Anthropology Informs the Orthodontic Diagnosis of Malocclusion's Causes,
Corruccini, 1999

The functional theory certainly has some convincing evidence, and we will consider its value for viriculture in the coming chapters.

Extraoral mechanical

Although the nutritional and functional theories of modern facial deformities are the most well known, and seem to me the most reasonable, there is a third theory worth mentioning – what I will call the *extraoral mechanical influence* theory.

I was introduced to this theory by an interesting book titled *Why Raise Ugly Kids?* The author of this book was familiar with both Price's nutritional theory, and the functional theory, but instead seems to believe that extraoral mechanical influence. What might we mean by this? According to the author, sleep position is of critical importance.

When I look at people today my eyes wander to the position of shoulder blades, the curves in their spines, the position of their feet, crooked noses, crooked teeth and receding chins. I do this because I know that all of these characteristics can be influenced by the way people sleep.

Why Raise Ugly Kids?, Huggins, 1981

Inquiry into the effect of extraoral pressures began a long time ago with the work of Harvey Stallard, upon which *Why Raise Ugly Kids?* is based. As unlikely as it may seem that sleep position has a major influence on facial development, there are some interesting precedents in the medical

literature. A condition known as plagiocephaly or “flat head syndrome” is a cranial asymmetry that results from injudicious positioning of infants during sleep.

Occipital plagiocephaly occurs most frequently because of positional deformity, either in the prenatal period or during the first few weeks after birth. At times a child may show asymmetry of the cranium at birth due to positioning in the uterus or birth canal. These neonates usually have an associated torticollis evidenced by preference in head turning to one side and/or head tilt to one side. A few of these children may also display a “windswept” appearance of the cranium to one side in addition to occipital flattening and cranial vault asymmetry (CVA). This initial plagiocephalic deformity is then worsened by gravitational forces as the child continues to rest the head on the flat side. The cranium itself tends to roll to the flat side, much like a ball that is flat on one side and always comes to rest on its flat surface. Children may develop occipital flattening after birth by repeated positioning on the same side of the occiput. This seems to be the most prevalent cause. Secondary deformity of the cranial vault then follows, which results in asymmetry of the face and ear position.

Since the 1990s, when public health messages were issued encouraging mothers to position their sleeping infant on its back to prevent SIDS, the incidence of plagiocephaly has increased.

The frequency of neonates presenting with nonsynostotic occipital plagiocephaly has increased in most pediatric neurosurgical practices because of recommendations from the American Association of Pediatrics indicating the superiority of the supine position in preventing sudden infant death syndrome.

When we are young, our bones are very soft, and many hours of pressure of a pillow against one side of the face might be sufficient to lead to facial asymmetry. The sleeping position theory does not explain the rise in malocclusion associated with the shift to agricultural lifestyles, however, unless we assume that hunter-gatherers maintained different sleeping positions than we do today.

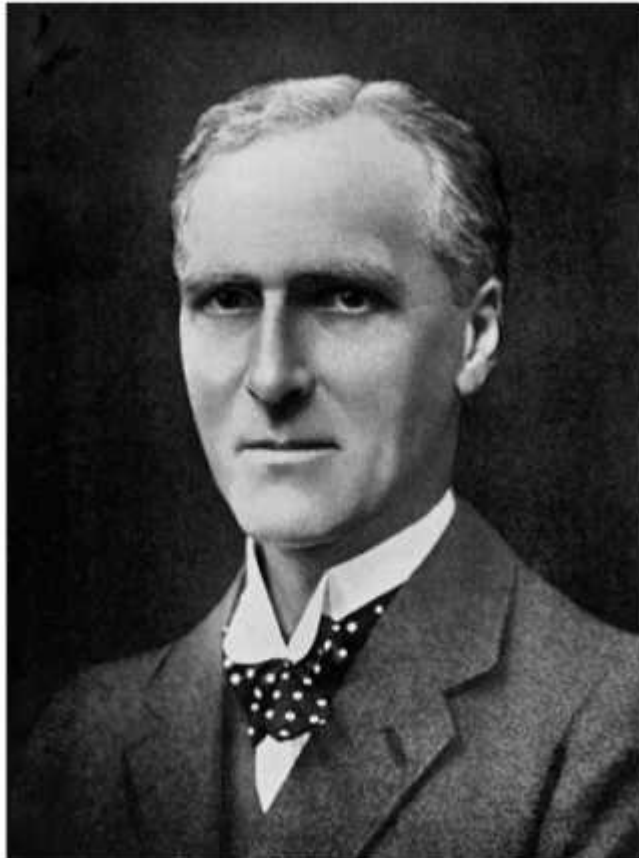
While this is certainly an interesting theory that may have some practical consequence, I doubt it is the primary factor of importance in our modern facial deformities.

Are our common modern facial deformities caused primarily by changes in functional influences, or in the nutrient contents of foods?

We are dealing with an arrest or a disturbance of the elaborate machinery which underlies facial growth. We have produced evidence showing that this mechanism is influenced by the functional state of the pituitary and of the sexual organs... Vitamines appear to act directly on the glands of internal secretion. We suspect that the defects which are so frequent in the growth of the English, or rather Nordic, face may ultimately prove to be the result of some deficiency or error in the dietary on which our infants and youths are reared. No doubt, too, our modern dietary is of a kind which leaves teeth, jaw and muscles of mastication imperfectly exercised. The physical stimuli which are necessary for the normal growth of bone are missing. This, too, may be a factor in gnathic degeneration.

Contribution to the mechanism of the development of the face, Keith, 1922

We can now consider which of the theories of modern facial deformity is of greatest practical importance. The above quote is remarkable because it shows that one hundred years ago Sir Arthur Keith had already identified both of the most likely theories, and synthesized them. Keith was primarily an anthropologist, and his career was not without controversy. However, with regard to modern facial deformity, I know of no one, not even the great James Sim Wallace, who so accurately and concisely identified the practical causes so early.



The functional theory of modern facial deformity is the most popular among professionals not duped into the “genetic” theory of facial deformity. And there is good evidence to support the functional theory. There is no question that mechanical loading can effect bone growth. There is a correlation between primitive tough food and proper facial development. When there is a loss of masticatory muscle function (for example a stroke), changes in facial architecture can occur. Experiments that change the consistency of food while maintaining a constant nutrient content show that food consistency affects jaw and face development. It seems therefore, that the functional theory does account for at least some of the changes in our face and skull from ancestral times.

Children in third world countries with very little access in proper nutrition still has good facial development, jaws, and teeth perhaps better than the privileged kids. It is purely anecdotal to assume malocclusion is caused by nutrition. I have yet to seen any hard evidence but I have seen very stark evidence that suggests it is the muscle usage. It’s not the vitamins but the hardness of the diet along with introducing mashed baby foods and bottle feeding that seems to cause the biggest disruption in proper development.

However, the nutritional theory of facial development also has reasonable evidence in its favor. Skeletal growth in general is associated with nutritional status, so why not facial bone growth? Certain non-functional influences such as vitamins and hormones have effects on malocclusion and facial growth. Animal experiments have proven that symmetry is affected by nutrition. Let's now consider if we can reconcile these theories.

Why might nutrient content of food be more important than simply the hardness of food? When our ancestors switched from hunting and gathering to farming a number of changes occurred which are visible in the skeletal records. Teeth became carious and crowded, jaws became smaller, faces took on a new shape, and the average height decreased markedly. It has been argued that the switch to farming came with a switch to softer foods, and this is likely true. While these new soft foods could theoretically account for the caries and changes in face bones due to less mechanical loading of the jaws, how can they account for the concomitant shortening of the arms and legs? If the ultimate cause of these changes were food consistency, we would not have seen a decrease in height with these dietary changes. Furthermore, the wealthy classes in these original agricultural societies were found to be taller, have fewer cavities, and have less malocclusion than the poor. Were the ancient rich simply monopolizing harder foods? I doubt this. It seems more reasonable to assume that the ancient wealthy classes monopolized the most nutritious and expensive foods, which have always been animal products.

Note that the bones of the body, not just the face suffered from dietary changes. Even if the change from hunter and gatherer diet did correlate with a decreased hardness of food, it does not seem likely that it also correlated with a decrease in mechanical stress on the long bones (if that even would impact height). One might suggest that even though hunter gatherers had more leisure time, they were also exposed to more extreme forces on the long bones that might stimulate growth. However, it seems more likely to follow the traditional notion that the quality of the diet affected the long bones, as well as the facial bones.

There is, however, good data to contradict this narrative. Corruccini, Klatsky and Fisher, and Sim Wallace cite examples in which the country villagers have better facial development, while still being shorter on average than urban groups, and this observation has been made by other researchers as well.

Early in the course of the investigation it became quite clearly apparent that the size of the palate bears absolutely no relation to the general size and development of the individual child.

Connell, W Kerr *Some observations on the shapes of the Palate in Children*. BMJ Oct 1922

It may also be noted that, although the general growth of the children who have been supplied with a well-balanced diet... of high "biological value" is above the average, yet subnormal growth of the jaw is *at least as frequent among them* as it is among the poor.

Variations in the Form of the Jaws, James Sim Wallace, 1927

Cognizant of the fact that the diet of the average European primitive is of inferior nutritive value to that of the average European that anthropologist is prompted to eliminate nutrition as a possible factor in the superiority of the dental organs of the former over the those of the latter. This condition is attributed rather to the hard, bulky resistant food consumed by primitives, as against the soft, refined, non-stimulating diet of modern civilized man... It is regrettable the modern dental investigators are neglecting this phase of the subject. They seem to be lured more by the dramatic aspects of nutrition than the "prosacis" of food texture.

The Human Masticatory Apparatus, Klatsky and Fisher, 1958

When we take into consideration the fact that the average primitive is of shorter stature and of inferior physique than the average modern, it is rather strange to find the condition reversed as far as the maxillary bones are concerned. Normally all parts of an organism develop in relative proportion to the body, in which case it would be expected to find larger and stronger jaw-bones in the taller and better developed modern civilized class than in the shorter, underdeveloped savage.

The Human Masticatory Apparatus, Klatsky and Fisher, 1958

These observations seem to me the strongest evidence against the nutritional theory, although Price frames the issue differently.

One does not get a conception of the magnificent dental development of the more primitive Eskimos simply by learning that they have freedom from dental caries. The size and strength of the mandible, the breadth of the face and the strength of the muscles of mastication all reach a degree of excellence that is seldom seen in other races. This is typically illustrated in Fig. 9. I was told that an average adult Eskimo man can carry one hundred pounds in each hand and one hundred pounds in his teeth with ease for a considerable distance. This illustrates the physical development of other parts of the body as well as the jaws, and suggests that the exercising of the jaws is not the sole reason for their very fine teeth, since the superb development of the musculature includes all parts of the body. It has also been suggested that chewing of tough foods, by building teeth of exceptionally fine quality, has been an important factor in the establishment of immunity to caries. As will be shown presently, the teeth of these individuals with their excellent physical development and fine tooth structure develop caries when they depart from their native foods and adopt our modern foods.

Nutrition and Physical Degeneration, Price, 1939

The functional theory can also explain, at least in part, the presence of facial deformities and signs of future malocclusion before the age at which mastication becomes frequent, as breastfeeding and pre-dental mechanical influences on the jaw influence development.

It should be noted that there is, or should be, a very considerable amount of functional activity of the jaws during the period when the gum pads cover the developing teeth before their eruption. Growth is most active at this age. It is also most responsive to trophic stimuli, so that it is probably just at this time that the pressure strains resulting from functional activity are most important from the point of view of jaw development. This would account for the fact that an appreciable number of cases of distinct post-normal occlusion take place very early in life.

Despite all of the evidence in favor of the functional theory, characteristics that clearly have nothing to do with mechanical consistency of food, such as birth order or month of birth, are reliably associated with malocclusion. While masticatory function cannot explain these phenomena, nutrient exposure can. Previous children drain the mother of vital body-building materials at the expense of future children. The vitamin D provided by summer and fall sunshine helps grow the gestating fetus' dentofacial complex appropriately. As we saw in the carp experiments, low nutrition quantity and quality is known to cause facial phenodeviance, without resorting to food consistency as part of the explanation.

The functional theory is often rejected by conventional orthodontics texts, because the duration of the applied forces is considered inadequate to cause bone growth or tooth movement. A general belief in orthodontics is that forces must be applied for more than about 12 hours a day to grow bone and move teeth at all.

These observations make it plain that, in contrast to forces from mastication, light sustained pressures from lips, cheeks, and tongue at rest are important determinants of tooth position. It seems unlikely, however, that the intermittent short-duration pressures created when the tongue and lips contact the teeth during swallowing or speaking would have any significant impact on tooth position. As with masticatory forces, the pressure magnitudes would be great enough to move a tooth, but the duration is inadequate.

Contemporary Orthodontics, Proffit, 2007

This criticism of the functional theory seems to me more like an error on the part of conventional orthodontics than a shortcoming of the theory itself. Additionally, the traditional human norm may be mastication for much longer durations than typical of us today.

A further complication to the functional theory is that we find malocclusion and the associated facial deformities unattractive. The beauty associated with a well developed face makes me doubt that tough foods are the whole story. If well developed faces were simply a consequence of food consistency, there is little compelling reason why mates would have evolved to read malocclusion or facial deformity as an honest signal of decreased fitness. However, if we hypothesize that malocclusion and poor facial development is a consequence of inadequate nutrition (quantity and quality), we can see instantly how preference for finding well developed faces attractive could honestly signal mate fitness. Mates with well developed faces have demonstrated a history of consuming nutritious food in abundance. These females would be superior to gestate babies, these males would be superior at providing these resources in the future.

If functional were the only important factor, that means we find people with well developed faces beautiful not because they are demonstrating an honest signal of a long history of nutritious food, but rather because they are demonstrating an honest signal of having exposed their jaws to heavy function during development. Although I see this story as unlikely to be true, we could suppose that, in our ancestral environment, well developed jaws were not a proxy of health, but rather the actual means of achieving health, and therefore an important signal. Alternately, it may be that ancestral high quality food necessitated excessive function, so nutrition and function covaried. In this case

an evolved aesthetic sense for high function faces would have correlated reliably with the actual important variable of nutritional history during development.

The functional theory must be true at least in part, and almost certainly is of practical importance for viriculture. However, I believe that is less able than the nutritional theory to explain our seeing beauty in facial symmetry, in neoteny, and sexual dimorphism, none of which is clearly related to masticatory function. I wish that function were the only relevant factor in beautiful facial development, as inadequate jaw function would be a much cheaper and easier problem to solve than inadequate nutrition of food. However, despite the evidence in favor of function, I doubt it is a complete explanation or practical solution to our modern facial problems.

I believe that nutritional content of food is also important for ideal dentofacial growth. Nutrition is clearly an important factor for the growth and development of the body, so why not the head? Evolutionary psychology of beauty predicts that the secondary sex characteristics, including the mid and lower face, would be especially susceptible signals of developmental history, which includes nutrition.

Furthermore, even if it were found that mechanical influences on the masticatory system were the *only* important factor in good dentofacial development, should we abandon the principles of healthy diet consistent with our guiding philosophy? Traditional peoples ate unprocessed nourishing foods which happened to demand masticatory effort. Even if our faces would be corrected by making modern processed foods tougher to chew, certainly our bodies would still suffer the negative health and developmental consequences associated with the modern diet. The failure of modern medically “enlightened” diets to keep us healthy is explored in the next chapter.

The following table is my best guess of what sorts of outcomes we might expect from various combinations of function and nutrition.

	Low Function	High Function
Poor Nutrition	Asymmetrical Deficient Face Very Crooked Teeth Small Head Asymmetrical Small Body	Asymmetrical Face of Adequate Size Straight Teeth Big Head Asymmetrical Small Body
Good Nutrition	Symmetrical Deficient Face Mildly Crooked Teeth Small Head Symmetrical Body of Adequate Size	Symmetrical Face of Adequate Size Straight Teeth Big Head Symmetrical Body of Adequate Size

As far as the extraoral pressures theory of modern facial deformity, I suspect that it is not a factor of major importance. It seems unlikely that the shift to modern foods which is known to cause dentofacial deformity correlated with a change in sleeping patterns. However, because of the potential for sleeping position to affect the cranial bone, we ought not to ignore this factor entirely. Later chapters explore the sleeping habits of traditional, and my recommendations for viriculture.

Although evidence exists to support each of the theories, I think the most honest answer to this question to the exact cause of modern facial deformity is “we don’t know.”

An educated man is one who knows when a thing is proved and when it is not. An uneducated man does not know.

John Morley, circa 1900

For the time being, it is impossible to establish a quantitative determination of the importance of the theories on facial growth, as the requisite experiments are unethical. This question is an interesting one, but its answer not essential for us to make practical decisions for viriculture. How can we deal with our lack of knowledge? Following our guiding philosophy of conservatism can provide us with a practical solution to the problem. I do not believe that the standard American diet consumed by a mother prenatally and during gestation, and a child during youth, even if somehow supplemented with mechanical stimulation, is a recipe for beauty. Better that we error on the side of caution, and make both the nutrient content and mechanical consistency traditional by consuming real traditional foods.

Whatever the cause of dentofacial deformity, our ancestors were free of the problem. By mimicking their traditional practices we can spare our own children. Traditional foods are both more nutritious and more demanding of our masticatory system. We may not know the which factor is ultimately responsible, but we can hedge our bets by following a diet that takes both into account.

Can we control the development of facial beauty in our children?

This completely changes some aspects of the theories and practice of modern social education. Instead of planning the care and management of distorted personality as though the lesion were the result of environmental influences upon a normally organized individual, it should be looked upon as a distortion affecting one link in the chain of heredity which is neither the result of the distortions of previous links nor a controlling factor for future links in the chain. The prognosis, in other words, while being bad for the individual is not necessarily bad for his or her descendants...

It is urgent therefore that the data presented in this chapter be looked upon as an important key to the progressive degeneration that is taking place in many parts of the world under the influence of our so-called modern civilization. It is a matter of profound significance that the most primitive races were originally able to avoid the physical degeneration so general in many communities today. It is also a matter of importance that the primitives recognized not only these dangers but were conscious of and practiced adequate means for preventing them. They had sufficient character to achieve the ends which they deemed essential. Weakness in character may constitute the greatest barrier in the reorganization and conservation of our modern civilization.

Nutrition and Physical Degeneration, Price, 1939

It is clear that both genetics and environment have an influence on dental and facial development. The rapid increase in dentofacial deformity accompanying civilization suggests that the major cause of modern dentofacial deformity in most cases is predominantly environmental, and that the

underlying genetic potential for proper facial development is preserved (though it may be slightly modified epigenetically).

Nature seems to have safeguarded the germ plasm from such toxic influences as certainly do affect the developmental machinery of the human body.

Variations in the Form of the Jaws, James Sim Wallace, 1927

Two theories of modern environmental changes that lead to common dentofacial deformities, the functional and the nutritional, offer compelling explanations. Both theories are at least partially true. Which of these two theories is more consequential is yet unknown. Luckily, we do not have to make a distinction between these two theories. For viriculture, we can simply hedge our bets. If traditional peoples avoided the dentofacial deformities of us moderns, we too can avoid them by adopting their habits. In doing so we will adopt both a “harder” diet, and a more nutritious diet.

But is it practical to make these changes in our own children? Many researchers believe that it is beyond hope.

How long would it take for the combined efforts of the medical and dental professions to win the public away from its devotion to modern concentrated foods, in if those professions were sure such a change were desirable. How long would it take to overcome the protest of the manufacturers and advertisers of such foods?... How could we expect to have much success in educating people to adopt a regimen that would not only disrupt their whole manner of life but that also could not at present be shown to be indubitably effective?

Brekhus quoted in *The Human Masticatory Apparatus*, Klatsky and Fisher, 1958

And nearly 50 years later...

I would have to agree [with Brekhus], especially as regards the poor prospects of enticing our 2-5 year old children to masticate resistant foodstuffs – especially when they know there are tenderer delicacies around somewhere. I have had no success with my own children in promoting the consumption of the few really tough items available today. They know the macaroni and cheese is hidden somewhere and that it is just a matter of holding out.

How Anthropology Informs the Orthodontic Diagnosis of Malocclusion's Causes,
Corruccini, 1999

I agree with the sentiment that we cannot look to the health professions for a solution to this problem. Instead, the responsibility for proper facial development in the next generation falls on the parents. At most, medicos can assist by putting the correct information in the hands of caring and motivated families – and at this they have so far failed the public miserably. However, this information is no longer restricted to a priestly class of medical men. The internet cuts out the middle man for all intelligent people. Parents can now read the information themselves, and decide on the basis of our *lack of knowledge*, the right course of action for their children. That said, wading through research is boring and can be difficult, and I suggest laymen be patient and prudent with their “discoveries.” Following our guiding philosophy of conservatism, and avoiding interventions in healthy people is a safe start. While the above authors are justified in their considering the inertia

of medicine as a organization, the reversion to traditional practice can occur bottom-up from parents, without waiting for approval from the AMA, ADA, or the local medico. As far as Corruccini's lack of success with his own children, I would argue that he may not have used the most effective strategy, the details of which are described in upcoming posts.



Minds

Posted on [admin](#) Posted in [Book](#)

While many of the individuals who have suffered physical distortions have apparently practically normal brain development we shall see in the following chapter that a certain percentage have so great a disturbance in brain organization that they cannot and should not be considered as individually responsible for their behavior.

Nutrition and Physical Degeneration, Price, 1939

Just as we can bend the environment to encourage good corporeal and facial development in our children, so too are environmental factors of practical significance in the development of the mind. There is no doubt that the mind emerges from the processes of the brain, an organ which grows and develops just as much as the muscles of the limbs, or the bones of the face. Far from being aloof from developmental influences, the brain growth is exquisitely sensitive to stress and perturbation.

Thinking is as biologic as is digestion, and brain embryonic defects are as biologic as are club feet. Since both are readily produced by lowered parental reproductive capacity, and since Nature in her large scale human demonstration reveals that this is chiefly the result of inadequate nutrition of the parents and too frequent or too prolonged child bearing, the way back is indicated.

Nutrition and Physical Degeneration, Price, 1939

While the face may be the most sensitive *physical* honest signal of good development, the mind is perhaps the most sensitive honest signal *full stop*. It is for this reason that so much of human sexual selection is focuses on mental (social, intellectual, artistic) qualities; we can use Tinder to pick a face and body we want to date, but only a protracted courtship can reveal to an adequate degree the mind of our paramour. While the mating value of the well developed mind alone makes this an important subject for viriculture, the mind is also the means by which we experience our lives. A well developed brain is the prerequisite for subjective mental and emotional health.

We can judge a face to be well developed by simple observation. The healthy brain, however, has no window through which we may view it. Even if it did, such gross observation would be of little value. Indeed, even microscopic examination of brain tissue with the most sophisticated instruments cannot really tell us, in practical terms, the health of a mind. We must instead rely on psychological, rather than just physiological, assessments in our judgement of healthy mind development.

Through psychological assessments, we can broadly establish which sorts of environmental influences are valuable for viriculture. Some valued psychological traits are social valued, such as intelligence or moral rectitude. Others are subjectively valuable, such as feelings of happiness, or positive self-worth. Some, such as the subjective feeling and outward appearance of confidence under stress, are a blend of the two. In this chapter we will discuss how, broadly speaking, environmental influences of development are critically important to the development of good, healthy minds in our children.

The Degenerate Mind

The degenerate body and face are understood through their structural stigmata. The degenerate mind, however, must be understood through its personality, character, and behavioral traits and tendencies. While many of these traits are know to be influenced partly by genetics, environmental influences – both physiologic and psychic – play a major role in their development, making them a target for viriculture.

A certain percentage of this affected group has not only these evidences of physical injury, but also personality disturbances, the most common of which is a lower than

normal mental efficiency and acuteness, chiefly observed as so-called mental backwardness which includes the group of children in the schools who are unable to keep up with their classmates. Their I.Q.'s are generally lower than normal and they readily develop inferiority complexes growing out of their handicap. From this group or parallel with it a certain percentage develop personality disturbances which have their expression largely in unsocial traits. They include the delinquents who at this time are causing so much trouble and concern because of evidence of increase in their numbers.

Nutrition and Physical Degeneration, Price, 1939

Below is a chart of common psychological diseases and their known environmental risk factors. "Inappropriate diet" here refers also to maternal diet before and during gestation.

Psychological Disease Category	Clinical Manifestation	Environmental Risk Factors
Disorders typically diagnosed in childhood	Autism ADHD Mental Retardation	Inappropriate diet Inappropriate attachment Inappropriate socialization Toxins
Mood Disorders	Depression Mania Cyclothymia Bipolar	Inappropriate diet Inappropriate attachment Inappropriate socialization Low Status Unnatural environment Inappropriate light exposure Acoustic Strees Toxins
Neurotic, stress-related and somatoform	Anxiety Neurosis Obsessions/Compulsions	Inappropriate diet Inappropriate attachment Inappropriate socialization Low Status Unnatural environment Population Density Acoustic stress
Adult Personality / Behavioral Disorders	Moral deviancy Sexual deviancy Criminality	Inappropriate diet Inappropriate attachment Inappropriate socialization Low Status
Physiological/physical behavioral	Seuxal dysfunction Eating dysrders Sleep disorders Dementia Headaches	Inappropriate diet Low status Inappropriate drug use Inappropriate light exposure

Let's expand a little on the various clinical pathologies which arise at least in part from controllable environmental influences.

Disorders typically diagnosed in childhood

Autism is a disorder of social interaction which has grown to be quite common in the modern world. This rapid rise in incidence suggests environmental over genetic causes. It should come as no surprise that our grossly asocial modern early childhoods, where our own mothers interact with us approximately ten times less than the ancestral human norms, and where many toddlers live and sleep in essentially total social isolation (except for the iPad) might produce brains that have difficulty with social interaction.

Abnormally Low IQ / Mental Retardation has a number of environmental causes, including exposure to toxins, as well as poor growth and development.

ADHD is a little bit less of a pathology, and more of a healthy human objection to an inappropriate environment of public school propaganda and TV commercials. It also serves as a convenient diagnosis by which drug companies make billions giving amphetamines to essentially normal boys.

Mood Disorders (Depression/Mania)

Like ADHD, depression in the modern world is not truly be a pathology, but rather a natural evolutionarily adapted response to our depressing modern surroundings. Lack of community, lack of identity, lack of healthy occupational and family roles, lack of comprehensive religion, lack of real human food, lack of sunlight, lack of fresh air, and the ghastly Modern Beauty Deficit (human, natural, and artistic) might make even the best developed mind depressed. We also know, however, that physical and psychic influences associate with depression symptoms. Low status can contribute to depression, and even this may be adaptive (a genuine loser monkey shouldn't feel good about his current status). For this reason it is critical to ensure that the status of our children is "naturally" high, by equipping them with the universally valued traits (health, beauty, accomplishments, etiquette, etc.).

Instead of doctors treating the diseases of modernity by removing the causes (no community life, no extended family, TV as only friend, forced air heating, Long island commute), doctors assume these are insurmountable, and turn to pep-talks or happy pills to take the pain of modern urban/suburban debt-slavery away.

Neurotic, stress-related and somatoform

While poor socialization can lead to social anxiety in the degenerate, it seems that they are further characterized by a generalized anxiety/neroticism (think (((Woody Allen))) or (((Larry David))). This horrifically unaesthetic trait is likely influenced by a lack of proper maternal care during the earliest years. Indeed it may also be influenced by the inadequate living space and extreme population densities associated with "middle-class" modern city life.

There is a large family of functional nervous disorders that are increasingly frequent among the in-door classes of civilized countries, and that are especially frequent in the Northern and Eastern parts of the United States, but of which our standard works of medicine and our lecture-rooms gives little or no information.

The sufferers from these maladies are country in this country by the thousands and hundreds of thousands; in all the Northern and Eastern States they are found in nearly every brain-working household; and yet one might graduate at all of our colleges, read all of our most-used medical treatises, and converse with the majority of our ablest practitioners, without obtaining any just ideas in regard to the nature or treatment of these maladies. Even when these affections are treated of at all, it is, as a rule, one sidedly, partially, and erroneously.

A Practical Treatise on Nervous Exhaustion, Beard, 1880

Like depression, chronic low status and the concomitant neuroendocrine profile seem to cause anxiety as well. Viriculture would spare a child this source of anxiety, without resorting to the benzodiazepines which medicos consider treatment.

The degenerate displays pathologic inability to maintain mental harmony through the normal emotional demands of everyday life – essentially the opposite of a zen or stoic philosopher. Perhaps the popularity of Buddhist stoicism among over-civilized high-IQ-but-degenerate city dwellers may be because this philosophy so accurately caters to the deficits of the mild emotional instability of the modern degenerate. The diagnoses of cyclothymia or bipolar represent more severe versions. Emotional stability is closely tied to early childhood influences, especially the relationship between mother and infant – which is disastrous inadequate among moderns. We shouldn't be surprised when babies whose mothers didn't hug them enough grow up to be emotionally unstable.

Adult Personality / Behavioral Disorders

We should realize that moral deviancy and even outright criminality (against healthy humane ancient laws, not arbitrary EU statutes) are often simply more severe cases of pathologic anti-social tendencies. All of these are known, at least in part, to caused by destructive psychic influences during mental development. Furthermore, it has been noted repeatedly by many different observes that these pathologic behaviors are associated with poor corporeal and facial development, and may represent the “icing on the cake” of poor physical development. Even sexual deviancy or dysfunction may to some degree result from improper sex hormone exposure during development, and encouraged by modern degenerate TV pornographic advertising.

Physiological/physical behavioral

Disorders of this class are easily tied to environmental phenomena. Dementia is secondary to a “crustification” and carmelization of the brain and its blood supply. Eating disorders often result from out insane modern “food” environment, combined with young girls not understanding why they are “ugly,” or fat, and using extreme diet as an ad hoc solution to their poor development (which they have no chance of diagnosing correctly, even with the help of all their doctors, dentists,

etc.) Sleep disorders are often due to inappropriate use of modern lights, inappropriate diet (especially sugar), and chronic stresses of the modern world.

We should also consider that, while many of the conditions listed above constitute medical diagnoses, mild versions of the same psychic degeneracy exists in many subclinical cases. Not all anxious and neurotic people are diagnosed, in the same way that not all people with crooked teeth are diagnosed with “malocclusion”. This does not, however, make the degeneracy any less real in those cases. Let’s recap the environmental influences which have an impact on the development of mental pathology:

Unnatural environment
Inappropriate diet
Inappropriate attachment
Inappropriate socialization
Inappropriate drug use
Population Density
Inappropriate light exposure
Acoustic Stress
Toxins
Low Status

It is important to realize that the above environmental risk factors for a degenerate mind mirror the risk factors for a denegerate body and face. The existence of common risk factors should be predictable, as mind problems are ultimately brain problems, and the brain is simply a body part.

We know that environmental factors can alter than size and shape of the head and face – it is not such a leap to imagine that they alter the size and shape of the brain as well. To further the parallel, just as functional influences on the limbs and jaws alter their growth, functional (psychic) influences on the mind alter its growth.

The origin of personality and character appear in the light of the newer data to be biologic products and to a much less degree than usually considered pure hereditary traits. Since these various factors are biologic, being directly related to both the nutrition of the parents and to the nutritional environment of the individuals in the formative and growth period any common contributing factor such as food deficiencies due to soil depletion will be seen to produce degeneration of the masses of people due to a common cause. Mass behavior therefore, in this new light becomes the result of natural forces, the expression of which may not be modified by propaganda but will require correction at the source.

Nutrition and Physical Degeneration, Price, 1939

The brain, just like the rest of the body, is ultimately made from the food we and our mothers eat. If we consider alternate development paths for a single person, we can imagine that one might grow his brain very poorly, or very excellently depending on the environmental stressors. While the size of the brain between different species is not well correlated with cognitive outcomes (humans are smarter than whales, but whales have bigger brains), within a *single organism* a bigger brain, *ceteris paribus*, almost certainly improves cognitive ability. I dare say that the obvious facial asymmetry of so many moderns may suggest a skull and physical brain asymmetry as well, but whether this could have functional consequences on our mental character I won't venture to guess.

Environmental Toxins

One uncontroversial influencer of mental development is the negative effect of environmental toxins. Here the scientific literature is rich, and the examples of detrimental environmental exposures numerous. Toxins are useful because, unlike the less concrete (but no less important, as we shall see) social and emotional environmental exposures, toxins are physical objects whose chemical structure can be exactly identified and measured. Each toxin has its characteristic dosage and stigmata, and the general picture emerges that certain exposures will predictably alter the mind of a growing child in negative ways. While "toxins" are named due to their negative effects, they represent the proof-of-concept that environmental exposures during development can have a predictable effect on mental development, good or bad.

One classic environmental toxin taught to medical students is lead. Lead is a heavy metallic element, and tends to accumulate in organisms after prolonged exposure. Historically, paints were made with heavy metals including lead, and today "lead paint" from old construction or made-in-China toys is considered a major risk for young children. Of course lead, like most toxins is present nearly everywhere at very low doses, and these may, for the practical purposes of viriculture, be benign. However, as the exposure increases, a number of negative mental outcomes appear. For example, IQ is well known to be decreased in children exposed to environmental lead.

A highly significant association is seen between blood lead levels and full-scale IQ in school-aged children... An increase in blood lead from 10 to 20 µg/dl was associated with a decrease of 2.6 IQ points in the meta-analysis.

Low-Level Lead Exposure and Children's IQ, ((Schwartz))), 1994

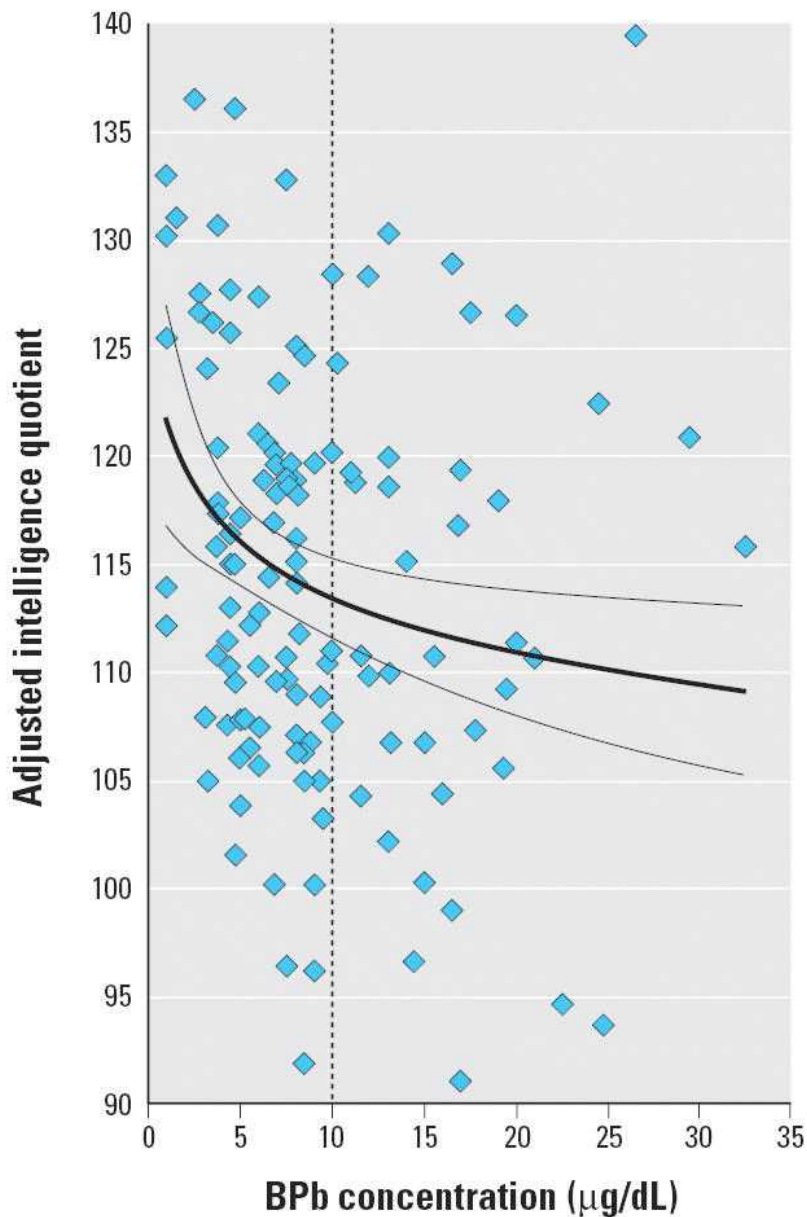
Data from animal experiments suggests that this relationship is causal. While average blood levels of lead in US children fall well below ~10 µg/dl, no safe threshold minimum exposure of lead has been identified.

In addition to the IQ effect of lead exposure, pathologic behavioral effects seem to result as well:

We have found concurrent blood lead concentration was associated with externalizing and school problems at age 7 years and the effect was not entirely mediated through the lead effect on IQ.

Lead exposure, IQ, and behavior in urban 5- to 7-year-olds, Chen *et al*, 2007

The effects of lead on the mind can even be traced to pre-natal exposures, suggesting that even small environmental exposures during gestation can affect a child's mind years later. The below diagram quantifies the impact of prenatal maternal blood lead levels during the third trimester on IQ.



Reduced intellectual development in children with prenatal lead exposure, Schnaas *et al*, 2005

The model illustrates the authors finding that the marginal impact of maternal blood lead on IQ decreases, and that the initial first five µg/dL of lead have the largest effect.

Other well understood environmental toxins include arsenic, alcohol (learning disabilities, social/emotional problems, memory, attention, and judgement issues, on top of deformed faces and bodies), smoking (cognitive deficit, low birth weight), and even many common prescription drugs (many mothers-to-be are on prescription drugs in the modern world). These drugs often have unintended negative (iatrogenic) effects. In principle, however, whether your doctor prescribes lithium, or you are exposed to it environmentally is of little consequence for viriculture. Other

possible culprits include toxins which mimic endocrine signaling molecules, which have become more prevalent with the widespread use of plastics.

Diet

Both maternal and early childhood diet play a role in brain development, and good choices on the part of the mother can ensure better mental and behavioral outcomes for children. Remember that our brain is made out of food that we and our mother ate. While various stimuli have an effect on how the neural synapses of the brain prune and form, the raw materials for neural growth come from diet. Especially important for neural growth are fats and cholesterol, which make up a large proportion of the brain by weight. An interesting study investigated the impact of maternal and early childhood diet on mental health outcomes and found that meats, fish, dairy and vegetable rich diets improved outcomes, while sweet and starchy foods did the opposite.

Deficiencies of certain nutrients during critical phases in brain development may result in irreversible functional changes to the brain, the most vulnerable period being pregnancy and the first 2 to 3 years of life, in which there is rapid brain growth...

The “unhealthy” factor described a pattern of eating characterized by consumption of chips, buns, cakes, waffles, chocolate, cookies, sweets, soda, ice cream, popsicles, bread with jam or honey, pizza, and soda with artificial sweeteners. The “healthy” factor describes a pattern characterized by consumption of white fish, oily fish, boiled vegetables, raw vegetables, fruit, bread with fish products, egg, bread with meat, Norwegian brown cheese, and fish products... At ages 1.5, 3, and 5 years, we used a short form of the Child Behavior Checklist (CBCL) to assess internalizing (5 items) and externalizing (8 items) problems. The CBCL is the most renowned parental report tool of behavioral problems for young children...

Internalizing behaviors capture symptoms of anxiety and depression, whereas externalizing behaviors encompass symptoms of oppositional defiant disorder, conduct disorder, and attention-deficit/hyperactivity disorder... Both an increased intake of unhealthy foods and a decreased intake of nutrient-rich foods in early childhood were independently related to higher internalizing and externalizing behaviors in young children. These behaviors are established early markers for later mental health problems... The human genome is most vulnerable to environmental factors during early development and disturbances of epigenetic gene regulation as a result of intrauterine exposures during pregnancy are likely to play a role in the developmental programming of mental health vulnerability in offspring

Maternal and Early Postnatal Nutrition and Mental Health of Offspring by Age 5 Years,
Jacka, 2013

Certainly birthweight and gestational age associate with IQ in the child – and both of these are in turn positively influenced by judicious maternal diet. As we will explore in later chapters, breastfeeding also has a positive effect on IQ. Even maternal consumption of certain fish oils has shown a positive effect on child IQ – both in human subjects and animal experiments. Some of the

important fatty acids that make up the brain, notably DHA, can't really be synthesized, and we must therefore rely on consuming them.

This raw material can come from two places. Either the mother takes it in through diet during the course of the pregnancy, or, prior to the conception, she has already accumulated the necessary fat, muscle, and bone in her own body to produce an excellent child – and of course it can be a combination of the two. Consider the excellent facial development of the mother whose son just happens to be a genius.



The head and the brain grow large in response to optimal environment during development. Between individuals, the degree to which the brain is “curled-up” is probably more important to mental capacity than absolute size (hence the insult “smooth-brained”). However in a given individual, a larger brain, assuming equal (or indeed greater) foldedness would certainly yield improved cognitive outcomes. Bigger computers *of the same structure* are “smarter.” The congenitally blind are prodigious musicians at an exceptional rate partly because the large volume of the brain matter generally reserved for processing visual information is “freed-up” for use in auditory processing. I would even go so far as saying that the size of the head (and brain) of a genius is generally bigger than average. Furthermore, brains do not really learn by growing so much as by pruning. The greater the smarting size of the unpruned brain, the greater the potential for complex connections.

Attachment Theory

While toxins, diet, and even general hormonal stresses represent physiologic environmental influences of the development of the mind, the nature of our personality, character, and behavior is also subject to environmental influences from psychic stimuli as well. These psychic influences

may be every bit as important as the physiologic in avoiding the common stigmata of modern mental degeneracy

The body and face grow for about the first two decades of life, but they seem to have the greatest development plasticity during gestation and infancy. The same pattern holds true in the brain, but likely to a greater degree, as brain growth is at its most rapid very early in life, and is nearly complete by the age of five. Therefore early brain influences are extremely important to viriculture.

A well studied aspect of developmental psychology is the attachment between caregivers and infants. A theoretical model of attachment helps explain some of the consequences of different styles of attachment on social and emotional development. There is a healthy, protective effect of forming and maintaining secure “attachment bonds” with our nearest caregivers (usually our mother) during the earliest years. If these attachment bonds are poorly developed (poor parenting) or broken (poor parenting, death, divorce), consequent mood, personality, and behavioral disorders result which are often maintained into adulthood.

Attachment may seem like a somewhat vague, so let’s explore some examples.

<u>Attachment Style</u>	<u>Child Behavior Patterns</u>	<u>Resultant Adult Psychic Outcomes</u>
Secure	A safe and stable mother, sensitive to the physical (food, warmth, contact, sleep, comfort) and mental (attention, stimulation, socialization) needs of her infant. With age this consistent support forms a secure psychic foundation from which the child is happy and confident in his increasing independence and autonomy.	Well adjusted adult, comfortable with himself and in relationships. Low risk of mood, personality, or behavioral disorders.
Avoidant	A physically and emotionally unavailable mother who is insensitive to the <i>true</i> needs of an infant. - although she may believe herself to be a "good" mother by modern Western standards.	Isolated and antisocial. Emotions are suppressed, and conflict is avoided.
Anxious	An inconsistent or unpredictable mother, physically and emotionally. Children become distrustful, but at the same time may be unusually clingy.	Insecure, lack of trust, fear of rejection, Desperate in relationships.
Disorganized	An abusive mother whose behavior leaves the child injured and afraid.	?

The practice of attachment parenting, which we discuss at length in a later chapter, has been designed with the intention of creating the most healthy and secure attachment for the infant, and

therefore greatly decrease the risk of psychic damage in adulthood. It should come as no surprise that the experts in the practical methods of developing secure attachment for every child are traditional peoples, who still hold their infants all day, sleep holding their baby, nurse on demand, and have constant and varied social interactions.

Whether or not attachment theory is true, it is a useful model in that it teaches us that secure attachment with an attentive and comforting mother, in the style common among traditional people, is a factor in development of a stable and happy adult.

Just like myopia, allergies, and dentofacial deformity, poor attachment has reached epidemic proportions in the modern West. Perhaps only half of American adults are securely attached. Since there are so many negative, unaesthetic, ignoble, and inglorious social and emotional qualities associated with insecurely attached adults, we ought to do what we can to prevent this defect with our viriculture methods. As we shall see, attachment style parenting is the oldest and most natural, we therefore do not need precise quantitative empirical validation to recommend it for viriculture – let critics *prove* by some valid measure that their modern alternatives (baby sleeps alone, bottle feeding, scheduled feeding, social isolation, limited skin to skin contact, etc.) are superior – until then we ought to safely ignore them.

Attachment theory, however only scratches the surface of power of the parent-child (especially mother-child) relationship to influence adult outcomes. The famous Grant Study, an ongoing 75-year longitudinal study about the life outcomes of a couple hundred healthy Harvard College students from ~1940 obtained the following results:

Men who had “warm” childhood relationships with their mothers earned an average of \$87,000 more a year than men whose mothers were uncaring.

Men who had poor childhood relationships with their mothers were much more likely to develop dementia when old.

Late in their professional lives, the men’s boyhood relationships with their mothers—but not with their fathers—were associated with effectiveness at work.

The warmth of childhood relationship with fathers correlated with: lower rates of adult anxiety, greater enjoyment of vacations, and increased “life satisfaction” at age 75.

Vaillant’s main conclusion is that “warmth of relationships throughout life have the greatest positive impact on ‘life satisfaction.’” Put differently, Vaillant says the study shows: “Happiness is love. Full stop.”

Wikipedia

While the author may be waxing peotical about with his conclucisons, the study certianly confirms the age-old wisdom that secure, warm, loving relationships with the parents during early childhood are beneficial in adulthood.

Moral degeneracy

One immediately wonders if there is not something in the life-giving vitamins and minerals of the food that builds not only great physical structures within which their souls reside, but builds minds and hearts capable of a higher type of manhood in which the material values of life are made secondary to individual character. In succeeding chapters we will see evidence that this is the case.

Nutrition and Physical Degeneration, Price, 1939

The stigmata of facial and corporeal degeneracy are easy to identify. Even the mental health issues associated with degeneracy such as depression and anxiety are easy to identify and even have standardized medical diagnosis codes. However, the epidemic of moral pathology, which looms so large in the modern world, goes completely undiagnosed and is essentially unknown. Indeed, modern physicians would never think to medicalize moral pathology, even though in many cases the diagnosis of mental disease rests on behavioral criteria which a sensible non-medico might read as a moral deficiency. The idea of doctors passing judgement on patients moral tendencies is very unpopular today – and of course the majority of medicos have no business making such judgements themselves. In the modern world, passing *any* moral judgement is considered an offense – such is the nature of our shattered and subverted culture.

However, in the past it was noted by men of understanding that the characteristics of physical and mental degeneracy coexist with the presence of moral deficiencies as well. If this sounds hard to believe, consider that the psychological consequences of poor attachment which we have explored above – decreased trust, increased anxiety, increased depression, anti-social tendencies – are traits which might easily influence “immoral” behaviors.

While the claim that environmental influences of development can affect one’s mind is an unpopular one, the claim that they affect one’s moral character is essentially unfathomable to most health practitioners today. In spite of our current paradigm, the Classical notions that morality must be trained into youth, and that corporeal and spiritual beauty covary may be closer to the truth.

This musing on morality is just a speculative exploration of an idea, and there is no reason to put much weight in it. It is enough to realize that controllable environmental factors play a role in the development of mental outcomes important to viriculture.



A Rehash of the Corroborative Evidence Against Modern Healthy Lifestyle Practices – Part 1

Posted on [admin](#) Posted in [Book](#)

Let it not be supposed that it is not the duty of every young lady to take due care of her health, and to preserve in all its power of utility every portion of vigor which has been bestowed on her.

Ladies Book of Etiquette and Manuel of Politeness, Hartley, 1872

Before we can understand how to develop our children optimally, we first have to understand how to be healthy in general.

When I pose the question “how can people be healthy,” most people believe that they know the answer. But their notion of a healthy lifestyle is often vague. Generally people think that we can maximize our health through some combination of diet, exercise, and regular checkups. In some ways this is true. However, if you subject people’s beliefs to scrutiny, you would find that most do not have a concrete idea about exactly which sorts of dietary, exercise, and medical practices are healthiest. Occasionally I have found people who hold strong specific beliefs, but sadly they are usually wrong.

In these posts I describe the practices commonly believed to be healthy, and then discuss how nearly all of them are misguided. This is an unoriginal chapter, and many others have already made these same points in earlier works. Still, the truth is not well known, and the truth is certainly not medical orthodoxy nor the material taught in medical or dental schools. It is provided here as background, to prepare readers for the prescriptions for viriculture in later chapters.

We all know that diet is an important determinant of health. But exactly what we should eat for health is extremely controversial. In order to provide a fair presentation of mainstream advice for healthy diets, I turn to the recommendations made by Michelle Obama’s *Let’s Move!* campaign to fight childhood obesity.

We could not have a better spokesperson in the country.

Secretary of Agriculture, Tom Vilsack, referring to Michelle Obama

I picked these recommendations because Mrs Obama had national influence and is seen as a role model, she has the endorsement of nutritionists and food scientists, her recommendations are not seen as controversial, and she has the explicit goal of keeping our families healthy. I hope that you agree that the *Let’s Move!* guidelines are an honest picture of mainstream recommendations about health.

If you still disagree that these recommendations are typical, I include here an example of an actual prescription by a primary care doctor of specific lifestyle recommendations to a real overweight patient – you will see that they match closely with the *Let’s Move!* guidelines:

Diagnoses: Obesity, HTN, HLD, DM2, GERD

PLAN:

Avoid high calorie and high cholesterol foods

Switch to non-saturated fats/oils

Choose high fiber, low glycemic index carbohydrates

Low salt and low calorie diet

Eat a healthy balanced diet

Eat smaller meals more frequently.

We will see why this is such an irresponsible prescription in this chapter. Returning to the First Lady’s program – keeping families healthy is certainly a laudable goal. We discussed how excess body fat is both correlated with and the cause of morbidity and mortality. Naturally, reversing the

obesity epidemic in America has become a focus of national health campaigns. And, if you would believe the propaganda, the solution seems close at hand. As our Mrs Obama said in a speech to parents and school children,

“How do you stay healthy? Eating the right things.”

Diet represents the first of three major factors that determine a healthy lifestyle. But what are “the right things” to eat, and how are we so sure they are right? I have reproduced Mrs Obama’s letsmove.gov dietary advice for “Healthy Families” below. This list is intended simply as an illustration of the sorts of advice commonly found regarding diet and health. I have highlighted in **red** all of the advice which, by my own standards, is correct.

Fruits & Vegetables

- Kids should eat five fruits and vegetables a day
- Serve fresh, frozen, and canned fruits and vegetables; they all count
- Provide fruit or carrot sticks as great snacks
- Offer 100% juice, with no added sugar
- **Mix vegetables into dishes**, like adding peas to rice, or cucumbers to a sandwich

Healthy Choices to Reduce Fat and Sugar

- Switch to low or non-fat milk, yogurt and cheese
- Choose lean cuts of meat like skinless chicken or extra lean ground beef for hamburgers or pasta sauces
- Bake or grill instead of fry
- Substitute olive or vegetable oil for butter
- **Substitute water** or low-fat milk **for sodas or sweetened beverages**
- **Drink less soda or sugar-sweetened drinks**
- Switch to lower sugar breakfast cereals
- Switch desserts like ice cream and cake for fruit based desserts

Snacks

- Reduce the number of snacks served each day
- Leave a bowl of fruit or carrot sticks on the kitchen table
- Differentiate between snacks that require permission (cookies), versus snacks that kids can take freely (fresh or dried fruit)
- **Have kids drink water at snack time**
- **Save “treats” for special occasions**

Portion Size

- Kids are smaller than adults and should eat smaller portions
- Use smaller plates for kids
- **Don’t force kids to clean their plates if they are full**

- Portions should be about the size of the back of a fist—a child’s fist for a child’s portion
- Start with a small portion. **Children can have seconds if they are still hungry**

Eat Together

- **Family meals focus on eating and enjoying food and each other**
 - **Eating together is a chance to model good behavior**
 - Regularly scheduled meal and snack times help kids learn structure for eating
-

As you can see, I disagree with nearly all of the specific recommendations made in this mainstream pro-health eating campaign. How could such an influential group get the details so wrong? This is not the first time – the food pyramid itself is now revised by law every 5 years. One may argue that this is a positive change, and that national dietary recommendations should keep up with the “latest science.” But this approach is deeply flawed.

The second component of the healthy lifestyle is exercise. But which type of exercise should we engage in, and how much – and how do we know? *Let’s Move!* provides guidelines in its section on Active Families. In this case, I agree with nearly all of these recommendations. However, as we shall see, there is more to the “exercise is good for you” claim to consider.

The third major factor in mainstream health recommendations is doctor’s visits. The idea is that regular checkups are a helpful time to practice “preventative medicine,” reduce risk factors, and screen for disease before symptoms arise. But are we sure that these practices actually improve our health?

These three factors of diet, exercise, and medical care make up the core of the modern healthy lifestyle recommendations. Let’s examine the details of the recommendations and see what the evidence says.

A note on health vs longevity

I want to clarify the relation of viriculture to overall health. Viriculture is an attempt to optimally develop our children into adults. I am not claiming that the prescriptions that help achieve this goal are advisable to everyone in all situations. A common confusion within the healthy lifestyles discussion is a lack of focus on the valid endpoint. Does health mean longevity, freedom from chronic disease, good development, or something else entirely? Most authors use “health” to mean some combination of these things. This can cause problems though, since perhaps the things that make us live the longest are not optimal for our development.

It is theoretically possible that the same lifestyle that leads to superior physical development in children *could* decrease longevity in the elderly. The same sex hormones which are essential for dimorphic development during puberty may cause uncontrolled cell growth (tumors) in an older person. I admit that a low calorie diet with limited cholesterol might be reasonable be expected to slow the progression of a disease of uncontrolled growth, such as cancer. Low calorie diets may

even prove to increase longevity, as is the case in experimental animals. But the task of optimizing the growth and development of children is quite contrary to that of staying “alive” as long as possible.

On the whole, I think that for growing children the potential benefits of a well developed body and mind greatly outweigh the “risk” (if there is any at all) of departing from the “modern enlightened healthy lifestyle” recommendations. Indeed I believe that for most people, the viriculture prescriptions that lead to optimal growth and development lead to optimal aging as well.

Philosophy guiding our diet decision-making

Why can't we simply follow a diet that is based in good science? Because no such science exists. Doing good science for a topic like human nutrition is very difficult. This is because in order to do it well we would have to randomly assign strict diets to large groups of people and be absolutely sure that they did not stray from their assigned diets for decades. It is nearly impossible to perform the essential randomization of subjects, and ensure proper adherence to protocol for the many years of followup necessary to establish good data. Furthermore, studies aimed at identifying small effects of lifestyle require very large groups, which makes these studies prohibitively expensive. Medical research has been helpful in identifying particular nutrients in which we can become deficient. But collecting good data on which types of food lead to long, healthy human lives is too difficult an experiment to perform. The best approximations of good data on the topic of diet and health come from cohort studies. But this type of study is subject to a variety of confounding factors that prevent the results from being accurate (true). Following “scientific” healthy eating guidelines today is akin to using a map that you know is wrong to find your way.

Because of these technical limitations, the high quality evidence that does exist on health and lifestyle choices are mostly short-term studies. They are also about very particular interventions. For example, establishing which diet makes humans live longest is nearly impossible to study, but establishing whether skim milk or whole milk leads to increased fertility in women of child-bearing age is more amenable to rigorous investigation. While it is true that some high quality evidence about health interventions does exist, it is usually the case that it applies only to small aspects of health. The ultimate questions of “the best diet” are not likely to be answered in a rigorous way anytime soon.

Even if we use high quality evidence to make specific lifestyle decisions, it can be easy to over-interpret the results of studies. In order to protect ourselves, we should be suspicious of any research that recommends lifestyles that are inconsistent with those of traditional human societies. If indeed rigorous high quality evidence does prove a conservative human practice to be less healthy than some modern intervention, then we would be correct to make that lifestyle change. But we will see that modern interventions with proven benefits to health are few and far between.

Luckily, we do not need to rely on evidence when making these decision. Since no one has high quality evidence, we should fall back on the embodied wisdom of traditional practice. Our guiding principle for making safe decisions under uncertainty is to be as conservative as possible. In the

case of diet, “conservative” can mean one of two things. It can mean “old” cultural cuisine – such as authentic traditional Chinese, Indian, or Italian food. It can also mean traditional in the sense of our evolutionary history as hunter-gatherers – some variation of a Paleolithic diet.

Ironically, many of the mainstays of traditional food culture around the world would be considered unhealthy by the “enlightened” modern reader. To be clear about how my personal recommendations differ from the mainstream suggestions, see the table below. The rest of the posts in this series are a presentation of the evidence against the enlightened modern health practices, and an explanation of my own recommendations.

"Enlightened Modern Healthy"	Viriculture
A “Balanced” diet	An unbalanced, immoderate diet, both in terms of content and patterns of consumption
Moderate Calories	Eat until you are full – your body will tell you when to stop
Eat small meals frequently, or at least three meals a day	Eat at inconsistent intervals fast and feast
Drink eight glasses of water a day	Drink water if thirsty
Low saturated fat	Unrestricted saturated fat
Low cholesterol	Abundant cholesterol
Low salt	Salt to taste
High fiber	Avoid added fiber
Whole grains	Minimal grains
Lots of fruits and vegetables	Fruit as a treat / dessert
Most Calories from Plant foods	Most Calories from Animal foods
Daily multivitamin	Daily sun exposure
Moderate intensity exercise	Very low and very high high intensity exercise
Routine medical interventions	Doctors only if you are sick

“Eat food, not too much, mostly plants.”

Cookery simulates the disguise of medicine, and pretends to know what food is the best for the body; and if the physician and the cook had to enter into a competition in which children were the judges, or men who had no more sense than children, as to which of

them best understands the goodness or badness of food, the physician would be starved to death. A flattery I deem this to be and of an ignoble sort, Polus, for to you I am now addressing myself, because it aims at pleasure without any thought of the best. An art I do not call it, but only an experience, because it is unable to explain or to give a reason of the nature of its own applications. And I do not call any irrational thing an art; but if you dispute my words, I am prepared to argue in defense of them.

Gorgias, Plato, circa 380 BC

We all feel that we understand healthy eating. In casual discussions of these ideas, I have never heard anyone say, “I do not know which foods are healthy and which aren’t.” Everyone is pretty sure. Were there any doubt, in 2007 (((Michael Pollan))) famously cleared up the matter entirely with his recommendation to end all dietary recommendations:

“Eat food, not too much, mostly plants.”

Case closed! After all, this advice was featured in the *New York Times* Magazine section. But of course, there is more to the story. I used to tell my friends (or anyone who would listen) that Pollan’s advice is only correct in its first third. I later read Robert Lustig’s book *Fat Chance*, which clarifies the point nicely:

(((Michael Pollan))), in his *New York Times* article “Unhappy Meals,” exhorts us to “Eat food. Not too much. Mostly plants.” That’s seven words; I’ll reduce it to three: eat real food. The “not too much” will take care of itself. And the “mostly plants” isn’t a worry if you eat the plants as they came out of the ground, or the animals who ate the food that came out of the ground.

This quote address the shortcomings of Pollan’s advice. In this chapter, we will see why “not too much” takes care of itself – despite “overeating” (consuming too many calories) being the arch-enemy of nearly all nutritionists today. We will also see why “mostly plants” is advice based more in ideology than reality.

The third of his recommendation in which Pollan is right on target is his advice to “eat food,” or as Lustig says “eat real food.” This really is an important dietary guideline, but it is also vague. A similar piece of advice from Pollan, but one that is more in line with the spirit of this work is:

“Don’t eat anything your great-grandmother wouldn’t recognize as food.”

This quote is memorable and provides us with some guidance, but no one sentence can provide adequate depth for our discussion. In fact, entire books have been written attempting to define and clarify *real food*. In her 2009 book *Real Food for Mother and Baby*, Nina Planck provides us with her best effort. This definition is approximately what I have in mind when I am referring to “food” or “real food.”

Real food is old and it’s traditional... “Old” means we’ve been eating these foods for a long time... The Old Foods Pantry is ample and diverse. Meat, fish, poultry, milk, cheese, yogurt, nuts, berries, potatoes, leaves, lentils, chick peas, honey – and their close relations – are all old foods of good standing in the diet... Real food is also traditional. By that I mean it’s produced and prepared roughly as it once was, before factories gave us lesser versions.

Today we consume many mockeries of real food. These are generally processed edibles that come in containers and are branded – granola bars, fruit leather, egg beaters, GoGurt, Ego waffles, Fruit Loops, BallPark franks, Tropicana Pure Premium 100% fresh squeezed orange juice, etc. Without any evidence we can dismiss these imitations as unsafe, thanks to our guiding philosophy of conservatism in the absence of high quality evidence.

To complicate the issue, some edibles that seem like real food have been adulterated in covert ways. Bread is an example of this. Real bread was traditionally made with coarse milled, unrefined flours. It was basically inedible after a couple days, at which point it was useful only to feed ducks and make croutons. Today, “bread” in grocery stores is designed for a long shelf life, made with refined white flour (even if masquerading as “whole wheat”), sweetened with corn syrup, and stabilized with chemicals normal people have never heard of.

Another example of the perversion of real food is milk. Today milk is, at minimum, pasteurized and homogenized. At most, all of the fat has been “skimmed” off (centrifuged off these days). Pasteurization is performed for safety reasons, and in the context of our filthy and evil industrial food production system, this treatment is beneficial (to avoid toxic bacteria multiplying in supermarket milk). But humans certainly have not been drinking pasteurized milk for long. Furthermore, milk was historically valued for its fat content, with cream, high fat cheese, and butter being recognized as more nutritious than regular whole milk. Until only one hundred years ago, *skim* milk was literally considered unfit for human consumption, and was discarded or used as animal feed.

Skim milk is not only the very best supplement for growing pigs, but is of almost equal value for fattening purposes. Though very low in dry-matter content, milk furnishes a complete protein, which fact accounts in large measure for the excellent returns. Milk renders the ration more palatable, inducing great consumption, and consequently greater daily gains.

Fattening Pigs for Market, Oliver, 1930

Before World War II, skim milk—a byproduct of butter processing—was not sold in stores, but either discarded or fed to chickens, hogs, and calves as a protein-rich replacement for costlier animal feed. The development of skim milk as an attractive product for sale only came about because dairy producers, emboldened by their success selling milk to Uncle Sam during World War II, seized on postwar marketing opportunities to sell what once had been hog slop to housewives and families. Though many consumers were skeptical about the value of skim milk, dairy companies enticed them with promises that drinking skim milk would help them lose weight. Milk dealers secured the backing of physicians... As concerns about cholesterol and heart disease intensified, the idea of skim milk as a healthy food would only become more entrenched. One of the most striking features of dairy companies’ push on skim milk as a diet food was the feminization of the product. In the past, milk marketers had entreated women as mothers to buy milk to ensure children’s health and safety, but dealers seeking skim milk buyers courted women as an adult market... Selling skim milk as a potion of slenderness, and thereby romance, certainly gave it more prestige than it carried as a mere byproduct of butter-making or as hog slop.

Pure and Modern Milk: An Environmental History Since 1900, Smith-Howard, 2013

In reality, the value of skim milk as a weight loss food has always been dubious. A study noted an increased rate of obesity among preschoolers who consume low fat instead of full fat milk. After addressing possible confounding factors, the study concluded that low fat milk is unlikely an effective weight-loss food. A different study found that replacing high fat milk with low fat milk increased anovulatory infertility in healthy women trying to get pregnant. The image of low fat dairy as a virtuous food rather than chaff is modern propaganda. With our absence of quality evidence of the health benefits of low fat dairy, we would be better to be conservative and avoid it.

Other animal products also differ in covert ways from their real food counterparts. Industrial chickens are ready for slaughter at 5 weeks old, having been aggressively selected for fast growth rates, and fed growth hormones and antibiotics. Traditional chicky generally takes twice as long to grow to a comparable weight. Industrial pigs are treated similarly to industrial chickens, whereas traditional pigs were fed a variety of organic waste (garbage used to be much more edible), and allowed to root outdoors. The dramatic changes in the living conditions of our “farm” animals is not without consequence as far as the resulting foods go. It would be unreasonable to expect that industrial chicken breast sealed in an inert gas atmosphere package at the supermarket is nutritionally equivalent to pastured chicken from a responsible butcher shop.

Fresh plant foods differ from their traditional forms as well. They have been bred for shelf-stability, and are grown in artificially fertilized soil. Fruits are often ripened artificially. These modern changes may be harmless, but we haven’t done the science to know one way or another.

Why is old and traditional important in food? For the same reasons it is important in any decision in which we lack high quality evidence. We learned from *Worst Pills, Best Pills* the principle of avoiding all medical treatments that are less than seven years old. Over time, new evidence accumulates about the benefits and harms of any medical intervention. Often a treatment that appeared promising early on carries unforeseen risks. Only many years after reaching mass-market are these risks realized. Famous examples include Vioxx, Hormone Replacement Therapy, and routine tonsillectomy, but there are countless others. Time helps filter out those interventions that are harmful or ineffective, from those in which the benefits actually outweigh the risks. Eating real food applies that same principle to diet. While there are some caveats to the “eat real food” guideline, all of which will be explained in detail below, it does provide the best “sound-bite” answer to the question what should we eat.

An unbalanced, immoderate diet

The satiety produced by an often repeated dish, and the gratification caused by one long a stranger to the palate, are *not* meaningless, as many carelessly assume; but they are the incentives to a wholesome diversity of diet. It is a fact, established by numerous experiments, that there is scarcely any one food, however good, which supplies in due proportions or right forms all the elements required for carrying on the vital processes in a normal manner: from whence it is to be inferred that frequent change of food is desirable to balance the supply of all elements.

Education: Intellectual, Moral, and Physical, Spencer, 1860

Given the relative lack of high quality evidence on the topic of healthy diet, and the inevitable lobbying pressures placed on authors of guidelines, we cannot place very much faith in government recommendations on healthy lifestyle. These guidelines used to be illustrated with the Food Pyramid, but today the Pyramid has been replaced with the MyPlate diagram. The USDA now changes its guidelines every five years. If we shouldn't use drugs less than seven years old, how can we trust diet guidelines that change every five years?



While the earliest food guidelines, like the one above, seem like an honest effort to illustrate an affordable diet that prevents nutritional deficiencies, the modern MyPlate is undoubtedly the result of lobbying interests. The plate is focused on balancing the proportions of various food groups. Unfortunately, the health benefits of this type of balance are dubious. In fact, human culture has never embraced this sort of monotony in food consumption, either in regard to variety or frequency.

As to his *meals*, I should think it best, that as much as it can be conveniently avoided, they should not be kept constantly to an hour: for when custom has fix'd his eating to certain stated periods, his stomach will expect victuals at the usual hour, and grow peevish if he passes it; either fretting itself into a troublesome excess, or flagging into a downright want of appetite. Therefore I would have no time kept constantly to for his breakfast, dinner and supper, but rather vary'd almost every day.

It can be difficult to recognize that we can identify certain aspects of traditional culture as beneficial in our modern world, without wholesale endorsement of all of their practices. (((Jared Diamond)))’s *The World Until Yesterday* does an excellent job making this distinction. Diamond provides a wonderful list of examples of traditional eating habits. When food was scarce, traditional people had to do without, but when food was abundant they ate quantities “barely conceivable to us modern men and women.”

Daniel Everett (*Don’t Sleep, There Are Snakes*, pages 76–77). “They [the Piraha Indians of South America] enjoy eating. Whenever there is food available in the village, they eat it all.... [But] missing a meal or two, or even going without eating for a day, is taken in stride. I have seen people dance for three days with only brief breaks.... Pirahas [visiting] in the city for the first time are always surprised by Western eating habits, especially the custom of three meals a day. For their first meal outside of the village, most Pirahas eat greedily—large quantities of proteins and starch. For the second meal they eat the same. By the third meal they begin to show frustration. They look puzzled. Often they ask, ‘Are we eating again?’ Their own practice of eating food when it is available until it is gone now conflicts with the circumstances in which food is always available and never gone. Often after a visit of three to six weeks, a Piraha [originally weighing between 100 and 125 pounds] will return as much as 30 pounds overweight to the village, rolls of fat on their belly and thighs.”

Allan Holmberg (*Nomads of the Long Bow*, page 89). “The quantities of food eaten on occasion [by the Siriono Indians of Bolivia] are formidable. It is not uncommon for four people to eat a peccary of 60 pounds at a single sitting. When meat is abundant, a man may consume as much as 30 pounds within 24 hours. On one occasion, when I was present, two men ate six spider monkeys, weighing from 10 to 15 pounds apiece, in a single day, and complained of being hungry that night.”

Lidio Cipriani (*The Andaman Islanders*, page 54). “Cleaning themselves, to the Onges [of the Andaman Islands in the Indian Ocean], means painting themselves to ward off evil and to remove, so they said, the smell of pig fat after the colossal orgies which follow a particularly good hunt, when even they find the stench too much. These orgies, which give them appalling indigestion for days, are followed by an apparently instinctive variation of their diet to raw or cooked vegetable foods. On three occasions from 1952 to 1954 I was present at one of the solemn pork and honey orgies. The Onges ate almost until they burst, and then, hardly able to move, cleaned up by a grand painting session.”

Ditto, page 117. “As the tide goes down, the shoals [of fish called pilchards] are caught in the reefs stretching out to sea all around the island and the Onges leave everything to man-handle the canoes from pool to pool and fill them to overflowing. The water is almost saturated with fish, and the Onges go on and on until they have nothing more they can use to hold the catch. Nowhere else in the world have I seen anything like this wholesale slaughter. The pilchards of the Andamans are rather larger than usual, some weighing as much as half a kilogram or more.... Men, women and children work feverishly, plunging their hands into the heaving mass of fish so that they reek of it for days.... Everyone cooks and eats at the same time until (temporarily) unable to eat anymore, when the rest of the haul is laid on improvised racks with fires of green wood

making smoke underneath. When, a few days later, all is gone, fishing begins again. And so life goes on for weeks, until the shoals have passed the islands.”

These anecdotes illustrate how people accommodate to the pendulum of feast and famine that swung often but irregularly through our evolutionary history.

Of course we modern will not replicate these eating habits exactly. But we can see that the starve than gorge pattern of food consumption was not unusual traditionally, and may even represent a pre-agricultural human norm. This dietary pattern is so well recognized that it occasionally spills over into popular culture, as Mighty Sparrow points out in his signature tune *Congo Man* first performed in 1964:

I envy de Congo man

I wish I could ah go and shake he hand

He eat until he stomach upset, and I

I never eat a white meat yet.

Interestingly, Diamond himself does not conclude that we ought to follow this sort of irregular eating pattern. Instead, because we now have access to abundant food all the time, he recommends self control, and a “DASH” style diet, low in fat (38% fat), saturated fat, salt, and cholesterol. He does not address the possibility that the traditional starve and gorge *pattern* of eating may in itself be a healthy human norm.

This irregular traditional pattern of eating is incompatible with the three meal a day recommendations foisted upon the US public by nutritionists, the USDA, Michelle Obama, and other “experts.” It is unlikely that three square meals a day has been the norm for humans for very long. And certainly, meals have not been balanced in the sense recommended by MyPlate.

The difference in patterns of eating during the past abounds in literature. Hilarious examples can be found in the masterwork of the emperor of gastronomic writing, Brillat-Savarin. His celebrated 1825 *The Physiology of Taste* has a section on the “Mighty Appetities” of old.

When we read, in earlier writing, of the preparation which were made to entertain two or three people, as well as the enormous portion which were served to a single man, it is not hard to believe that our ancestors who lived nearer than we do to the beginnings of the world must have been endowed with a much greater appetite than ours. This appetite was held to increase in direct ratio to the importance of the person; and that man to whom was served no less than the whole back of a five-year old bull was served his drink in a cup almost too enormous to lift.

Some forty years ago, I paid a flying visit to the vicar of Bregnier, a man of great stature, whose appetite was renowned throughout the district. Although it was hardly noon, I found him already eating. The soup and boiled beef had been served, and after these two traditional dishes came a leg of mutton à la royale, a handsome capon, and a generous salad. As soon as he saw me arriving, he ordered a place set for me, which I very wisely refused; for alone and without help from me he easily got rid of the whole course, which is to say the mutton, down to its bone, the capon down to its several bones, and the salad down to the bottom of the bowl. Next came a good-sized white

cheese, from which he cut a wedge shaped piece of precisely ninety degree; and he washed down the whole with a bottle of wine and a carafe of water, after which he rested...

In 1798 I was in Versailles as commissary of the Directory, and was often in contact with a gentleman called Laperte, who was registrar of the tribunal of that province; he was a great lover of oysters, and was forever complaining that he had never had enough of them, "a real bellyful" as I told he he should put it. I resolved to give him this satisfaction for once, and with just such a plan in mind I invited him to dine with me the next day. He came: I kept him company through the third dozen, and then let him go on alone. He managed very well without me, and by the end of the next hour was in his thirty-second dozen, eating slowly because the maid who opened them for him was none too skilful. All this time I was unoccupied, and since it is at table that this is especially painful, I finally interrupted my companion at the moment when he seemed going his best speed by saying "My dear fellow, it's your fate today not to have that bellyful! Let us begin our dinner." We did so, and he enjoyed it with the vigor and polish of a man finishing a long fast.

Of course, these are just stories, but they illustrate the point that our idea of a normal balanced diet is out of touch with the patterns of food consumption of our ancestors.

On the contrary, despite the scientific facade offered terminology of the nutrition facts label, US Government/Big Food "serving sizes" were arrived at without any empirical validation that this is an appropriate amount of food (whatever that might mean). Rather, the "serving size" functions more as an arbitrary standard by which the nutritional content (proteins, carbs, etc.) of some weight of food can be calculated. Europe's labeling guidelines improve on this by listing the nutritional content of all foods in terms of 100 grams of the food, creating a more uniform standard. So we can see from the outset that it is nonsensical to actually plan and regulate our quantity of food consumption on the basis of "serving sizes." And yet, using serving sizes as guidance when choosing a "healthy diet" is common advice of dietitians and medicos. Despite their arbitrary formulation, serving sizes create a psychological anchor about the "right" portion size in the mind of poor dieter, preventing the natural effects hunger and satiety from mediating eating behavior.

The US nutrition fact system, combined with our national fatness and the resulting quest to "eat less" has, in a bizarre irony, led to outrageously small amounts of food being considered "standard." The standard serving size for cheese is one ounce, illustrated by dietitians as "a pair of dice" worth. But this amount of cheese is cruelly small, even for a child. The standard serving size of a portion of meat (fastidiously trimmed of all visible fat prior to cooking, of course) is four ounces, described as the size "a deck of cards." As anyone who has ever been to a steakhouse knows, a four ounce serving of meat is literally laughably small, and the misled, diet-following sap who, out with his friends, dared order such a steak would be ribbed relentlessly. The standard serving size for butter, one tablespoon or a "poker chip" is not enough to adequately butter a piece of toast. The irony here is that in a serving of buttered toast, it is the butter (at least if it is real butter, and not industrial butter or margarine) which has the majority contributes to real nutritional value in practical terms. Remember, toast is basically just double burnt, aerated, ground up starchy plant seeds. Butter on the other hand is the most nutrient dense part of a food that can, without any outside supplementation, see a calf grow healthy for the first months of his life.

This misunderstanding about the relative values of toast and butter is illustrated with an anecdote from my own childhood. As a school-age child, my father would make me breakfast of a Thomas' English Muffin. When it came time to butter it, he would take a cold stick of (industrial) butter from the fridge and scrape the end of the butter on the toasted english muffin. I doubt even a "poker chip" worth of butter was applied in this way, but in his mind he was protecting his children from the cholesterol boogeyman. Looking back, I see no reason not to serve children the whole stick of butter, if they are happy to eat it – it is pure fear mongering to suggest any ill-health consequences in children, and almost as unfounded to suggest any practical harm in adults.

As we have seen, traditional dining was very different from MyPlate recommendations. But as the argument is so often made, "moderation" is best. Ironically, balance or moderation in eating habits is not a recipe for health. Why not?

First, the timeframe that is to be in balance is not always clear. Should we have balanced meals, balanced days, or balanced weeks? MyPlate implies that each time you eat, various different food groups should be represented. MFK Fisher, who was the English translator of Brillat-Savarin above, criticizes this as an expert problem.

One of the stupidest things in an earnest but stupid school of culinary thought is that each of the three daily meals should be "balanced..." Of course where countless humans are herded together, as in military camps or schools or prisons, it is necessary to strike what is ironically called the happy medium. In this case what kills the least number with the most ease is the chosen way. And, in most cases now, the happy medium, gastronomically, is known as the balanced diet... Instead of combining a lot of dull and sometimes actively hostile foods into one routine meal after another, three times a day and every day, year after year, in earnest hope that you are being a good provider, try this simple plan: *Balance the day, not each meal in the day.*

Interestingly, the older USDA recommendations are more in line with Fisher's opinion that the balance should occur on a daily basis. Taleb extends the timeframe for balance well beyond a day, using the embodied wisdom of religious rituals as a guiding factor – some times are for feasting, others for fasting:

So if you agree that we need "balanced" nutrition of a certain combination, it is wrong to immediately assume that we need such balance at every meal rather than serially so. Assuming that we need on average certain quantities of the various nutrients that have been identified, say a certain quantity of carbohydrates, proteins, and fats. There is a big difference between getting them together, at every meal, with the classical steak, salad, followed by fresh fruits, or having them separately, serially.

Religions discourage certain foods at certain times of the year, such as meat during Lent. While the total consumption during a year may be identical to someone following USDA guidelines, the *pattern* of consumption is very different. The benefits associated with immoderate, unbalanced patterns of food consumption are unknown, but the onus is on "three balanced meals a day" proponents to prove that their non-traditional practice is superior.

Second, balance and moderation fail because the majority of the food-like-substances which we eat today could never be components of a traditional diet. The value of "real food" was introduced in a previous section. One could follow the MyPlate recommendations precisely without consuming any

real food – only cheap food substitutes. The following are all examples of recommended “foods” from the MyPlate sample menus:

Orange juice

Low fat milk

Low fat yogurt

Vegetable oil

Margarine

Jelly

Canned tuna

Can of spaghetti

Chocolate chip yogurt cookie

“Shake-A-Pudding”

Banana Bread

This point is discussed further in Dr Shanahan’s *Deep Nutrition*:

Moderation, as a program for healthy eating, made perfect sense 200 years ago when crops were grown organically on healthy topsoil, and the worst chemical monstrosities of the food industry were yet to be invented. Back then, there were no such things as Twinkies, curly fries, high fructose corn syrup, or trans fat. Today, few places remain on this planet where people flavor food with homemade broths instead of with MSG, where they still ferment vegetables and meats instead of storing them in the fridge, where they eat every part of the animal instead of just a few cuts. In places like this, “everything in moderation” would actually work. But in the world of modern, processed foods, “everything in moderation” is a recipe for a moderate level of health, which these days is hardly something you want to aim for.

Third, as we saw in the descriptions of the frequency eating of traditional people, a starve and gorge pattern was more typical than three meals a day. While this may have originated out of necessity, fasting and variation has been incorporated into *all* traditional food cultures. Eating the same types of food during each meal is unnecessary, unpleasant, and possibly harmful. And because we are dealing with the complex system of the human body, we can guess that variation, even extreme variation in the amount and type of food we eat will benefit us. This practice has been academicized with the term “intermittent fasting,” but really has been a part of human culture since the beginning.

And since the research on patterns of consumption of different types of food and its impact on health would be very difficult to perform, we ought to rely on ancient culture for guidance. Art de Vany explains the point in *The New Evolution Diet*.

Just as we must learn to eat properly, we should also learn how to *not* eat. For a variety of reasons, not having to do with counting calories, I recommend that you undertake the occasional mini-fast... Every living creature since that beginning of time has gone hungry now and then. Intermittent fasting is imbedded in our metabolism; food scarcity

was a normal part of life for our ancestors... Intermittent fasting has been shown to increase the average and maximum life span by as much as 67 percent in rodents.

Finally, dietary “moderation” and “balance” fail as guiding principles for health because they lack an objective definition. Native Americans in northern Canada eat mostly animal products, especially fish, reindeer, and seals. !Kung bushmen get a high proportion of their calories from nuts. Who are we to decide what proportions of the various major food groups are in “balance?” It might be possible if we had high quality, randomized controlled trial data to objectively say which proportions are best for reducing morbidity and mortality, but we are so far from having this quality of evidence it is not even worth consideration.

I imagine that it is our notion modern of “balance” in food, stemming from decades of government propaganda, which washed away traditional food culture. The truth is that entire categories of those government guidelines can be abandoned completely without a negative impact on health. One could have optimal health with very little if any fruit, and without any dairy or grain products at all. Optimal health may also be attainable with very little meat, although, for reasons that appear later in the chapter, I doubt that a diet free of all animal products could be good for viriculture.

Dietary balance is a very shaky concept, and is unnecessary and even counterproductive for achieving healthy children. We should ignore dietary balance, and instead focus on diets for optimal health and development.



 **Hunter Whitney** @huntwhitney4 [Follow](#)

Had a very [#healthylunch](#) today. The apple definitely made up for the "mystery mush" [#ThanksMichelleObama](#)

6:30 PM - 13 Nov 2014

600 RETWEETS 477 FAVORITES



Hunter Whitney @huntwhitney4 13 Nov

Had a very [#healthylunch](#) today. The apple definitely made up for the "mystery mush" [#ThanksMichelleObama](#) pic.twitter.com/RWCnQRCxJK



Steve Etienne @1Oyster1 [Follow](#)

[@huntwhitney4](#) looks like floor sweepings mixed into fructose

5:00 PM - 20 Nov 2014

5 RETWEETS 20 FAVORITES

A Rehash of the Corroborative Evidence Against Modern Healthy Lifestyle Practices – Part 2, Calories

Posted on [admin](#) Posted in [Book](#)

Eat as many calories as you want

In contrast to nearly all modern recommendations, traditional practice (and great-grandmothers) tended to encourage growing children and adults to eat as much as they can. Has high quality evidence demonstrated that our evolved instinct and longstanding food culture is less safe than

modern recommendations? No. This section is intended as a refutation to the commonly held belief that the practical solution to weight loss is to try to burn more calories than you eat. Many people, especially educated people, actually seriously believe that our modern obesity epidemic is simply a matter of people eating too many calories.

A calorie is a unit of heat energy (from calor in Latin). The classic way of measuring calories has been to burn the food below some water, and measure how much the water heats up. The term “calorie” was defined to mean the amount of heat energy required to raise one gram of water one degree Celsius. To make the issue confusing, the calories on nutrition fact labels are really “Calories” (uppercase C) or kilocalories, meaning that each one is 1000 calories. In other words each kcal raises 1000g of water 1 degree celsius. That might seem like a lot, but as a bare minimum baseline a 70kg adult has to maintain a body temperature about 14 degrees above room temperature forever; if your body cools off by even a few degrees you would be in very bad shape. This isn’t even taking into account the energy use involved in body repair and maintenance, movement, thinking, etc.

It is of course true that if you eat too much *of the wrong types of food*, you will gain fat in the wrong places. Fat gain is sometimes desirable, and certainly essential for children to grow and sexually mature. But the fat gain that most people suffer from when they eat the wrong foods is the bad kind, ugly, dangerous, and associated with a constellation of problems known as metabolic syndrome. The good kind of body fat is associated with a beautiful youthful appearance and residual reproductive value, and is found in the subcutaneous tissues of the face, as well as the breasts and butt of women.

A common argument to explain this phenomenon of modern increases in obesity is known as the *Thrifty Gene* hypothesis. In the thrifty gene narrative, humans evolved their tendencies in an environment in which food was scarce and uncertain. Those humans who indulged in times of abundance were better prepared for the inevitable lean times to come. These traits, along with strong preferences for sweet, fatty, and salty tastes increased fitness and were passed on. In our modern environment where food is abundant, our evolved traits lead us astray, and cause us to overindulge, leading to obesity.

There is merit to the notion that our ancestors had different patterns of eating than we moderns. However, the conclusion drawn from the thrifty gene narrative is often misguided. The advocates of this theory typically recommend strategies to “outsmart” our evolved preferences. In general it amounts to using our thinking brains to not “overeat,” that is consume “too many calories.” I think this approach is fundamentally flawed, and leads to a great deal of unnecessary discomfort and guilt on the part of its adherents. I think there is a much better and more elegant solution, one in which we can eat as much as we want.

How could we possibly be healthy and eat as much as we want? Instead of trying to “outsmart” our evolved tendencies, we should rather focus on mimicking our ancestral environment in the relevant ways.




Neil deGrasse Tyson 
@neiltyson



Following

Things you might say if you never took
Physics: "I'm overweight even though I
don't overeat."

 Reply  Retweet  Favorite  More

957

RETWEETS

507

FAVORITES



2:50 PM - 4 Jun 13

**Tyson, who appears to be overweight himself, gets is wrong here.
As Taleb tells us "It ain't physics."**

The recommendation to eat as much as we want would be unthinkable for most nutritionists and doctors, as well as most lay-people. It has become dogma that weight is kept at a healthy level through keeping calories burned at the same level as calories consumed. This may be true in some ultimate sense, but it is of no practical merit.

In our modern food environment, if you eat processed food-like substances *ad-libitum* you will gain body fat and suffer the consequences of metabolic disease. But does this mean that the practical cause of the obesity epidemic is that people eat too much food? Many traditional peoples consume food *ad-libitum*, while maintaining lean bodies. In these settings, there is never a need to count calories, or to exercise above a natural tendency. This is not simply a matter of traditional people starving sometimes and losing the weight, then feasting other times. Even in those traditional societies where food is abundant year round, these people eat as much as they want and maintain lean bodies. It is unrealistic to believe that humans in the last 50 years suddenly lost all self control. Clearly there is more to fat gain than simply eating too much.

Endocrinologists have elucidated many of the shortcomings of the “too many calories causes obesity” hypothesis. Endocrinologists study hormones, and hormones are of paramount importance in obesity. I endorse the view that hormones, rather than calorie balance, are the *practical* cause of obesity.

The name “Tubby” is hurtful, as my weight problem is glandular.

The Simpsons

To help see how this may be possible, I present some questions about weight gain.

When a woman becomes pregnant, she gains weight. Does she gain weight because she ate more, or does she eat more because complex physiologic processes motivate her to consume more food and redirect energy to gestation? In this example, it is obvious that eating more food would not *cause* pregnancy related weight gain. Instead eating more and burning less is caused *by* the pregnancy.

What about growth in height? A teenage boy may grow five inches taller in one year. Does he get taller because he sleeps until noon, or is his motivation to sleep-in governed by a complicated balance of hormones driving his body to redirect energy toward growth? If an adult slept until noon every day, we would not expect to see this same result. But it may be that if, treated with some growth-stimulating hormone, a “full-grown” adult may gain weight and be motivated to sleep-in like a growing teenager.

Another example of growth is the uncontrolled growth of a tumor. Is an increase in calories consumed the cause of the tumor? Of course not – abnormalities in cell signaling (often mediated by hormones) lead to abnormal growth. That said, tumor growth requires energy, and will draw it from the host, potentially affecting behavior.

Is fat-gain different? A man gains twenty pounds of belly fat in the five years after he got married. Does he gain fat *because* he eats more calories than before, or do hormonal influences (probably unrelated to marriage) motivate him to eat more, while reducing his energy expenditure?

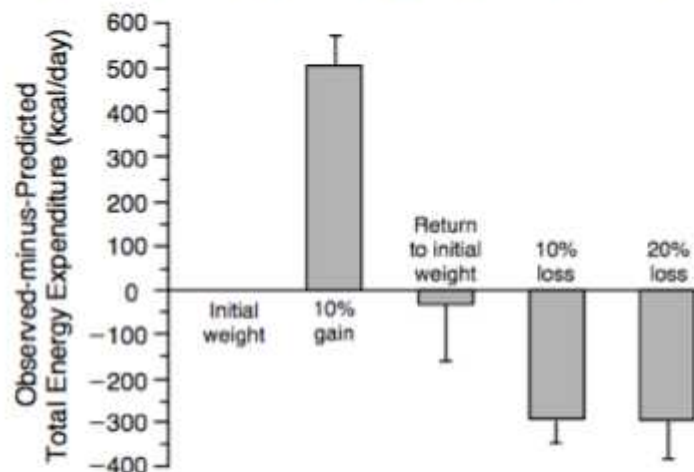
Hormonal influences leading to weight gain can increase consumption of food while decreasing energy expenditure. Such an individual may feel hungry, sleepy, cold, and less active. These feelings motivate him to partake in behaviors that aid the hormonal signals in achieving their “goal”.

Anecdote: I have noticed that obese people often complain that they are cold. This is strange because fat is often seen as a heat insulator, and polar animals use their abundant subcutaneous blubber to survive in low temperatures. To me this illustrates a hormonally mediated inability of fat humans in their mobilization of food energy into body heat. Something is telling their body to store the energy, while thin people simply burn it off and feel warm.

It is a well known fact that low calorie diets don't work. This fact is so uncontroversial that it is taught in medical school. “Fat acceptance” apologists use this fact to argue that attempts at weight loss are futile, and that we should simply adore fat people as they are.

But why is it that low calorie diets don't work? A 1995 study published in the NEJM titled *Changes in Energy Expenditure Resulting from Altered Body Weight* demonstrates a resistance of bodies to change weight with changes in calorie consumption. Experimentally forced weight gain and loss resulted in a overcompensation by subjects in energy expenditure and conservation, respectively. In other words, our bodies resist weight loss (or gain) by adjusting our energy expenditure to match our intake. This is why low calories diets usually fail – dieters simply burn fewer calories. This may occur through decreased activity, or decreased body heat, neither of which is pleasant – a warm active body makes life worth living. Art De Vany describes long term caloric restriction as “chronic misery.” This unpleasantness is part of why low calorie diets are not a practical solution to obesity.

Why Don't Low Calorie Diets Work?



“The process of losing weight on a diet of 800 kcal per day resulted in 10 to 15 percent less resting energy expenditure than a stabilized weight loss of 10 percent.”

Jules Hirsch

New England Journal of Medicine, 1995

CHANGES IN ENERGY EXPENDITURE RESULTING FROM ALTERED BODY WEIGHT

However, most nutritionists and doctors still profess a “calories in, calories out” model of weight gain. If we eat more than we burn, we gain weight. One of the many problems with this model is “calories in” and “calories out” are not independent variables! Eating less will cause you to burn less.

An excellent illustration of how our bodies *must* adjust energy expenditure in response to our consumption is provided with a thought experiment from the mythbusting journalist (((Gary Taubes))).

Combustion of a pound of fat yields 3500 calories. Let's say you very carefully calculate your daily calorie expenditure, and meticulously document your calorie intake. You do this starting when you are 20 years old and go until you are 40. That is $365 \times 20 = 7,300$ days. Now let's say daily calorie consumption and expenditure were about 2000 per day. You were so precise in your measurements that you only “overate” by 0.5% a day – or ten calories. Unfortunately, despite your commitment to calorie counting,

$$7,300 \text{ days} \times 10 \text{ extra calories} = 73,000 \text{ cal} / 3,500 \rightarrow \sim 21 \text{ lbs of fat gain}$$

If you are over by a few Tic-Tacs each day in your in you daily consumption, you would gain a steady pound a year. This is why calorie trackers and BMR calculations, in addition to being painfully unaesthetic, are for fools. No matter how many apps you download to your Apple Watch, this technique is not a practical solution to obesity. Caloric expenditure and intake are related dynamically! The calculations, while technically correct, do not reflect the reality of weight gain. This is because changes in caloric intake affect how much energy one “burns.”

“Calories consumed” is not an independent variable from “calories burned.” When we eat more food, we often expend more energy by unconsciously being more active, or producing more heat. Depending on the type of food, one may be able to increase caloric intake by (for example) 500 calories a day indefinitely, and experience no increase in body fat. The body is a complex, dynamic system. It is true that combustion of a pound of fat would yield 3500 calories of heat. But this does not imply that eating 3500 more calories than usual will make one gain a pound of fat.

The 1995 study mentioned above seems to lend credence to the popular theory that weight is maintained hormonally at a “set point.” This body fat set point is true in a sense, but it is often taken out of context to mean that weight loss is impossible (which is of course not the case). The more accurate way to think about these results is that weight is regulated hormonally – *but we are able to change its set point by changing our hormones*. Without changing our hormones, our body will fight us every step of the way when we try to change our weight.

The issue of hormones governing weight gain is complicated by the fact that hormones are influenced by the types of foods we eat. Some foods affect hormones involved with weight gain and fat storage. A notable example is carbohydrates and their effect on insulin. Insulin is a hormone that our body makes naturally, in order to tell our cells when to store energy. After consuming carbohydrates, they are absorbed into our body as monosaccharide, or sugars. In response our blood sugar levels normally rise after consuming carbs. This increase in blood sugar causes insulin secretion from the pancreas. Insulin tells our body’s cells that now is a good time to store extra energy. One storage form of this energy is fat.

In a thin person this process is later reversed, when we have gone some time without eating. Insulin levels fall, and an antagonist hormone triggers the breakdown of stored fat into blood sugar. A problem occurs in individuals who chronically trigger insulin releases through frequent eating of refined carbs. In these cases, our cells build up a tolerance to insulin, just like they would to any drug. They become “resistant” to its effects. The increased circulating levels of insulin make it impossible for cells to breakdown the stored fat into energy. In this way, chronic consumption of refined carbs is thought to cause fat gain. Eating fewer calories would not reverse this process, as the fat cells are being given the hormonal message not to breakdown their stored fat. This is of course just a narrative, and only describes one of many ways in which food affects our hormones. The details don’t matter for us however, it is enough to recognize that food and hormones are interdependent.

A further complication with the ubiquitous “don’t eat more calories than you burn” recommendations is that not all the food that we eat is actually “burned.” When caloric density of foods is determined, the food is burned completely. This caloric value represents that heat energy released if all of the potential food energy in the food was turned to heat. Some foods, notably the carbohydrates, have their energy utilized by our bodies entirely. Other do not. Proteins are not entirely utilized for energy. Instead of undergoing complete combustion, much of our protein intake is used to replace the biologic structures and enzymes which are degraded on a daily basis. Fats are also used to replace biomolecules, such as hormones and cell membranes. Every time a fat or protein in a food is used to replace biomolecules, rather than being combusted to yield its energy content, the effective calorie content of that food is reduced. Exact measurement of the proportion of fat and proteins which are actually combusted for energy is difficult, and the process is dynamic.

The consequence of this is that caloric content of foods according to a product labels are not valid. They do not accurately represent the energy we burn from those products. They are precise, but not valid – in other words they are precisely wrong.

Counting calories is new. It is generally unpleasant and unaesthetic. There is no evidence that it benefits our health, and is entirely unnecessary and probably harmful to healthy living. Furthermore, not all calories are equally consequential for health and weight maintenance. Eating until you are full is the ancient and traditional way. It works well if you balance it out with periods of fasting, such as those imposed by traditional environments or religion, and you eat real foods and don't eat modern food-like substances.

School lunches

We feed them food that tastes like insanity. It's insanity, our food. You should be able to give a kid an apple and they go, "Oh, thank you. I love apples." Kids can't even taste—apples are like paper to them, because we fill them—we *force them* to eat—people *force their kids* to eat fast food! I was in this hamburger—this woman is just shoving french fries— She's like, "Eat it!!" The kid's like, "Mom, it's salty. It hurts. I can't eat any more. "Shut up! Have a soda!" We give them MSG, sugar, and caffeine. And *weirdly*, they react to those chemicals. And so they yell "Aaaaah!!" and then we hit them. What fucking chance does a kid have? We pump this stuff in there "Aaaaah!!" "Shut up! Stop it! Why are you like this?" "Cause I haven't had actual nutrition in eight years, mom. I'm dehydrated. Give me water. Pepsi is not water. Give me a glass of water. I'm dying. I have sores on my tongue all the time..

((Louis CK))

The destiny of nations depends on how they nourish themselves.

Brillat-Savarin

This is a good time to recall the "secular trend" in adult height – the gradual increase in height among adults over the last 400 years, corresponding to improvements in living conditions. One of the major improvements in living conditions came in the form of improved nutrition. Improved nutrition is more than just increased calories. But there is no doubt that calories are essential for growth! The bodies of the wealthy classes have traditionally been taller, more robust, and less diseased, partly because of their increased caloric consumption. The value of calories for growth and development is still true today. Targeting low-calorie diets at growing children and women of childbearing age to fight obesity has three major negative consequences. First, it won't cause fat loss, because low-calorie diets don't work. Second, it withholds calories essential for growth and development from children and gestating fetuses. And third, the "importance" of low calorie diets seeps into the public consciousness, and even individuals of normal weights may adopt these behaviors.

The pervasive belief in the value of low-calorie diets has already affected our national school lunches for the worse (if that is even possible, and as if we needed another reason to avoid public schools). In fact, the understanding of the role of calories and fat in the obesity epidemic is so

jumbled in the public consciousness that Michelle Obama's sincere beliefs are indistinguishable from stand up comedy.

We've all read the articles, seen those documentaries. It's the same message. Look **McDonald's is really bad for you. It's very high in fat and calories** and we don't even know where the meat comes from. And we're like, that's disgusting.

Jim Gaffigan

The reality is that kids are spending 1/3 of their time at school. We don't have control over what you eat at school. **If they go to school and eat a lunch that is loaded with calories and fat then all of the efforts that we try to instill at home, it gets knocked off a little bit.** And many kids do not have any access to physical education in the schools.

Michelle Obama

Sadly they are both wrong. The *White House Task Force on Childhood Obesity Report to the President*, 2010, describes the state of public school lunches, and plans for future improvements.

In the 2004-05 school year, although most school meals were consistent with meal pattern requirements and provided most key nutrients, 93-94% of meals failed to meet all nutritional standards, primarily due to not meeting standards for fat, saturated fat, or calories...In about 90% of all schools nationwide, a student had opportunities to select low-fat lunch options, but in only about 20% of all schools did the average lunch actually selected by students meet the standards for fat... The Institute of Medicine recently provided recommendations for updated nutrition standards consistent with the 2005 Dietary Guidelines. Those recommendations include increasing the amounts of fruits, vegetables and whole grains; reducing the amount of sodium and saturated fat provided; and setting a minimum and maximum number of calories for school meals.

Most schools fail to meet these pseudo-scientific "requirements" because the kids ate too much. But don't worry, top government officials are hard at work making sure that hungry growing children do not eat "too many calories" or "too much fat." Michelle Obama's *Let's Move!* advocates limits on the allowable calories from fat, carbs, and protein in a lunch. Instead of living up to legitimate goals of improving the types of foods in school lunches, perhaps by hiring real chefs to *cook* real food for America's children, these limits have simply caused schools to offer *smaller portions* of the same old "food."

/u/Wisconski 2221 points

A lot of people are looking at this wrong. It's not so much about the look of the food. Michelle Obama's lunch program is meant to bring healthier foods to schools, but instead kids are just getting really small portions. So some schools, especially in Wisconsin, where I believe this all started, are protesting because they're not getting 'healthier' food, they're just getting really small portions of food.

By shrinking portions to meet bogus standards, we have institutionalized food deprivation for the segment of our population who needs the calories most. Children are aware of this, and use Michelle Obama's twitter #healthylunch ironically to show the national disgrace they are served.



Hunter Whitney @huntwhitney4 [Follow](#)
Had a very [#healthylunch](#) today. The apple definitely made up for the "mystery mush" [#ThanksMichelleObama](#)
6:30 PM - 13 Nov 2014
600 RETWEETS 477 FAVORITES



Hunter Whitney @huntwhitney4 13 Nov
Had a very [#healthylunch](#) today. The apple definitely made up for the "mystery mush" [#ThanksMichelleObama](#) pic.twitter.com/RWCnQRCxJK

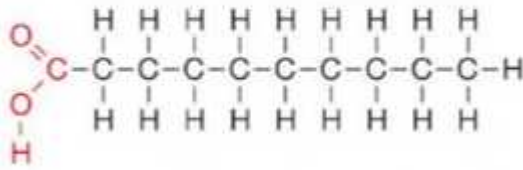


Steve Etienne @1Oyster1 [Follow](#)
[@huntwhitney4](#) looks like floor sweepings mixed into fructose
5:00 PM - 20 Nov 2014
5 RETWEETS 20 FAVORITES

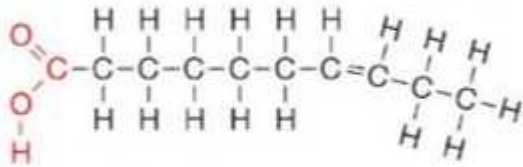
Even if it were true that *all* school children are fat, decreasing the calories in school lunches would not fix the problem. Kids, even fat kids, need calories to grow. The problem in fat children is that the *types of food* they eat make it impossible for their body to metabolize their stored fat. Different foods, not less food, is the answer. That our public schools feed children the type of food that makes them fat, but then not feed them enough calories to grow is a tragic irony. If you have a kid in public school, don't make her go. But if you must, send her with a packed lunch.

Lack of food helps explain a lack of energy in the children, and this, combined with medication for the boys, is probably why American public schools can continue to decrease recess and gym time. This problem of a lack of food in school lunches will not be solved with vitamin fortification, daily multivitamins, or supplements, none of which have any real evidence in their favor.

Saturated



Unsaturated



A Rehash of the Corroborative Evidence Against Modern Healthy Lifestyle Practices – Part 3, Fat

Posted on [admin](#) Posted in [Book](#)

Eat Mostly Fat

Fat is the most valuable food known to man.

John Yudkin

Of all inhabited cities under the sun and stars of heaven, there was none that I so much respected as Ilius with Priam and his whole people. Equitable feasts were never wanting about my altar, nor the savour of burning fat, which is honour due to ourselves.

Zeus, Illiad, Homer / Butler, circa 800 BC

Foods dear to those in the mode of goodness increase the duration of life, purify one's existence and give strength, health, happiness and satisfaction. Such foods are juicy, fatty, wholesome, and pleasing to the heart.

Bhagavad Gita, circa 400 BC

For the reasons we described in the previous section, I would classify “low calorie diets are healthy and help us lose weight” as the ultimate diet myth. A close runner up is the myth that “low fat diets are healthy and help us lose weight.” By now nearly everyone is vaguely aware that low fat

recommendations were never really based on solid evidence. Even *Time* magazine has published articles about how fat has been unfairly demonized.

For decades, it has been the most vilified nutrient in the American diet. But new science reveals fat isn't what's hurting our health.

Ending the War on Fat, Time, 2014.

Ironically, we did not need science to tell us that fat is safe in the first place. Traditional practice, and a lack of high quality evidence to the contrary was sufficient. If any diet myth were to be considered “busted” it should be the low fat myth. However, the legacy of low fat lives on – in supermarkets, hospitals, nutritionism, and in the public consciousness.

Part of the problem is an inability for people to correctly identify the components of modern diets that actually *do* make us fat (modern, refined, value-added “foods,” especially sweets). Generalized confusion of about what makes us fat is rampant. I imagine that lobbying interests prevent the USDA from being explicit about what sorts of foods actually make us fat. Luckily, many figures outside of government have converged on the same conclusions about fat. There is an ever increasing list of books promoting high-fat nutrition.

What is the narrative in favor of high fat nutrition? Let's start by explaining macronutrients.

Nutrients are divided into two groups, the “macronutrients” and the “micronutrients.”

Micronutrients are vitamins and minerals, essential for health, but not broken down for energy in the body. Macronutrients on the other hand, can be broken down for energy in the body. There are four major macronutrients: fat, carbohydrates, protein, and alcohol. These macronutrients are where our calories come from. In our bodies, these macros are broken down into their components, and then absorbed:

Carbohydrates → Monosacharides “4 Calories per gram”

Proteins → Amino Acids “4 Calories per gram”

Fats → Fatty Acids “9 Calories per gram”

Alcohol is already its monomer “7 Calories per gram”

As we discussed, some of the fatty acids and amino acids we absorb are utilized in necessary metabolic processes, or for body repair or building. Carbohydrates and alcohol are typically utilized solely for energy. Approximate values of calories per gram are listed. As you can see, fat has more than twice as many calories per gram than carbs or proteins. This naive observation, along with the “calories make you fat” and “a calorie is a calorie” beliefs, led in part to the vilification of fats as a source of too many calories. In spite of these beliefs, these caloric values per gram are not practically useful in dieting for reasons discussed more fully in the previous section – especially that these values are calculated from complete chemical combustion of the food, and our bodies do not do that.

Ultimately, macronutrients are the source of our energy. If we ignore alcohol and nucleic acids, then 100% of our dietary calories must come from carbs, fats, and protein. Eating a high proportion of our daily calories from proteins alone is unsustainable because it leads to metabolic problems in the kidneys and liver. The majority of our calories must therefore come from either fats, carbs, or some

combination of those two. Because proteins will always make up a minority of our total calories, fats and carbs must “compete” for the majority. Therefore, a low fat diet is necessarily a high carbohydrate diet, and vice versa.

This brings us to the first problem with the low-fat diet – a low fat diet must be a high carbohydrate diet. Now I do not necessarily mean that fats are good and carbs are evil. Making the trade off between fats and carbs would likely not be of much consequence in a traditional cuisine context. In fact, these sorts of macronutrient changes likely occurred on a seasonal basis. It would also not be a big deal if we were talking about exchanging dietary fat from margarine and shortening for dietary carbohydrates from fresh fruit, vegetables, yams, squash, sprouted grains, fermented beans, etc. But in our modern world, in the majority of cases, relatively benign fats are being exchanged for processed and refined carbs – and our health suffers. A 2010 study found that replacing even the “dangerous” saturated fats with refined carbs increased the risk of heart attack.

Saturated Fat and Health

Tertiles of dietary GI ²	All participants		Women		Men	
	Median dietary GI (80% central range)	HR (95% CI)	Median dietary GI (80% central range)	HR (95% CI)	Median dietary GI (80% central range)	HR (95% CI)
Carbohydrates with low-GI values (first tertile)	82 (77, 85)	0.88 (0.72, 1.07)	80 (75, 82)	1.17 (0.80, 1.71)	84 (79, 86)	0.83 (0.65, 1.04)
Carbohydrates with medium-GI values (second tertile)	88 (86, 90)	0.98 (0.80, 1.21)	85 (84, 87)	0.80 (0.54, 1.18)	89 (87, 91)	1.08 (0.84, 1.38)
Carbohydrates with high-GI values (third tertile)	93 (91, 98)	1.33 (1.08, 1.64)	91 (88, 96)	1.10 (0.75, 1.63)	94 (92, 98)	1.34 (1.04, 1.71)

“This study suggests that replacing SFAs with carbohydrates with low-GI values is associated with a lower risk of MI, whereas replacing SFAs with carbohydrates with high-GI values is associated with a higher risk of MI.”

Marianne U Jakobsen

American Journal of Clinical Nutrition, 2010

Intake of carbohydrates compared with intake of saturated fatty acids and risk of myocardial infarction: importance of the glycemic index

The carbs that we adopt when we begin a low-fat diet are the very carbs so likely to cause obesity and the constellation of associated metabolic diseases. In our modern environment, a shift from fats to carbs tends to be associated with increased obesity, and worse health. But the primacy of fats as the fundamental nutrient in a healthy diet goes much further. An interesting narrative for the justification of high fat diets for humans has to do with our place in the animal kingdom. It turns out that most wild mammals eat a diet primarily of fat. Surprisingly, this includes both herbivores and carnivores.

At first blush this seems obviously untrue. After all, we know cows eat grass, sheep eat grass, and gorillas eat leaves; and grass and leaves contain essentially no fats. But there is more to the story than meets the mouth. Nutritional analysis of leaves or grass would demonstrate that these are mostly water. The dry matter contents of leaves or grass is some carbs, some protein, a lot of fiber, and no fats. How then can herbivores eating grass or leaves be eating a high fat diet? The story becomes more complicated once the foods enter the digestive tract. Water, proteins, and carbs are absorbed by the body. Fibrous matter, however, typically cannot be absorbed. Herbivores have specially evolved digestive systems which allow adequate time and space for intestinal bacteria to “ferment” the fiber. This bacterial fermentation chemically transforms the indigestible fiber into short chain fatty acids – fat. To add to the irony, these fats are of the saturated variety. So, contrary to our intuition, the leaf and grass eating herbivorous mammals really end up getting most of their food energy from saturated fats.

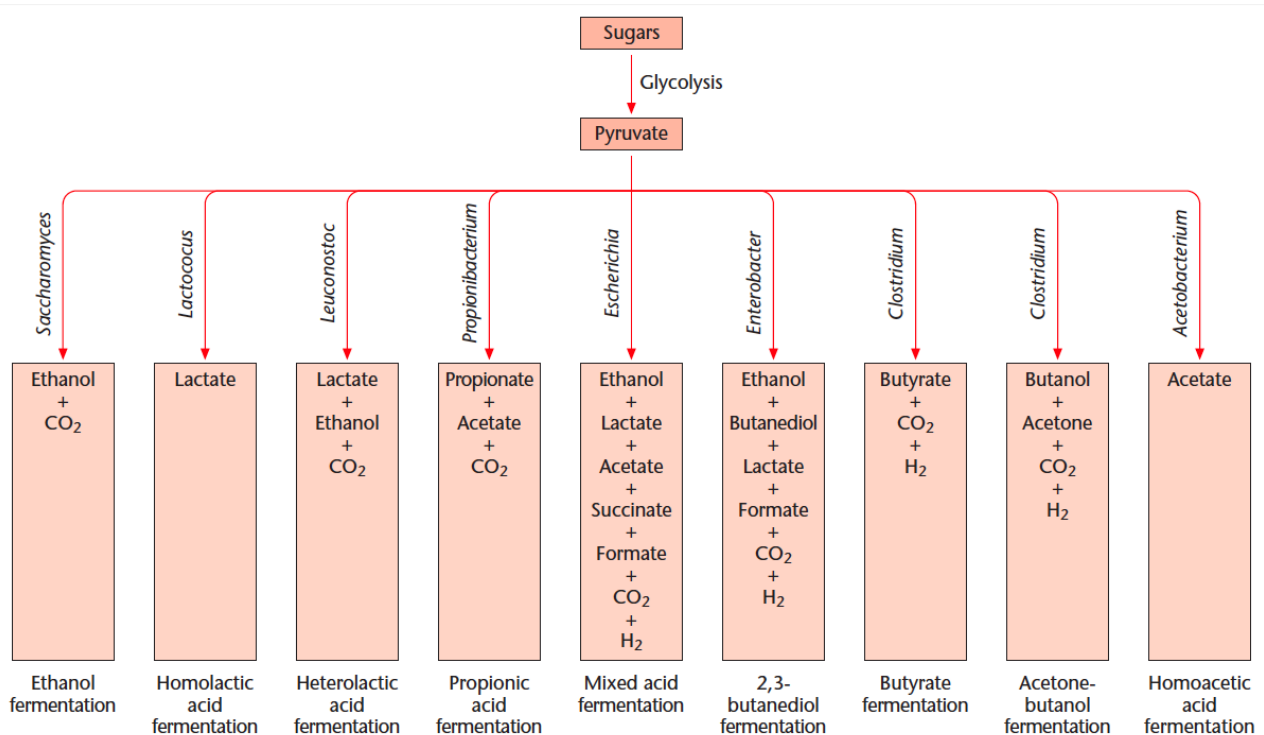


Figure 2 Major pathways for fermentation of sugars including organisms involved and end products formed.

To a lesser extent, this same process of bacterial “fermentation” occurs in the human GI system as well. Doctors often discuss this in the context of dietary fiber. It is well understood that fat intake stimulates GI motility, and can be used to treat constipation as well. Most doctors insist that the mechanism by which fiber relieves constipation is through stretching the colon, or through a mechanical scraping action, rather than through the fat from fermentation causing GI motility. In reality, the elderly have constipation because all of the fat has been removed from their food. Agribusiness marks-up and sells old people fiber (literal chaff), which, through a convoluted process, simply replaces the gut-stimulating fat that was removed from “food” in the first place!

Carnivores, of course, eat meat. Muscle meat does have some fat in it. But it is worth noting that, carnivores preferentially consume the fattiest parts of the animal. Brains, eyes, viscera, and bone marrow are especially prized. This is true among indigenous humans as well.

An important and highly relished article of diet has been baked cod's head stuffed with chopped cod's liver and oatmeal.

Nutrition and Physical Degeneration, Price, 1939

During a salmon run, grizzly bears will eat the fatty brain and skin of a salmon, but discard the flesh – the very flesh we pay \$30 a pound for. Indeed even the Alaskan natives would fish augment their salmon flesh with additional fat before consumption:

As each piece of fish is broken off, it is dipped in seal oil. I obtained some seal oil from them and brought it to my laboratory for analyzing for its vitamin content. It proved to be one of the richest foods in vitamin A that I have found.

Nutrition and Physical Degeneration, Price, 1939

Lions and wolves start off by feeding on the internal organs such as the heart, liver, and lungs.

Meanwhile the Trojans kept on flying over the middle of the plain like a herd of cows maddened with fright when a lion has attacked them in the dead of night—he springs on one of them, seizes her neck in the grip of his strong teeth and then laps up her blood and gorges himself upon her entrails—even so did King Agamemnon son of Atreus pursue the foe, ever slaughtering the hindmost as they fled pell-mell before him.

Iliad, Homer / Butler, circa 800 BC

Much of the fat of these organs is saturated – the same fats that doctors and nutritionists advise against our eating. Price himself tells a story about how captive lions were discovered to prefer the viscera; when zoo keepers began feeding lions organ meat, they began to reproduce much more effectively. Consider the example below describing the hunting practice of wild wolves.

Wolves are not fed by meat alone... To grow and maintain their own bodies, wolves need to ingest all the major parts of their herbivorous prey. The liver of prey may be the most important organ for wolves to eat, based on the variety of vitamins and minerals it provides... Bones from prey are required by wolves as a major source of calcium and phosphorous for their own skeletons. Bones, in fact, are a surprisingly well-balanced food for canids... Brain tissue contains the highest amount of polyunsaturated fatty acids, some of which are required for body maintenance. Thus brains of prey are inevitably eaten...

Wolves: Behavior, Ecology and Conservation, Mech and Boitani, 2010

Wild animals rely on the fat of prey for both macronutrients, and for the fat soluble micronutrients. Not only do most wild herbivores and carnivores consume much of the calories in the form of fat, but so do “wild” humans. Without sufficient fat, carnivorous humans can suffer from excessive dietary protein, a condition known as “rabbit starvation.”

The groups that depend on the blubber animals are the most fortunate, in the hunting way of life, for they never suffer from fat-hunger. This trouble is worst, so far as North America is concerned, among those forest Indians who depend at times on rabbits, the leanest animal in the North, and who develop the extreme fat-hunger known as rabbit-starvation. Rabbit eaters, if they have no fat from another source-beaver, moose, fish-will develop diarrhea in about a week, with headache, lassitude and vague discomfort. If

there are enough rabbits, the people eat till their stomachs are distended; but no matter how much they eat they feel unsatisfied. Some think a man will die sooner if he eats continually of fat-free meat than if he eats nothing, but this is a belief on which sufficient evidence for a decision has not been gathered in the North. Deaths from rabbit-starvation, or from the eating of other skinny meat, are rare; for everyone understands the principle, and any possible preventive steps are naturally taken.

Vilhjalmur Stefansson

They lived in a country in which grizzly bears were common. Their pelts were highly prized and they captured many of them with baited pitfalls. Their knowledge of the use of different organs and tissues of the animals for providing a defense against certain of the affections of the body which we speak of as degenerative diseases was surprising. When I asked an old Indian, through an interpreter, why the Indians did not get scurvy he replied promptly that that was a white man's disease. I asked whether it was possible for the Indians to get scurvy. He replied that it was, but said that the Indians know how to prevent it and the white man does not. When asked why he did not tell the white man how, his reply was that the white man knew too much to ask the Indian anything. I then asked him if he would tell me. He said he would if the chief said he might. He went to see the chief and returned in about an hour, saying that the chief said he could tell me because I was a friend of the Indians and had come to tell the Indians not to eat the food in the white man's store. He took me by the hand and led me to a log where we both sat down. He then described how when the Indian kills a moose he opens it up and at the back of the moose just above the kidney there are what he described as two small balls in the fat. These he said the Indian would take and cut up into as many pieces as there were little and big Indians in the family and each one would eat his piece. They would eat also the walls of the second stomach. By eating these parts of the animal the Indians would keep free from scurvy, which is due to the lack of vitamin C. The Indians were getting vitamin C from the adrenal glands and organs. Modern science has very recently discovered that the adrenal glands are the richest sources of vitamin C in all animal or plant tissues.

Nutrition and Physical Degeneration, Price, 1939

As we can see, the majority of mammals ultimately use fat as the source of most of their calories. However, there are some mammals who may not consume most of their calories in fat, including some primates. Frugivores are animals who eat a large proportion of fruit. Fruit is rich in simple sugars, and these are absorbed directly and used for energy. They are not converted to fat through bacterial fermentation. In this sense, frugivores may be said to eat a high carbohydrate diet. Bonobos, one of our closest animal relatives, are frugivores. However, there are three major differences between the high carbohydrate diets of frugivores, and those of modern humans.

First, wild frugivores consume their carbs from whole wild fruits. Secondly, they consume fruits only on a seasonal basis. They will gorge during the high fruit season, and be left eating whatever they can find in other months. Even frugivores do not typically consume high carbohydrate diets monotonously. Thirdly, frugivores typically eat bark, seeds, sprouts, leaves, reeds, rinds and pith. This, in addition to insects and other foods greatly reduces the proportion of carbohydrate in the diet, as most of this fibrous matter is fermented to fats. We can therefore see that even those rare wild animals who consume diets with the highest proportion of carbohydrates do not do so exclusively or monotonously.

It is sometimes suggested that humans ought to follow our common ape evolved tendency to eat leaves and fruit. This is a reasonable idea consistent with our guiding philosophy.

From the earliest times to about 5 million years ago our ancient primate ancestors had been living exclusively in the deep tropical forests of Southern Africa. Here, for about twenty million years, evolution had superbly developed their fruit spying and picking skills to a degree that their numbers increased to taxing the limited food resources... It is hypothesized that it is still the healthiest diet also for Man because for about twenty million years it has been eaten by the common ancestors of Man and Chimp... Consequently, all are less healthy and moreover they are the less healthy the later they were adopted. Approximating the Chimp diet by suitably supplemented supermarket items may give us the best of both worlds.

Hans Georg Dehmelt

However, unlike our ape cousins, we throw out the tough parts of leaves, shoots, roots, and rinds. Our bodies simply cannot deal with these. We cannot extract many calories from vegetables, due to the evolved changes in our digestive system. While it is possible to get the majority of calories we need from fruit, this ignores the facts that fruit has traditionally been seasonal, our primate cousins eat the fibrous matter which is later turned into fats by bacterial fermentation, our modern fruits are unusual in their sugar content and lack of fibrous matter, and that sweet, acidic fruit is not very good for our teeth. Even the very professors who claim that early man did eat most fruit point out that “fruit” doesn’t mean what we get at the supermarket.

No one would expect to raise a first-rate melting pear from the seed of the wild pear, though he might succeed from a poor seedling growing wild, if it had come from a garden-stock. The pear, though cultivated in classical times, appears, from Pliny’s description, to have been a fruit of very inferior quality.

Origin of Species, Darwin, 1859

Dr Walker notes, however, that a fruit diet need not resemble what Americans consider a fruit diet – oranges, plums, apples, bananas and other extremely sweet and soft items. Hundreds of plants produce fruits that are tougher, more substantial foods. The pod of the acacia tree is one, for example, that is quite common in Africa today. It grows in lightly forested regions close to the grasslands usually considered to have been the home of early hominid.

Teeth Show Fruit Was The Staple, NYT, May 15 1979



Acacia tree pods - they don't look much like fruit to me.

Because our calories have to come from somewhere, and our digestive systems are incapable of fermenting the fibrous plant matter of leaves and grass into calorie rich fats, the only unrefined, naturally occurring foods with enough calories to keep humans alive are fruit (including starchy tubers like sweet potatoes), and meat (including fat, fish, eggs, dairy). Our evolved food preferences can only function correctly if we try to mimic our ancestral environment. If we consume *real food*, the fats and proteins we eat are essentially the same as those humans evolved eating. The fat on our steak is approximately 100% fat, the same as the on roast mammoth. But with carbohydrates the story is different. Even some foods that are somewhat traditional, like honey, maple syrup, and flour provide a super-normal carbohydrate exposure that our bodies have not evolved to handle. Prehistoric sources of sweets would be rare, seasonal, and far less concentrated than our modern versions. Instead of the “100% sweet” wild seasonal fruits, soda, sugar, candy, or NutriGrain bars may be “1000% sweet.” Worse still is the omnipresence of sweeteners and refined flours in most foods made outside of the home. Part of the reason why we should eat fat is because many of our carbohydrates are so pernicious.

But the most compelling case against the low-fat recommendations come from the fact that there was never any consensus in the medical community about their benefits in the first place. Essentially, misinformation snowballed, eventually becoming enshrined in government recommendations. The amazing story of how this unfolded has been told by others, notably in (((Gary Taubes)))’ *Good Calories, Bad Calories*.

Today the low fat dogma has come under heavy criticism, and for good reason. If there was any doubt remaining, a 2001 report in the British Medical Journal, *Dietary fat intake and prevention of cardiovascular disease: systematic review* lays the issue to rest. A systematic review is a study of studies. This review looked at major studies that investigated the role of fat intake on heart disease and mortality. The result of the study are below.

Pooled results of dietary fat trials indicate that reduction or modification of intake of dietary fat reduces the incidence of combined cardiovascular events by 16% (rate ratio 0.84; 95% confidence interval 0.72 to 0.99) and cardiovascular deaths by 9% (0.91; 0.77 to 1.07). **No effect was seen on total mortality.**

The authors also report that decreased fat consumption has a slight decrease in heart related disease and deaths (as opposed to total mortality) . But importantly, they note that:

Exclusion of data from the Oslo diet study attenuated the effects on cardiovascular events. In this trial participants in the intervention group were supplied with oily fish, in addition to dietary advice. Oily fish, which is rich in omega 3 fatty acids, seems to have independent beneficial effects, so the benefits seen in this trial may have been due to the fish oils and not to cholesterol lowering or alterations in other dietary fats.

In other words, the slight reduction of heart related disease and deaths they found may be due to the increase in fish oils, rather than the decrease in fat consumption. So slight is the reduction that, even if it were true, it ought to be of no practical importance in our decision making.

This is a case of using “Relative Risk” to exaggerate the purported benefit of an intervention. The absolute impact of the interventions was (fat group / low fat group), for total mortality 692/699, and for cardiovascular disease mortality 419/393. This is out of 15096 / 15806 total person-years per

arm. In other words, even if we conceded that this decrease in CVD deaths is due to low fat, and not fish oil supplementation, the absolute risk reduction of CVD mortality was 0.29%. Not a matter of practical importance.

Additionally, and even more importantly, “No effect was seen on total mortality.” This is true despite a 9% increase in cardiovascular deaths. This can only mean that this increase was offset by a corresponding decrease in deaths from all other causes! In other words, even if decreasing fat intake does slightly decrease heart disease deaths (which is doubtful), it does so while *increasing* deaths from other causes. A lack of effect on total mortality means that decreasing fat consumption does not increase one’s risk of death. If there is any negative impact of fat on health (which I doubt) it must be very slight, as many studies have been looking for this effect for years, and it is still dubious.

A different meta-analysis from 2015 titled *Evidence from randomised controlled trials did not support the introduction of dietary fat guidelines in 1977 and 1983*. The guidelines being referred to include the 1977 *Dietary Goals for the American people*:

Increase consumption of complex carbohydrates and naturally occurring sugars; and reduce consumption of refined and processed sugars, total fat, saturated fat, cholesterol, and sodium.

and the 1983 *Discussion Paper on Proposals for Nutritional Guidelines for Health Education in Britain*:

The problem then becomes one of achieving both a reduction in fat intake to 30% of total energy and a fall in saturated fatty acid intake to 10%

These guidelines are the antecedents to our contemporary government issued diet recommendations, including *MyPlate*.

The 2015 meta-analysis examined the best quality evidence regarding low fat and low saturated fat diet (which will be explored in greater detail in the next section) that existed at the time the US and UK guidelines were developed. Their results are derived from pooled data of all the relevant randomized controlled trials:

The risk ratio (RR) for all seven studies was 0.996 (95% CI 0.865 to 1.147). The overall effect measurement lies on the line of no effect. There was no statistically significant relationship between dietary interventions and **all-cause mortality**.

The RR for all seven studies was 0.989 (95% CI 0.784 to 1.247). The overall effect measurement lies on the line of no effect. There was no statistically significant relationship between dietary interventions and **heart deaths**.

In other words, at the time when these guidelines were released, not only was there no evidence that low fat, low saturated fat diets are safer, but the best quality existing evidence said that low fat, low saturated fat diets were *not* safer. To quote the article:

From the literature available, it is clear that at the time dietary advice was introduced, 2467 men had been observed in RCTs. No women had been studied; no primary prevention study had been undertaken; no RCT had tested the dietary fat recommendations; no RCT concluded that dietary guidelines should be introduced. It

seems incomprehensible that dietary advice was introduced for 220 million Americans and 56 million UK citizens, given the contrary results from a small number of unhealthy men. The present review concludes that dietary advice not merely needs review; it should not have been introduced.

An exchange between Dr Robert Olson of St Louis University and Senator George McGovern, chair of the Dietary Committee, was recorded in July 1977. Olson said “I pleaded in my report and will plead again orally here for more research on the problem before we make announcements to the American public.” McGovern replied “Senators don’t have the luxury that the research scientist does of waiting until every last shred of evidence is in.” There was best practice, randomised controlled trial, evidence available to the dietary committees, which was not considered and should have been. The results of the present meta-analysis support the hypothesis that the available RCTs did not support the introduction of dietary fat recommendations in order to reduce CHD risk or related mortality.

This McGovern quote is a beautiful illustration of the the pervasive misunderstanding of the proper role of conservatism in making important decisions. *Of course* McGovern wanted what is best for the American people, but if we are going to design a national health guideline that goes against thousands of years of traditional practice, we must demand every last shread of evidence.

So little trouble do men take in the search after truth; so readily do they accept whatever comes first to hand.

History of the Peloponnesian War, Thucydides

Now we can see that Michelle Obama has been duped when she says,

The reality is that kids are spending 1/3 of their time at school. We don’t have control over what you eat at school. **If they go to school and eat a lunch that is loaded with calories and fat then all of the efforts that we try to instill at home, it gets knocked off a little bit.** And many kids do not have any access to physical education in the schools.

Dietary fat is not the cause of the obesity epidemic, and it is not bad for our health. I want to end this section with a reminder that high fat is good for us only when it comes from *real food*. Margarine, shortening, and “vegetable oils” have no place in a healthy diet. The ubiquity of these fake-fats in restaurant and processed foods is all the more reason to treat these edibles with suspicion.

Eat Saturated Fat

We saw in the previous section that there is no basis for the persisitent myth that fat is unhealthy or makes us fat. On the contrary, fat will ultimately be vindicated, and ought to make up the majority of our caloric intake.

Some people recognize that fat is good for us, but have bought into another fat propaganda, that only the “unsaturated” plant based fats are healthy. Here is an example of this attitude from a reddit.com post:

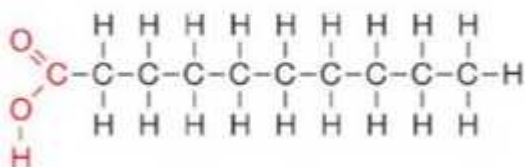
/u/JayGatsbyFan **Fat is not your enemy** – What you believe about fat is what advertising companies have made you believe. Low-fat does not mean healthy. You associate the word fat with being overweight, so that’s what makes you fat, right? Wrong. You’re going to want a lot of *healthy* fats in your diet. Healthy fats come from peanut/almond butter, nuts, olive oil,, avocados, and seeds.

What is informing this claim is another persistent myth about fat – the myth that saturated fat is bad for us. And while the fat myth in general has come under scrutiny, the *saturated fat* myth is still firmly clung to by medicos. The saturated fat myth is not so much about the foods that make us fat, but rather the foods that will cause cardiovascular disease later in our lives. This distinction is rarely clear in the mind of public figures, and so saturated fat is uniformly withheld from both growing children and the elderly alike out of fear and misinformation. Even if eating lots of saturated fat did cause early death (which it doesn’t), that is *not* a reason to fearfully withhold it from our children!

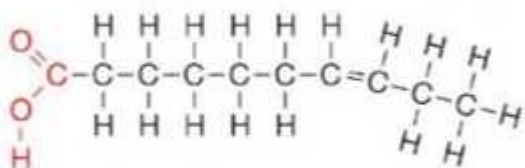
What is saturated fat? Things are ultimately made up of elements. These elements form connections with one another in chemical bonds. The elements and their connections determine the properties of materials. The chemicals that make up living things happen to form particularly complex connections between many elements. This is made possible by the physical property of the element carbon. Carbon just happens to be able to bond to up to four other elements at a time. This unusual ability of carbon has led to it being fundamental in the construction of complex biomolecules. Along with oxygen, hydrogen, and nitrogen, carbon makes up the majority of “organic” chemicals. This is why science fiction often refers to “carbon-based lifeforms.” Carbon is unique among elements in its ability to form complex molecules.

“Saturated” is a chemical term that refers to how different atoms are bonded to carbon. In a “saturated” carbon atom, all four of the four potential sites for other atoms to bond are occupied. In a “unsaturated” carbon, less than four other atoms are bound to the carbon.

Saturated



Unsaturated



It turns out that patterns of bonding are fundamentally related to the physical properties of material. Fat as a bulk material contains a tremendous number of these chains of carbons. In saturated fats, these chains are fairly straight, allowing them to pack together more easily. In unsaturated fats, these chains are kinked, decreasing their ability to pack neatly together. In order for a material to melt, the molecules within it must lose the neat organization of a regular packed arrangement, and become arranged more sporadically. The greater the inherent tendency of a molecule to engage in neat packing due to its shape, the greater the energy required to cause it to lose this regular arrangement and melt. In the context of fats and oils, this energy comes from the ambient temperature. Unsaturated fats, such as corn oil, are liquid at room temperature. Saturated fats, such as lard or tallow, are solid.

The fact that saturated fats are solid at room temperature and unsaturated fats are liquid provided a visual illustration that is so profound that it has been used to mislead doctors into thinking they know something for over fifty years. Doctors are taught – to this day – that the tendency for saturated fats to be solid at room temperature “is why saturated fats clog our arteries.” This is the ultimate in naive storytelling, as firstly, it is empirically not true, and secondly, it makes a gross oversimplification about our vascular system. Our Medicos are reasoning on par with George Costanza who famously said,

It’s all pipes, what’s the difference? I’ll call a plumber right now!

This is why, if we pour bacon grease down the drain, we are told to run the hot water – otherwise the pipes will clog! But the misrepresentation of the chemical properties of fats as the cause of heart disease is only the beginning of the story.

Let’s consider a popular recommendation about saturated fat intake. The American Heart Association is a good example of a major medical organization that pushes the saturated fat myth. According to the AHA’s diet and lifestyle recommendations,

To lower cholesterol, reduce saturated fat to no more than 5 to 6 percent of total calories. For someone eating 2,000 calories a day, that’s about 13 grams of saturated fat.

That is less than two tablespoons of butter per day, assuming you eat no other saturated fat.

Here we can introduce the next theory about why saturated fats cause heart disease. Theoretically, saturated fats increase our CVD risk by raising cholesterol, which in turn causes heart disease. Some parts of this narrative have some truth, but the conclusions drawn from this line of reasoning are faulty. And again, diets beneficial for longevity may differ from diets beneficial for child development. As we will see in the next chapter, cholesterol is essential for growth and development, especially for the brain and for sexual maturation.

In recent years, there have been high-profile studies published that conclude that prescriptions against consuming saturated fat are not warranted. True-believers have responded to this by suggesting that lobbying pressures from the meat and dairy industry have pushed the popularization of junk science into the mainstream. It is certainly true that food industry lobbying can change public perception. But these anti-fat apologists forget that the grain industry creates opposite pressures. After all, the AHA sold out to cereal companies, and is paid to have its approvals printed on boxes.



I think the image of the box of *Honey Nut Cheerios* is an allegory of a primary care medico at a routine “check up.” Buzz is smiling, auscultating an asymptomatic heart, telling you to lower your cholesterol, lower your dietary fat, and increase your dietary fiber, while recommending cheap processed grains and pointing the way with a honey dipper.

In writing these chapters, I asked around for the rigorous basis for the anti-saturated fat arguments. I was pointed to a website called nutritionfacts.org, with the slogan “The Latest In Nutrition Related Research.” I hope by now the reader can recognize why “the latest” in any form of research is not what we want for safety. The videos and articles about the dangers of saturated fat ultimately rested on a misunderstanding that is revealed in the comments of a anti-sat-fat apologist below:



Toxins NF Team → Richard Greyson · 14 days ago

The myth of the cholesterol myth is popular in the low carb blogosphere but does not stand up to [Nutritionfacts.org](http://www.nutritionfacts.org) presents peer reviewed research, not misconstrued opinions from authors trying to

"Serum cholesterol concentration is clearly increased by added dietary cholesterol but the magnitude is modulated by baseline dietary cholesterol. The greatest response is expected when baseline dietary cholesterol is low while little, if any, measurable change would be expected once baseline dietary cholesterol was > 200 mg/dL. Desiring maximal reduction of serum cholesterol by dietary means may have to reduce their dietary cholesterol level"

<http://ajcn.nutrition.org/cont...>

This study looked at 13,148 participants using an ultrasound to measure arterial wall thickness. "Arterial wall thickness increased with increasing intake of animal fat, saturated and monounsaturated fat, cholesterol and trans fat, and decreased with increasing intake of vegetable fat...the association between diet and wall thickness was in the same direction in all race-sex groups."

<http://aje.oxfordjournals.org/...>

Participants were put on an oat diet or 2 egg a day diet for 6 weeks. Those that ate eggs did not have their cholesterol raised, while those who ate oats had their cholesterol lowered. Does this mean egg cholesterol causes cholesterol? No, it just means that baseline cholesterol was already too high to begin with, as the average cholesterol was around 200.

<http://www.internationaljourn...>

A 2010 follow up study of the one above placed hyperlipidemic subjects (average total cholesterol > 200 mg/dL) into three groups: sausage and cheese muffin group, egg substitute group, or egg and muffin group. The sausage and cheese group did not have a significant change in lipid panel and both had unfavorable results from the brachial artery flow mediated dilation and sausage and cheese group caused endothelial dysfunction, a sign of inflammation. The egg and muffin group experience this arterial impairment and their cholesterol numbers actually dropped significantly in the follow up. Because the cholesterol was already high to begin with for the egg and muffin group, we should not judge the lipid panel.

<http://www.ncbi.nlm.nih.gov/pm...>

This list continues. It seems that he has provided incontrovertible evidence that dietary saturated fats increase cholesterol. The misguided assumption is that this means saturated fats are bad for us.

This illustrates the problem of using invalid endpoints in studies. Cardiologists place a lot of faith in the ability of blood lipid values to predict CVD risk. There is some truth to this, with the best predictor of cardiac risk being the ratio of HDL to Triglycerides. Most doctors, however, are hung up on the idea that "total cholesterol", or "LDL cholesterol" are strong risk factors for heart disease.

The best way to answer a scientific question is measure the things you actually want to know. For example, if you want to know whether eating lots of saturated fat causes heart disease, you would ideally measure saturated fat intake, and rates of heart disease. Unfortunately, this is not usually what is measured. This is because heart disease events and deaths are rare. It would take a lot of

participants and a long follow up to accumulate sufficient data. Instead saturated fat intake is measured against some marker of heart disease risk, commonly blood levels of LDL. The assumption is:

If \uparrow Sat Fat Intake \rightarrow \uparrow LDL **and** \uparrow LDL \rightarrow \uparrow Cardiovascular disease
then \uparrow Sat Fat Intake \rightarrow \uparrow Cardiovascular disease

Unfortunately this chain of causation, clung to by medicos, turns out not be so strong when the true factors in question, saturated fat intake vs CVD, are actually measured themselves.

This is a good time to recall the value of empiricism in medicine. We do not need to have any *understanding* of fat chemistry, cholesterol, arteries, heart physiology, etc. to address whether saturated fat causes heart disease. All we need to do is rigorously measure saturated fat, measure heart disease events, and come to a conclusion. The pre-existing theoretical “understanding” seems to be getting in the way here, as medicos cannot let go of what they “know” about how bodies work.

Below is a narrative that helps to explain the confusion of saturated fat and heart disease, but it is only for its interest value – narratives are unnecessary, and we ought to draw our conclusions from observed phenomena, rather than theories.

Narrative: Cholesterol is a single chemical, and is essential for many body functions. Cholesterol is oily, and therefore does not mix well with water. Our blood is mostly water. Because cholesterol cannot mix well in blood, it must be carried through the blood by special proteins call lipoproteins.

During the early days of cardiology, detailed blood analysis was impossible. Blood was drawn into a vial and centrifuged in order to separate the components by density. Lipoproteins come in different forms, and these forms show up in density bands on a vial of centrifuged blood. These bands can be isolated into “high density” HD and “low density” LD lipoproteins. It was eventually realized that LDL concentration in blood correlates with heart disease risk, while HDL concentration is inversely correlated. This test is still used today because it is simple, cheap, and can offer meaningful predictive information.

It is known that dietary cholesterol and saturated fat *do* increase blood levels of LDL. And so it was long assumed that these diets lead to increased heart disease risk. However, there is more to the narrative. Modern biochemical analysis has revealed that the low density band of lipoproteins isolated by spinning blood vials does not represent one biologically unique substance. LDL can be further classified into a number of subtypes, notably “buoyant” pattern A, and “small dense” pattern B. Blood concentrations of pattern B LDL correlate with CVD risk. But blood concentrations of pattern A LDL do not. In fact, pattern A LDL seems to be benign.

The irony in this narrative is that, while dietary saturated fat and cholesterol do raise blood LDL, *they preferentially raise the benign pattern A subtype*. In other words, they appear to have a “bad” effect on LDL, but really have no bad effect on the meaningful outcome of CVD, just as the empirical studies show. Furthermore, buoyant “pattern A” LDL, is associated with low levels of triglycerides in the blood, which, along with HDL, provide the best predictor of CVD risk.

We saw in the 2001 report in the British Medical Journal, *Dietary fat intake and prevention of cardiovascular disease: systematic review* that fat intake is not a cause of early death. In that same study, an analysis of saturated fat intake was performed. The effect of saturated fat intake on cardiovascular events was not statistically significant (confidence interval of the slope crosses zero), which in this context suggests that there is no effect.

Table 2 Effect of modification of dietary fat intake and serum cholesterol concentration on mortality and cardiovascular outcomes, results of meta-regressions performed

Outcome measure and test variable	Slope (95% CI)
Mortality*	
Total fat	0.15 (−0.009 to 0.039)
Serum cholesterol	0.297 (−0.141 to 0.734)
Cardiovascular events*	
Total fat	0.004 (−0.012 to 0.021)
Saturated fat	0.009 (−0.047 to 0.064)
Polyunsaturated fat	0.014 (−0.034 to 0.061)
Monounsaturated fat	0.167 (0.046 to 0.288)
Serum cholesterol	0.296 (−0.094 to 0.687)

*ln (rate ratio).

A 2010 report, *Meta-analysis of prospective cohort studies evaluating the association of saturated fat with cardiovascular disease*, found similar results:

The conglomeration of data from 16 studies with CHD as an endpoint and 8 studies with stroke as the endpoint showed no association of dietary saturated fat on disease prevalence after adjustment for other nutrients wherever possible.

Similar findings were echoed in another high profile study *Association of Dietary, Circulating, and Supplement Fatty Acids with Coronary Risk: a systematic review and meta-analysis*, published in 2014. The authors conclude:

Current evidence does not clearly support cardiovascular guidelines that encourage high consumption of polyunsaturated fatty acids and low consumption of total saturated fats.

And yet, the AHA and ACC guidelines maintain that saturated fats are very risky for us, on the basis of “Grade A” evidence.

2013 AHA/ACC Guideline on Lifestyle Management to Reduce Cardiovascular Risk[☆]

Table 5. Summary of Recommendations for Lifestyle Management

Recommendations	NHLBI Grade
Reduce percent of calories from saturated fat.	A (Strong)
Reduce percent of calories from <i>trans</i> fat.	A (Strong)

Nancy Houston Miller, RN, BSN, FAHA
 Van S. Hubbard, MD, PhD*
 I-Min Lee, MD, ScD
 Alice H. Lichtenstein, DSc, FAHA

Laura P. Svetkey, MD, MHS
 Thomas A. Wadden, PhD
 Susan Z. Yanovski, MD*

*Ex-Officio Members.

Why do the guidelines get this so wrong? It is at least in part because they are making the invalid assumption that increases in LDL due to dietary saturated fats and cholesterol necessarily correlates with increased risk. In fact, the empirical investigation contradicts this claim. Furthermore, when we removed saturated fats from our diet, we have to replace them with something. As we saw in the previous section, we often replace them with carbohydrate foods which actually increase the risk of heart attack!

Some people made aware of this controversy tentatively agree that saturated fat may not be harmful, but believe that more research is needed before we come to a decision. While I welcome more research (preferably not government funded), it is *not* needed to make a decision about eating saturated fats. On the contrary, more research would be needed to substantiate the claim “saturated fats are unhealthy.” This is the view that has been popular for the past 50 years despite a lack of evidence. In the absence of evidence, there is no reason to assume that a traditional and universal human practice like eating saturated fat is unhealthy. As always, we can safely go on following traditional practice *until high quality evidence shows it to be unhealthy* (which will never happen).

Subtle argument warning: I hesitate to add this in here because it may add confusion, but too bad. It *may* be true that diets high in saturated fat really do increase death from heart disease (and heart disease only) *slightly*. This is a legitimate point, and is still controversial. We simply do not know the answer for sure. A cardiologist might argue that saturated fats might increase CVD, so we better “play it safe.” However, a much more important question than “does saturated fat increase my risk of heart disease?” is “does saturated fat increase my risk of death or disease *from any source*?” This question we can confidently answer in the negative, on the basis of metaanalysis showing no link between saturated fat and total mortality. How can it be that something might increase our risk of heart disease and CVD death, but not increased our risk of total mortality? It seems that diets low in saturated fat increase the rates of other deadly diseases, notably cancer. In other words, a lifetime of careful avoidance of saturated fat may simply be trading a death from heart disease to a death from cancer.

If there really is an effect of saturated fat on heart disease then it must be small, since we have been looking for this correlation for fifty years and it is still controversial. As far as saturated fat intake and total mortality or health in general, there is likely no impact. Furthermore, all of these

discussions ignore the possibility that while saturated fat could slightly decrease longevity, it could greatly increase the development and quality of life of an organism. I suspect that our quibbling over a possible infinitesimal increased risk of eating saturated fats has robbed two generations of children of an essential nutrient for viriculture.

What About Trans Fats?

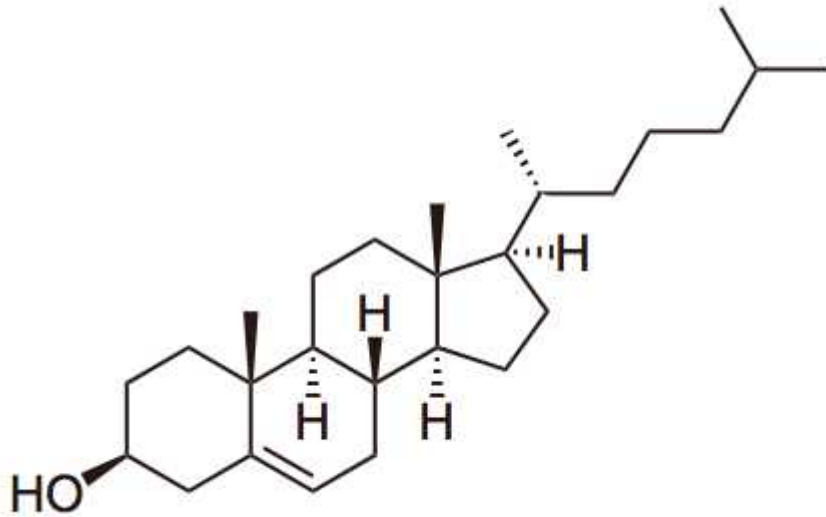
Many types of fats have been an important part of the human diet for millenia, and there is no good evidence that we should avoid them. There are, however, some fats which are synthetic, modern, and have never been proven safe. The so called “trans” fats fall into this later category, and seem to be especially pernicious.

“Trans” in this context is a chemical term (like saturated and unsaturated fat) that describes the orientation of atoms around a double bond. The opposite of trans here is cis. Most naturally occurring dietary fats are cis. In modern industrial food production, cheap alternatives are universal. Traditional cooking fats such as butter, lard, and suet had many useful properties. One of these properties is that they were solid at room temperature (because of their high proportion of saturated fat). This property was found to be especially useful in prepackaged foodstuffs, as it affects shelf stability. However, these animal derived fats are intrinsically more expensive than chemically extracted oils from plants such as corn and soybean. These “vegetable” oils are cheap, but they are unsaturated and liquid at room temperature, and therefore unsuitable for many industrial food products. The term “shortening” used to apply to any fat solid at room temperature, but today typically means “vegetable shortening,” a monstrous creation of “food” science.

The technological solution to this problem of obtaining cheap solid fat was to artificially saturate unsaturated vegetable oil. The saturation occurs by adding hydrogens to the fat, but typically not all of the unsaturated bonds are hydrogenated – hence the term “partially hydrogenated.” This process creates a cheap artificial saturated fat out of the “vegetable” oil. However, no chemical reaction is perfectly efficient. A side effect of the crude addition of hydrogen to the unsaturated bonds is that occasionally the trans form of an unsaturated fat is created.

Without knowing anything about the health effects of trans fats, we can dismiss them as unsafe – modern foods must prove their value through rigorous safety testing. Trans fats never have. On the contrary, the existing low quality evidence is so damning that it is acknowledged even by medical orthodoxy that trans-fats should be avoided.

Subtle argument warning: It may be that stating categorically that all trans fats are bad for us is too blunt. Certain traditional foods do contain some trans fats. For example, grass-finished beef has small amounts of naturally occurring trans fats. These are unlikely as harmful to us as their synthetic cousins. But this whole trans fat discussion is really just a story anyway. Instead of worrying about trans fat, simply stick to old fats in a traditional way, and embodied wisdom keeps us safe.



A Rehash of the Corroborative Evidence Against Modern Healthy Lifestyle Practices – Part 4, Cholesterol and Salt

Posted on [admin](#) Posted in [Book](#)

Don't Fear Cholesterol

NEWS: Rudy Giuliani, who underwent a physical last week, received some startling news today, when his cholesterol count turned out to be a whopping 375. What effect this will have on the minds of the voters remains to be seen... We now take you to Giuliani headquarters where Rudy Giuliani is about to make a statement.

GIULIANI: It's hard to understand. Because I've been doing everything I normally do. I've been watching my diet very carefully. I exercise regularly. My only indulgence, I guess, would be that I eat a lot of frozen yogurt. But it's non-fat.

JERRY: Non-fat yogurt? Oh, my god. They got Giuliani and he doesn't even know it.

ELAINE: (pointing to Kramer) Now look what you've done.

JERRY: Well, we've got to do something. (grabs his phone) I'm calling Giuliani's headquarters.

(((Seinfeld)))

Below are some titles of a few of the books that question the danger of dietary cholesterol. This is the oldest trick in the corroborative evidence book, but forgive me, I couldn't resist.

The Cholesterol Delusion

The Great Cholesterol Myth

Cholesterol Myth

The Great Cholesterol Con

The Great Cholesterol Hoax

Cholesterol is Not the Culprit

...

“A list long enough to weary Homer himself.” As you can see, the story debunking the cholesterol narrative has been told many times. The relationship between saturated fat and blood cholesterol was explored in the previous section, so this section will get down to the evidence about dietary cholesterol and health. Remember the dietary cholesterol that we eat does not mean that same thing as the blood cholesterol the doctor measures. There is not a direct linear relationship between cholesterol consumed and blood levels. You might be able to guess that dietary cholesterol should not be a practical concern for most people, and is likely beneficial to growing children. Cholesterol is an important part of nervous tissue, including the brain, and sex hormones, such as testosterone, are literally made out of cholesterol – an anonymous internet post compared a low cholesterol diet for men to “chemical castration.” A graphic description, but it is still important to identify if dietary cholesterol is even unhealthy to begin with.

The first relevant question is whether diets high in cholesterol are associated with increased mortality. A 1985 study examined men who had not previously had a heart attack or stroke, and who were surveyed by nutritionists about their diet before the 10 year study began. Cardiovascular events and deaths were monitored. Absolute dietary cholesterol was not significantly associated with total mortality or cardiovascular mortality. Cholesterol per 1000 calories was significantly associated with increased cardiovascular deaths, but not total mortality. This implies that the increased cardio deaths are offset by a decrease in deaths from other causes.

TABLE 2 *Standardized multivariate logistic coefficients relating specified nutrients to noted causes of death in 10 years. The Honolulu Heart Program.*

	All causes	Cancer	CHD	Stroke
Fat (g)	-0.073	-0.091	0.062	-0.205
SFA (g)	-0.064	-0.081	0.088	-0.253
Cholesterol (mg)	0.017	0.053	0.132	-0.161
Fat (%)	-0.048	-0.151*	0.247*	-0.302*
SFA (%)	-0.026	-0.131	0.255	-0.366*
Cholesterol per 1000 calories	0.046	0.063	0.227*	-0.215

Variables in the multivariate logistic model:

Nutrient, Age, Systolic Blood Pressure, Body Mass Index, Physical Activity Index, and Cigarettes smoked per day.

* Coefficient differs significantly from zero ($p < 0.05$).

The Relationship of Dietary Fat and Cholesterol to Mortality in 10 Years: The Honolulu Heart Program DANIEL McGEE et al

Of course, cholesterol is a nutrient of vital importance for growing bodies. It is also a component of traditional foods, so until high quality evidence damns dietary cholesterol conclusively, there is no reason to stop eating it. Even the 2015 USDA Dietary Guidelines Advisory admit that reducing dietary cholesterol is not of major importance for health. Beyond simply the relationship between dietary cholesterol and health outcomes, we can look at intervention studies that tried to reduce cholesterol.

A 1990 meta analysis titled *Lowering cholesterol concentrations and mortality: a quantitative review of primary prevention trials*, looked at randomized trials that compared deaths in cholesterol reduction groups (using drug, diet, or both) and a control in primary prevention patients. Primary prevention in this context means people who have not had a stroke or heart attack. They found that lowering cholesterol decreased cardiovascular deaths, but not total mortality. Interestingly, lowering cholesterol also increased deaths unrelated to illness.

Mortality from coronary heart disease tended to be lower in men receiving interventions to reduce cholesterol concentrations compared with mortality in control subjects ($p=0.06$), although total mortality was not affected by treatment. No consistent relation was found between reduction of cholesterol concentrations and mortality from cancer, but there was a significant increase in deaths not related to illness (deaths from accidents, suicide, or violence) in groups receiving treatment to lower cholesterol concentrations relative to controls ($p=0.004$). When drug trials were analyzed separately the treatment was found to reduce mortality from coronary heart disease significantly ($p=0.004$).

The association between reduction of cholesterol concentrations and deaths not related to illness warrants further investigation. Additionally, the failure of cholesterol lowering to affect overall survival justifies a more cautious appraisal of the probable benefits of reducing cholesterol concentrations in the general population.

Again, the key outcome of importance, total mortality, is unrelated to cholesterol reduction. It seems that the best available evidence provides no reason to think that high cholesterol diets increase total mortality. If anything, high cholesterol diets trade cardiac death risk for death risk of some other type.

Another meta analysis from 2010 by Ray *et al* titled *Statins and All-Cause Mortality in High-Risk Primary Prevention A Meta-analysis of 11 Randomized Controlled Trials Involving 65 229 Participants* had similar results. This analysis included randomized trials with “high risk” primary prevention participants who were treated with statin drugs vs a control. High risk means that they have an estimated risk of greater than 10% in the next 10 years of such an event. Statins are a very popular class of drugs that reduces the amount of cholesterol your body produces. The meta analysis concludes that they:

did not find evidence for the benefit of statin therapy on all-cause mortality in a high-risk primary prevention set-up.

Although this sounds conclusive, a different meta-analysis by Huffman *et al.* published in 2013, *Statins for the primary prevention of cardiovascular disease (Review)* asked a similar question but found the opposite answer:

Reductions in all-cause mortality, major vascular events and revascularisations were found with no excess of adverse events among people without evidence of CVD treated with statins.

The fact that the answer to the question of the value of statin drugs in primary prevention is so controversial is the first indication that it doesn't matter very much. If the effects of treatment were large, then it would be a lot harder for the two groups to reach opposite conclusions. These sorts of difficult-to-measure human problems is where the value of "scientific research" becomes minimal. That said, how could it be that these two meta-analysis report contrary results on the same subject? The answer is explored in a series of articles written in response to the Huffman article.

John ((Abramson)) is the thoughtful author of the popular *Overdosed America*, and was an early challenger to the gradually increasing proportion of Americans who officially ought to be treated with statins, according to new standards of care. ((Abramson)) is suspicious that corporate greed, rather than patient interests, was driving the changes in statin treatment guidelines. In his BMJ article *Should people at low risk of cardiovascular disease take a statin?* he notes of the Huffman meta-analysis:

Although these figures sound good, closer examination raises questions about both the benefits and harms... We used data from figure 3 of the CTT meta-analysis to calculate all cause mortality in low risk patients. Our calculations show that statins do not have a significant effect on overall mortality in this group of patients (relative risk=0.95, 95% confidence interval 0.86 to 1.04).

Our calculations using data presented in the 2012 CTT patient level meta-analysis show that statin therapy prevents one serious cardiovascular event per 140 low risk people (five year risk <10%) treated for five years. Statin therapy in low risk people does not reduce all cause mortality or serious illness and has about a 9% risk of causing side effects that range from minor and reversible to serious and irreversible.

While ((Abramson))'s response seems definitive, it only opened the door to an endless string of responses, and responses to responses, all of which question each other. Even if ((Abramson)) was wrong, and Huffman's articles was an accurate representation of reality, the absolute risk of total mortality in primary prevention over about 5 years Huffman reported was only 1077/24,408 (statins) vs 1223/23,652 (placebo) or 4.4% (statins) vs 5.2% (placebo). So we can see that while the relative risk reduction is about 15%, the absolute risk reduction is closer to 0.8%. And ((Abramson)) is claiming this 0.8% is not statistically significant.

While these priests of medicine are "locked in an epic battle until judgment day and trumpets sound," we still have to make practical dietary decisions. Because no clear scientific consensus will soon emerge, it is best to ignore the "science" entirely, and avoid the interventions in favor of traditional practice. So the next time you are at the medico for a "check up," skip the cholesterol test. If you must get one, don't let Doc fool you into thinking your "perfect" LDL cholesterol is very meaningful. And for primary prevention in low risk patients (pretty much everyone reading this), don't worry about dietary cholesterol, and skip the statins until high quality evidence proves them to be safe and effective.

When considered over the entire development of a human, differences in the endogenous sex hormone marinade would lead to different outcomes, even in genetically identical twins. Changing

sex hormones deliberately could lead to predictable outcomes in the aspect of beauty mediated by sexual dimorphism. Genetic males deliberately deprived of testosterone during development would develop looking less masculine. Certainly we know that in-utero testosterone correlates with many masculine traits in adulthood, including facial structure, finger ratio, and even sexual partner count.

In the same way, these sex hormones have effects on developing brains. Despite the persistence of the Blank Slate paradigm in social science, boys and girls brains are quite different. It is rarely specified however that the structure of the brain, like the skeleton, is not genetically encoded. The structure of the brain, and ultimately it's functional patterns, develops according to cell signaling phenomena that direct the growth and pruning of nervous tissue. Some of this cell signaling is mediated by hormones, including the sex hormones. It is not the Y chromosome *per se* that is responsible for the mental differences men have compared to women, but rather the hormone profile that is consequent to that genetic endowment. If we tinker with the hormones, we can likely potentiate or reduce their effects on brain structure, and consequently mental character.

For the past 50 years, US public health dogma has considered a low cholesterol diet or cholesterol lowering interventions, healthy. Because cholesterol is the chemical precursor to sex steroid hormones such as testosterone and estrogen, this policy could have had effects on levels of sex hormones. Is it therefore a stretch to imagine that, on a population level, major shifts in nations cholesterol levels might have some consequence on the mental character of that nation?

I suspect that many modern brains are, like our bodies, simply less sexually dimorphic than traditional norms. Today both men and women in modern societies are, on average “less well sexed” – men had less testosterone during development, and women had less estrogen-like compounds. In other words, human sexual dimorphism, and sexual orientation itself have low developmental canalization. Environmental factors such as prenatal and childhood hormone levels alter both the body and the brain.

Don't Fear Salt

Salt is good.

King James Bible, Mark 9:50

Another modern enlightened healthy lifestyle practice is the reduction in how much salt we eat. Salt is said to increase blood pressure, and chronic high blood pressure is known to be correlated with risk of heart attack, stroke, and death.

Standing at my podium, I'm trying to watch my sodium

Die high blood pressure either let the feds catch ya

Young Jeezy, 2009

((Gary Taubes))) explored the shortcomings of the theory that salt is bad for us in two articles, *The (Political) Science of Salt* in 1998, and *Salt, We Misjudged You*. I recommend these to give readers a healthy dose of skepticism on the dangers of table salt.

The narrative about salt goes like this: bodies need to maintain homeostasis. When we eat salt, the sodium concentration in our blood increases. In order to maintain the correct concentration of dissolved particles in the blood (which is a very important factor in physiology), water follows sodium. The more salt we eat, the more water is retained in the blood. As we increase the volume of blood fluid, the pressure in our vessels increases. Chronic high blood pressure is associated with an increased risk of death and disease. Therefore, we ought to decrease our salt consumption in order to reduce our risk of death and disease.

The same flaw in reasoning that we addressed in our discussions of saturated fat comes up again here:

If ↑ Salt Intake → ↑ Blood Pressure and ↑ Blood Pressure → ↑ Cardiovascular disease
then ↑ Salt Intake → ↑ Cardiovascular disease

Researchers are jumping to the conclusion, instead of *measuring* the valid endpoint of cardiovascular disease or mortality directly.

Before getting into research about salt and mortality, let's give a little background. "Salt" in chemistry refers to a compound that contains an equal number of negatively charged and positively charged ions, so that the material has a net neutral charge. There are many different "salts." Table salt is 50:50 composed of positively charged sodium and negatively charged chloride ions. These charges neutralize and stabilize themselves in solid table salt. However, when salt is dissolved in water, the sodium and chloride separate and form their respective charged ions.

Both sodium and chloride ions are essential for any living thing. Both ions are used in humans to maintain fluid balance, and in the formation of sweat and tears. Both are needed in the function of our nervous system. A salt deficiency leads to a host of medical problems.

Because of the necessity of salt for normal organismal function, animals have developed a taste for it. This is why herbivores, who consume little salt from plants, enjoy salt licks. Humans share this preference for salty foods. Salt is available in great abundance to any human population living by the sea (simply by evaporating the water), and many inland groups as well. But for those human groups who did not have access to abundant salt, the mineral was highly prized, and sought in trading.

According to the AHA, the average American consumes 3400 mg of sodium daily. This equates to about 8 grams of salt per day. AHA recommendations for sodium were 2300 mg for a healthy person, and 1500 mg for a person with high blood pressure. In 2014, the AHA lowered its recommendation to 1500 mg of sodium for everyone. 2300 mg of sodium is actually about 6 grams of table salt. 1500mg of sodium is about 4 grams of table salt per day.

6 grams is a generous amount. Even 4 grams is more than enough to abundantly salt one's food three times a day. 8 grams of salt is getting into "how could I possibly eat this much a day even if I tried" range. It seems that only through the miracle of industrial food processing could we ever

manage to consume the “average” 8 grams a day. Bear in mind that if we discuss expert advice to make “modest reductions” of 4 grams of salt to go from 3400 mg to 1500 mg sodium, that 4 grams is not modest at all – go measure it out for yourself and see. Without even evaluating whether a 1500 mg limit is valid, it seems to me that this is a sufficient amount to thoroughly shake salt on every meal every day.

How were these daily sodium values decided? The justification for the progressive lowering of recommended sodium is that this will decrease the incidence of cardiovascular disease on a national scale. This conclusion is reached through the faulty logic that we investigated above, that decreases in salt cause decreases in blood pressure, which must therefore lead to decrease in death and disease. This conclusion is not borne out by empirical testing, and is certainly unverified. Furthermore, even if we conceded that the decreases in blood pressure caused by reducing dietary sodium *do* decrease death and disease according to estimates, the risk reductions are very modest. Only on a national scale would we ever see benefits to the sodium reduction fiat. The estimated absolute risk reduction per person is small.

How small? A 2013 article *Effect of longer term modest salt reduction on blood pressure: Cochrane systematic review and meta-analysis of randomised trials* helps us understand the answer. The authors, He *et al.*, conclude that reducing sodium intake would prevent disease and save lives.

Our meta-analysis shows that a longer term modest reduction in salt intake of 4.4 g/day on average, causes significant and, from a population viewpoint, important falls in blood pressure in people with both raised and normal blood pressure. The blood pressure falls, on average, by 5/3 mm Hg in hypertensive people and 2/1 mm Hg in normotensive people... These results provide further strong support for a reduction in population salt intake, which will result in a lower population blood pressure and, thereby, a reduction in strokes, heart attacks, and heart failure... A modest reduction in salt intake lowers blood pressure and, therefore, should reduce cardiovascular risk. It was estimated that a reduction of 6 g/day in salt intake could reduce stroke by 24% and coronary heart disease by 18%.

There are a few important factors to note:

- 1) The amount that salt intake reduced daily is 4-6 grams. They consider this a “modest reduction,” however if we measure this ourselves we can see that this is actually a very large amount of salt.
- 2) The consequent reductions in blood pressure from the 4-6 gram reduction in salt are very small – 2/1 mmHg for normotensive people, and 5/3 mmHg for hypertensives. That means that if you had a blood pressure of 146/89, decreasing salt by about 4 grams might get you down to 141/86. While this result is *statistically* significant, it is of little *practical* significance to a person’s risk on an individual level, as we shall see in the next point.
- 3) The reductions in blood pressure are then used to “estimate” risk reduction. Keep in mind that this is not empirically valid data, but rather an extrapolation. 6 grams reduction of salt per day “could reduce stroke by 24% and coronary heart disease by 18%.” This seems like a lot, but this is another example of using relative risk to inflate the perception of risk.
- 4) Calculators exist to help estimate your risk of stroke and heart disease. These risks are based on large sets of epidemiological data. By entering information about yourself, the risk of event in the

next 10 years can be estimated. Using an imaginary patient as an example, we can see how the relative risk inflates our perception of risk.

Let us imagine a 59 year old female patient who is worried about her health. She is a non-smoker, and takes no medications. Her blood pressure is 146/89 mmHg, officially hypertensive. Her total cholesterol is 245 mg/dL, officially “high risk,” with an HDL of 60. If we use this data to estimate the risk of stroke in the next ten years, we get a 3% absolute risk. If we use this data to estimate the risk of coronary heart disease in the next ten years, we also get a 3% absolute risk.

The screenshot shows the NIH Cholesterol-CVD Risk Calculator interface. At the top, it identifies the user as a "Public" user. The main heading is "Information about your risk score:". The patient's details are listed as follows:

Age:	59
Gender:	female
Total Cholesterol:	245 mg/dL
HDL Cholesterol:	60 mg/dL
Smoker:	No
Systolic Blood Pressure:	146 mm/Hg
On medication for HBP:	No
Risk Score*	3%

A note below the risk score states: "Means 3 of 100 people with this level of risk will have a heart attack in the next 10 years." A disclaimer at the bottom explains that the risk score was calculated using an equation and that other NCEP products use a point system.

Now let's say that this patient wants to reduce her risk of death and disease through lowering salt intake. Her doctor agrees this is a good idea. She manages to reduce intake by a full 6 grams per day, and realizes the estimated risk reductions of 24% and 18% respectively for stroke and CHD. How much did she reduce her risk in absolute terms?

Stroke: $3\% \text{ risk} - (3\% \times 0.24) = 2.24\%$, a 0.76% risk reduction over ten years

Coronary Heart Disease: $3\% \text{ risk} - (3\% \times 0.18) = 2.46\%$, a 0.56% reduction over ten years

As you can see, even with the 6 gram reduction in daily salt intake, and even assuming that the theoretical estimates of resultant risk reduction are valid, this intervention doesn't even reduce absolute risk in this patient by 1% in the next ten years.

5) While the estimated (not the empirically validated) impact of reducing salt intake by 6 grams a day on an older person makes less than 1% difference in absolute risk, the impact on a woman of child bearing age (say 30 years old) or a child himself makes no practical difference. In fact it is likely harmful for reasons we do not understand.

Just as we saw in the case of saturated fat, the real important question is not whether decreases in salt intakes decrease rates of heart related deaths, but whether they decrease the rates of death, full-

stop. Otherwise you may simply be trading deaths from heart disease for deaths from something else, say cancer. No empirical evidence has confirmed that reduction in dietary salt lead to decreased total mortality.

This brings us to the running controversy in dietary salt meta-analyses. As we saw above, He *et al.* claim that:

A modest reduction in salt intake lowers blood pressure and, therefore, should reduce cardiovascular risk. It was estimated that a reduction of 6 g/day in salt intake could reduce stroke by 24% and coronary heart disease by 18%.

However, a letter written in response to this article in the BMJ by the authors of a *different* meta-analysis on salt intake and health (Graudal *et al.* 2011) addresses the flaw in reasoning by He *et al.* Graudal responds:

Although blood pressure is associated with mortality, **there is no evidence that sodium reduction reduces mortality mediated by a blood pressure reduction.**

A similar analysis on the all cause mortality outcome from all 7 studies shows no difference between the usual sodium group and the reduced sodium group. Further, it should be emphasized that all the included studies with the exception of the heart failure study reduce sodium to a level above the recommended level (2000-2300 mg). So there is no evidence (not even He and MacGregor's analysis) to prove beneficial effects on mortality of sodium reduction to a level below 2000 mg, which is the latest WHO recommendation, but there is non-optimal evidence in heart failure patients that a reduction below 2000 mg may be harmful.

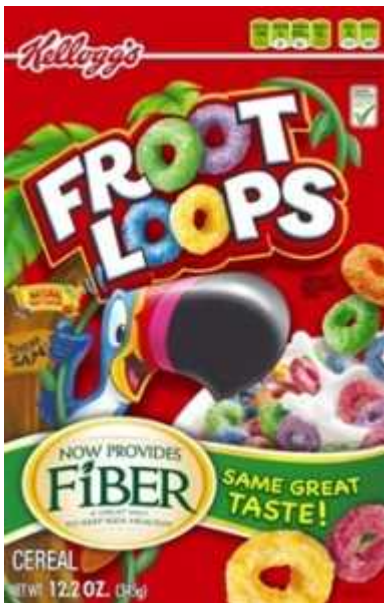
In their conclusion He et al. link the association between blood pressure and mortality and between sodium reduction and blood pressure to conclude that sodium reduction is associated with mortality. This is, however, a hypothesis not proven by scientific data. Such a link is not obligatory... With these firm beliefs He et al. can – in their copy paper – repeat unjustified conclusions from innumerable previous papers. In contrast, we think that general recommendations based on one single outcome (a small blood pressure effect) without knowing the consequences of this effect and possible accompanying side effects on morbidity and mortality is potentially hazardous.

The authors of these studies are locked in debate, however, the presence of the the debate alone tells us something important. If after all these years a consensus has not been reached it indicates that if salt is causing increased risk of morbidity and mortality the effect must be small. This sentiment is emphasized in the conclusion of a *third* high profile meta-analysis on the topic (Taylor *et al.* 2011).

Despite collating more events than previous systematic reviews of randomised controlled trials (644 deaths in almost 7,000 participants) we were unable to demonstrate a robustly estimated effect of reduced dietary salt on mortality or cardiovascular morbidity in normotensive or hypertensive populations. Including a further 79 deaths from long-term observational follow up of three trials did not improve the statistical power of the meta-analysis which is underpowered to assess the likely small relative risk reductions on all-cause mortality or cardiovascular events of dietary salt restriction.

Abundant salt has been a part of human diet forever. Today, the average American eats a bountiful 8 grams a day. Even so, the evidence for salt reductions on increases in longevity is shaky. If there

were an effect, it must be very small – practically inconsequential for most individuals. Furthermore, even if decreased salt did decrease longevity, it may have unforeseen negative consequences on viriculture. All told, we should happily avoid salt laden processed foods, but we ought not to worry about salting our food to taste.



A Rehash of the Corroborative Evidence Against Modern Healthy Lifestyle Practices – Part 5, Carbohydrates

Posted on [admin](#) Posted in [Book](#)

Skip the whole grains

We hear a lot about the wonders of whole grains. It is no doubt true that grains have been a staple food of all civilized societies. Indeed, it is unlikely that civilization could have emerged without the caloric abundance, predicable harvests, and long term storage capacity of grains. Grain, especially in the form of bread and rice, has been the basic foodstuff of most of the world's population for millennia. Ultimately, this is because grains are a very efficient source of calories. For a given amount of input in terms of land, energy, water, etc, grains produce more calories than other foods. Energy from the sun transforms carbon dioxide in the air into carbohydrates and proteins. The same can be said for fruit, however, it's short shelf life renders fruit unsuitable for establishing the stored calories required for civilization. By boiling and/or pulverizing the seeds of grain plants, we can create a food product that humans can digest.

The human diet has not always been dominated by grains, however. For hundreds of thousands of years, our ancestors survived as nomadic hunters. Their exposure to grains was limited to the wild grains which (in some parts of the world) grew without human intervention. Although different prehistoric groups had very different diets, the total contribution of grain as a proportion of human

caloric intake was much smaller before the Neolithic revolution. But today we are the progeny of thousands of years of grain farmers. The relative predominance of grain in the modern diet, at least relative to ancestral standards, is the first of two main problems with grain-based diets.

Today, grains, soy, sugarcane and beets dominate human caloric intake. Rice and wheat make up the bulk of foods recognizable as grain on the plate. Maize allows of the cheap production of fat (corn oil), and sugar (high fructose corn syrup). Soy, although not a grain, is used to produce protein (soy protein isolate) and fat (soybean oil). Intensive agriculture of these few crops allows production of each of the basic macronutrients and sugar as cheaply as possible. These basic building-blocks are then concocted into processed foods, just like chemicals in a laboratory. Food scientists then take these most efficient fundamental macronutrient isolates and combine them to make edible products.

Although grains have been used as staple food for almost 10,000 years, it was not until the industrial revolution that large scale refinement of these grains was feasible. Few of the fundamental grain isolates can be produced without technology. For example, of all of the plant oils (corn, soy, canola, etc.) only extra virgin olive oil is commonly extracted by traditional means (a press). Most plant oils are extracted with the help of “organic” chemicals such as hexane. The refinement of sugar and protein isolates requires similar sophisticated technology. The intense refinement of modern grain foods is the second problem with a grain based diet.

It would be very naive to expect that the food scientists who engage in this culinary criminality have come to a accurate consensus about which combinations of food-like isolates ought to be consumed for general health. Such data simply doesn't exist, and even if it did the food scientists are paid primarily by agribusinesses interested in selling more products, not improving our health. Furthermore, food laws and dietary guidelines are influenced by politicians with pet interests to serve – and they can hardly be counted on for accurate decision making concerning our health.

Traditionally, grains were boiled whole, or pulverized in stone mill. Modern grain refining removes the relatively nutrient rich bran and germ, leaving just the starchy endosperm as the flour. White flour has a superior shelf life (removing the germ and bran lowers the oil content and reduces the risk of rancidity), but this comes at the expense of the removal of valuable protein, vitamins, and minerals. This is part of implicit narrative as to why grains in their “whole” state are marketed as health foods. Indeed, in recent years public consciousness has been aroused to the “dangers” of refined grains, which have been blamed for many chronic ailments of modernity.

In addition to this theoretical narrative condemning refined grains, public health officials have pointed to empirical evidence that consumption of refined grains leads to worse health than consumption of whole grains. For example, a 2003 observational study in the *American Journal of Clinical Nutrition* (LM Steffen et al) concluded that whole grain intake reduces the risk of all cause mortality, while refined grain intake does not. We should keep in mind that, because of the ubiquity of refined grains, it must be understood that these results imply whole grains diets reduce all cause mortality *relative to refined grain diets*. On the basis of this and similar studies, cereal companies have begun using “whole grain” as a health claim. *Kellogg's* for example claims:



Made with whole grains and lightly sweetened, Froot Loops is a fun part of a complete breakfast, and is a good source of fiber.

Although the whole grain health claim may be abused in advertising to convince parents to feed candy to their children at breakfast, whole grains really do seem to be healthier than their refined counterparts. In fact, we didn't even need evidence to tell us this is true – our guiding philosophy is enough. Should we replace traditional stone milled whole grains with industrially refined versions before high quality evidence of their safety is gathered? No – we would be safer to stick with the traditional version.

So far our discussion of whole grains has been in line with standard modern enlightened healthy practice. But the failure of “healthiness” of whole grains comes to mind when we take a broader view of human diet. Yes, whole grains are healthier than refined grains – but pretty much *anything* may be healthier than refined grains, those modern industrial pseudo-food monstrosities. Saying whole grains are healthier than something patently and severely unhealthy is not saying much. Furthermore, the kind of people who consume whole grains tend to be those people who are healthier in general for other reasons (richer, smarter etc.). In this light, we can rephrase the cereal marketing claim to something more honest: “Now made with whole grains, slightly healthier for your family than the toxic refined grains we used to sell you.” It should come as no surprise then that grain based foods, including “whole grains” allow for agribusiness to upcharge most profoundly. From person experience I found that the per pound (let alone per calorie) cost of *Cheerios* or *Count Chocula* is more than having 80/20 Grass Finished Ground Beef from a responsible, non-evil farm can be shipped to your door in NYC.

A much more important topic than whether whole grains are healthier than refined grains is whether whole grains are healthy (full stop). This turns out to be a harder question, and one that cereal

companies are less eager to answer. A fair question to assess the value of whole grains may be, “does a diet rich in whole grains reduce all-cause mortality more than a diet low in grain?”

This question may not have such a popular answer. And even this question does not capture the subtleties associated with the common meaning of health, including vivacity, energy, mental alertness, and subjective feelings of vigor. Furthermore, we are talking about studying something that is an intimate part of people’s day to day lives, and which would be very difficult to randomize. As you can see, a high quality study assessing the health value of whole grains vs no grains is difficult to perform. And there is a further political problem with suggesting whole grains are less healthy than no-grains: grains are cheap. They allow food to be supplied to the swelling masses of humanity at the lowest possible cost. We have voted that Western governments charitably buy food for tens of millions of people and medical “care” for many of these same people. If the government admitted that the cheap grain foods are not as “healthy,” it may be implying that it does not provide our poor sufficient money to buy healthy food. Plant foods are intrinsically cheaper than animal foods. Pushing a “plant based” nutrition agenda (like the USDA is doing with its most recent guidelines) is pushing a cheap food agenda.

No matter the politics, we must remember that grains are a relatively recent addition to the human diet. Some non-Paleolithic foods have been introduced into human diets since agriculture, notably milk among traditionally pastoral peoples. However, there is a big difference between the small genetic change that makes proteins that cleave lactose persist into adulthood (instead of turning off lactase production at weaning), and introducing an entirely unusual domain of foodstuffs, the grains.

As we have already seen, the health fallout of the introduction of dietary grains at the neolithic revolution is dramatic. The first farmers were shorter, frailer, had more cavities, and more malocclusion than their hunter ancestors. One might argue that this decrease in corporeal markers of health was not due to grains *per se*, but rather the shift from a varied diet to monoculture. This is likely true, and we know that the elites of these early farming societies had bodies much more similar to the robust hunter-gatherers. The elites in these early agricultural societies were consuming a more varied diet – greater in the more expensive fruit, vegetable, and animal products. So the variable of “dietary variation” is not isolated from “dietary proportion of grain.” However we can say, on the basis of physical evidence circa the neolithic revolution, the hunters ate the least grain and had the most robust bodies, the poor farmers ate the most grain and had the “worst” bodies, and the agricultural elites probably ate an intermediate amount of grain, and had bodies similar to hunters. The story may be even more complicated, as elites may have been protected from severe periodic food scarcity in a way that hunters may not have been.

Government food propaganda has put too much faith in the health value of whole grains. They may be more traditional than refined grains, but eating very few grains is more traditional still. It seems that grain consumption in the style of traditional agricultural elites (a small part of a expensive, varied diet) would not be harmful. Even the grain consumption in the context of traditional food cuisines (Chinese, Indian, Italian, etc.) would be healthier than the monstrous technological concoctions many Americans eat. However, I prefer to err on the side of caution here and discourage grain consumption in general for viriculture, until high quality evidence validates it, which of course it never will.

Don't eat too much fiber

JERRY: Any luck?

KRAMER: No. No, nothing. I got no... peristalsis.

JERRY: What about bran?

KRAMER: I tried bran— 40%, 50% 100%. The bran isn't working for me.

(((Seinfeld)))

The claim that whole grains are healthy goes hand in hand with the claim that fiber is healthy, since whole grains contain more fiber than do refined grains. The importance of fiber has become dogma in the modern enlightened healthy eating guidelines, despite “fiber” as a substance lacking any practical import for human health.

In the same way the whole grains are more traditional and healthy than refined grain products, many unprocessed plant foods contain more fiber than their processed counterparts. However, this does not prove that fiber is essential, or even beneficial to the human diet. In fact, some have argued that fiber *per se* is actually detrimental.

One consequence of our modern diet is that many people have difficulty maintaining regular bowel movements. Having removed all of the fiber from our foods through processing, industrial food companies now sell it back to us at a tremendous markup. It is a neat trick really – feed old people food that makes them constipated, and then sell them seed husks, literally chaff, at \$20 a pound. To quote tumblr:

im sure the outside of a coconut is mad high in fiber but im not bout ta eat woodchips
cause of no govermence scientists

In an ultimate irony, the nutrient that stimulates the bowels in a traditional context is not fiber but fat! which – as per the the cardiologist's orders – has been scrupulously removed from the diets of the elderly.

For viriculture, if we eat real foods fiber need no even enter our minds, let alone be cuase of concern for our health.

Don't Eat too much Fruit

Fruit makes one of the most difficult chapters in the government of health, especially that of children. Our first parents ventur'd *Paradise* for it; and 'tis no wonder our children cannot stand the temptation, tho' it cost them their health. The regulation of this cannot come under any one general rule; for I am by no means of their mind, who would keep children almost wholly from *fruit*, as a thing totally unwholesome for them; by which strict way, they make them but the more ravenous after it, and to eat good or bad, ripe or unripe, all that they can get, whenever they come at it. *Melons, peaches*, most sorts of *plums*, and all sorts of *grapes* in *England*, I think children should be

wholly kept from, as having a very tempting taste, in a very unwholesome juice; so that if it were possible, they should never so much as see them, or know there were any such thing.

Some Thoughts Concerning Education, Locke, 1693

Compare Locke to what Mrs Obama and secretary of agriculture Vilsack had to say about fruit:

[We should] highlight the little ways that each of us can add more healthy fruits and vegetables to our diet, something that I think about all the time as a mother.

We could not have a better spokesperson in the country... She helped focus our attention on the importance of raising the fruits and vegetables... The everyday foods are the fruits and vegetables that are going to help you grow strong.

I want our children to grow strong too, but I doubt fruits and vegetables are going to do it. “More fruits and vegetables” has become the be-all end-all of mainstream healthy diet recommendations. This occurred because the other “classically” (in the last 50 years) healthy foods, especially grains and dairy, have come under heavy fire for not living up to the health-hype. Fruits and vegetables are a last bastion of these “classic” recommendations. Not only should we eat them, we must eat “more” of them. We must *strive for five*. But like many of the other mainstream healthy diet recommendations, “eat more fruits and vegetables” is clung to with an unwarranted tenacity.

Firstly, as discussed in [an earlier post](#) modern fruits are the product of aggressive breeding of the sweetest, largest, and most shelf stable cultivars. They are therefore, in many ways, unlike the wild fruits of the ancient world (with the exception of some tropical fruits). In [the post on fat](#), we saw why wild frugivores cannot be compared with modern human “fruitarians,” as the pith, rinds, husks, etc. that are fermented into fatty acids in animals are removed before consumption in our foods.

Secondly, fruit derives its sweetness primarily from fructose, which happens to be particularly harmful to health, as far as simple sugar molecules go. Lustig wrote an entire book about how fructose *per se*, rather than carbohydrates in general is the particularly insidious component of modern diets.

It is interesting to note that fructose is very effective at causing the glycosylation of hemoglobin, greater than the other common dietary monosaccharides glucose and galactose. However even the non-caloric sweeteners likely cause the hormonal response that is at the core of the negative consequence of the consumption of sweets (it’s not just the empty calories).

Barry Groves points out in his book *Trick and Treat* that the the data on which the “five a day” claim is based doesn’t actually support that conclusion.

The prestigious CARDIO2000 study published its results in 2003...

‘Our findings support that even low consumption of fruits and vegetables (1-2) servings per week) is associated with about 45% lower coronary risk. Consumption of 2 or more serving per week is associated with a 70% reduction in relative risk.’

Notably this study did not look at total mortality. As for how two servings week became five servings a day, we can only guess. Ultimately fruits should be considered more of a special treat than a fundamental food of a healthy diet. Vegetables, especially the green vegetables, are so low in calories that it would be impossible to survive on them, and therefore they can at most provide a valuable addition to the diet.

The Special role of Refined Carbohydrates in our modern health problems

“Oh Heavens!” all you readers of both sexes will cry out, “oh Heavens above! But what a wretch the Professor is! here in a single word he forbids us everything we most love, those little white rolls from Limet, and Achard’s cakes, and those cookies from... and a hundred other things made with flour and butter, with flour and sugar, with flour and sugar and eggs! He doesn’t even leave us potatoes or macaroni! Who would have thought this of a lover of food who seemed so pleasant?”

“What’s this I hear?” I exclaim, putting on my severest face, which I do perhaps once a year. “Very well then; eat! Get fat! Become ugly, and thick, and asthmatic, and finally die in your own melted grease: I shall be there to watch it.

Physiology of Taste, Brillat-Savarin, 1825

Sugar and starches have an especially bad impact on our health, and the processed versions of these foods are the primary cause of the contemporary obesity epidemic. While poor monoculture farmers eating grains have always been unhealthy, never before has such a large proportion of humanity got such a large proportion of its food from sugar and starch. These foods are the cheapest possible source of calories (grains grow like grass), and sugar has the special benefit of being both cheap and palatable. The “triumph” of high fructose corn syrup was that we created a very cheap delicious source of calories.

Unfortunately, sweets and starches destroy our bodies. Through their hormonal effects, notably their chronic elevation of circulating insulin, diets rich in refined carbohydrates make us fat. Through various mechanisms, they contribute to the chronic diseases of modernity, including hypertension, diabetes, cancer, and vascular disease (including brain and heart). By displacing from our diets those foods which are most effective at building a sound body, they contribute to our modern physical deformities – indeed they may actually do active damage to the developing body. Even possibly they have an effect on our psychology, as the modern sugar rich diet can disturb our sleep, affect our mood, affect our stress and sex hormones, and have a negative impact on subjective feelings of satiety and anxiety.

Can anyone really believe that 1000 calories of sardines is equivalent to 1000 calories of pure sugar, or pure starch, even if consider only the narrow aspect of fat gain? However this is the essence of the advice that dominates medical advice (a calorie is a calorie). When it comes to growing strong and beautiful bodies (a topic which doctors generally don't care much about), sardines would provide essentially all of the components to build strong bones, nerves, muscles, sex hormones, blood, and fat, while sugars and starches provided essentially none – despite their being “fortified with vitamins and minerals.” Remember, medicos have never actually proved that carbohydrate rich diets are in any way healthy.

Compared to carbohydrates generally, it seems that sugar (or honey, high fructose corn syrup, agave nectar, “evaporated cane juice,” etc) is especially unhealthy.

But sweethearts remember this: You eat too much sugar. You have only one fault, O women, and that is nibbling sweets. O gnawing sex, your pretty little white teeth crave sugar... So don't munch on sugar and you will live!

Physiology of Taste, Brillat-Savarin, 1825

Sweets are over-civilized, and straches are poor-people food. Some archaic greek peasants may have gotten their calories from barley meal, but huge and hugely Ajax ate a “mighty chine.”

If mothers were more ambitious to make little Samsons of their boys, instead of displaying their proficiency in book learning, we should have more *men* among us – men whose broad chests and robust frames would show them fitted to breast the storms of life and bear its burdens. Let me entreat you, now, to throw away all false notions about gratifying your taste in having a slender, pale-faced, delicate boy at your side, dressed in silk velvet and linen cambric, who likes to sit in the parlor and work bookmarks in silk floss, or play checkers *very still* in the corner, who never heard of baked beans or boiled beef and cabbage, but who likes bread and milk, and custards, sponge cake, and sugar crakers. Throw such notions aside.

Uncle Jerry's letters to young mothers, Porter, 1854

Medically, there is no reason that we ought to eat *any* refined carbohydrates or sweets. We hardly ought to deny ourselves fresh fruits, tomatoes, onions, shallots, wine, and even small amounts of flour – provided that they are used more as a garnish or sauce and not the actual source of calories. But to build strong and beautiful bodies, and maintain them in health, traditional, nutrient dense animal products such a offal, meat, fish, and fatty dairy should make up the bulk of the diet.



A Rehash of the Corroborative Evidence Against Modern Healthy Lifestyle Practices – Part 6, Animal Foods

Posted on [admin](#) Posted in [Book](#)

Get most of your calories from animal products

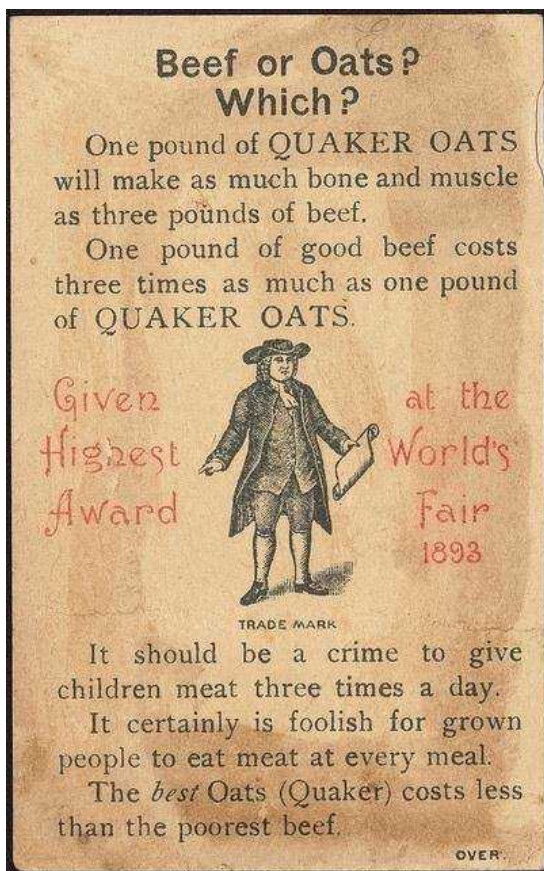
As we saw in [a previous post](#), because our calories have to come from somewhere, and our digestive systems are incapable of fermenting the fibrous plant matter of leaves and grass into calorie rich fats, the only unrefined, naturally occurring foods with enough calories to keep humans alive are fruit (including starchy tubers like sweet potatoes), and meat (including fat, fish, eggs, dairy).

“Forward-thinking” and “visionary” doctors who have noticed (after 75 years) that medical diet recommendations aren’t making people healthy have increasingly embrace plant-based nutrition as

the cure to our modern health issues. This trend is associated with the popular book *The China Study*, and the documentary *Forks Over Knives*. Like the present work, neither of these are works of rigorous science, however unlike this work, both of those *think* they are science. Now, even our national guidelines are heading in the plant-based direction:

Tufts University professor Miriam Nelson says the panel isn't telling all Americans to become vegan but adds, "We are saying that people need to eat less meat. We need to start thinking about what's sustainable. ...Other countries have started doing this – including sustainability in their recommendations. We should be doing it, too."

The modern notion that plant foods are somehow healthier than animal foods turns traditional wisdom (in which butter is a health food) on its head and is sorely misguided. The ultimate reason for this misbelief probably comes from the fact that animal foods are inherently more expensive due to their much greater energetic cost to grow compared to plants..



Compare the conclusions of this oat advertisement to those of the author of yester-year:

The superior development of the Aryan and Semites is perhaps attributable to the copious meat and milk diet of both races, more especially to the favorable influence of such food on the growth of children.

The Origin of the Family, Engles, 1902

In practice a "plant-based" diet almost always means a sweet or starch based diet – since where else can the food energy come from? The only other possibility, and ironically this is true for many vegans, the majority of their calories came from oil – in the form of peanut butter, olive oil, and

safflower oil, etc. While calories from fats can be healthy, calories from modern plant oils are not the best source for most of our food energy.

One of the touted benefits of a plant-based diet is that plant foods are typically lower in calories by volume than animal foods. Their theory is that less calorically dense foods will fill the stomach, giving us a satisfied full feeling despite not “over-eating.” This is a naive view of the physiology of satiety, however. In reality, our bodies do an exquisite job of regulating energy balance, as long as the food environment is consistent with what a human body can understand. The feeling of being full is regulated by the content of the food we eat, not just its volume. The reader can test this for himself by comparing how much skim milk vs cream it takes to make him “full.” While drinking 16 oz of skim milk is an easy task, drinking 16 oz of cream is a challenge. More importantly, [calories are not the cause of obesity or ill health](#), and high calorie diets are absolutely essential to excellent growth and development. “Plant-based” nutrition is hardly up to the task.

Another failing of the plant based diet is, despite the claims by raw-vegans of gaining a pseudo-spiritual “super-energy,” they actually make us lethargic and irritable. They lack a number of key nutrients, necessary for nerve and brain health even in adults, and their lack of cholesterol makes them chemical castration.

While switching from a diet rich in sweets and starches to a “plant based” diet of fresh vegetables and whole grains might actually benefit patients, this hardly implies the superiority of plant based diets in general. Viriculture demands abundant body building raw materials, and tremendous food energy – and animal foods are essential for this.

Don't Fear Meat

As the modern medico has declared plant-foods healthy, she has also declared animal food, especially red meat, unhealthy. There is, of course no basis for this claim. It is tied up in the other erroneous claims that fat, saturated fat, and cholesterol, all of which are present in animal products, are unhealthy – [which they are not](#).

This issue is further confounded by the fact that meat has the bad habit of being the main ingredient in a number of processed pseudo-foods, such a hot dogs, bologna, microwaveable bacon, pre-sliced ham, beef jerky, Slim Jims, etc. Certainly processed meats are unhealthy, and studies have confirmed this philosophical conclusion. But when fresh red meat has been considered independently of processed meat, no negative health consequences have been identified.

Consumption of red meat was not associated with CHD with no statistically significant between-study heterogeneity. Findings were similar in analyses restricted to cohort or studies for which this exposure-outcome assessment was pre-specified.

Two studies evaluated red meat intake and either total ischemic stroke or total stroke mortality; when these studies were pooled, the risk estimate was not significant.

Red and Processed Meat Consumption and Risk of Incident Coronary Heart Disease, Stroke, and Diabetes Mellitus: A Systematic Review and Meta-Analysis, Micha, Circulation, 2010

In fact red meat is very healthy. Up until recently, it was a recommended health-food, even according to elegant ladies.

Wholesome food is needful for your health. Buy the most strengthening. Pieces of fresh beef and mutton go the farthest. Eat plenty of fresh salt with food; it prevents disease. Pray do not let your children waste their pennies in tarts, cakes, bull's eyes, hardbake, sour fruit, &c., they are very unwholesome, and hurt the digestion.

Ladies Book of Etiquette and Manuel of Politeness, Hartley, 1872

And it is important to consider that it meat a very useful food for viriculture, certainly when compared to starchy foods.

Between children of the meat-eating classes and those of the bread-and-potato-eating classes, there is a marked contrast in this respect. Both in mental and physical vivacity the low-fed peasant-boy is greatly inferior to the better-fed son of a gentleman.

Education: Intellectual, Moral, and Physical, Herbert Spencer, 1860

Potato blood can make no revolution.

Feuerbach

Many traditional societies thrived on diets that were very high in meat. Caesar tells us about the habits of the ancient Germans:

They do not live much on corn, but subsist for the most part on milk and flesh, and are much [engaged] in hunting; which circumstance must, by the nature of their food, and by their daily exercise and the freedom of their life (for having from boyhood been accustomed to no employment, or discipline, they do nothing at all contrary to their inclination), both promote their strength and render them men of vast stature of body.

The Gallic Wars, Cesar, 49 BC

And it wasn't just the barbarians who ate so much meat. The Homeric Greeks, especially the large and beautiful scepter-baring kings, ate fat meat on a scale almost unimaginable to the average modern. Their burnt offerings to the gods had a dual purpose as an honorific rite, as well as a way to feed many heroes. The "hecatomb" originally meant a burnt sacrifice of 100 cattle – plenty of meat for a great feast to satisfy gods and men.

Then they offered hecatombs of bulls and goats without blemish on the sea-shore, and the smoke with the savour of their sacrifice rose curling up towards heaven.

When they had done praying and sprinkling the barley-meal, they drew back the heads of the victims and killed and flayed them. They cut out the thigh-bones, wrapped them round in two layers of fat, set some pieces of raw meat on the top of them, and then

Chryses laid them on the wood fire and poured wine over them, while the young men stood near him with five-pronged spits in their hands. When the thigh-bones were burned and they had tasted the inward meats, they cut the rest up small, put the pieces upon the spits, roasted them till they were done, and drew them off: then, when they had finished their work and the feast was ready, they ate it, and every man had his full share, so that all were satisfied.

Iliad, Homer / Butler, circa 800 BC

And such hecatombs are sacrificed many times during the 50 day course of the Iliad narrative. For an even richer description of just how much well salted roast meat Achilles and Odysseus consumed, let's consider the famous scene from book nine of the Iliad.

Patroclus did as his comrade bade him; he set the chopping-block in front of the fire, and on it he laid the loin of a sheep, the loin also of a goat, and the chine of a fat hog. Automedon held the meat while Achilles chopped it; he then sliced the pieces and put them on spits while the son of Menoetius made the fire burn high. When the flame had died down, he spread the embers, laid the spits on top of them, lifting them up and setting them upon the spit-racks; and he sprinkled them with salt. When the meat was roasted, he set it on platters, and handed bread round the table in fair baskets, while Achilles dealt them their portions. Then Achilles took his seat facing Ulysses against the opposite wall, and bade his comrade Patroclus offer sacrifice to the gods; so he cast the offerings into the fire, and they laid their hands upon the good things that were before them.

So we can see that the typical quantities of meat consumed by moderns are dwarfed by those of our ancestors. When we are really a rich society, instead of vegetable side dishes we eat multiple varieties of roast meat at each meal. Some critics of meat have suggested that its relative inefficiency is reason enough to abandon it, considering it less sustainable. While modern feed-lot meat is an irresponsible choice, traditionally raised beef, lamb, and pork in the style of Joel Salatin or Allan Savory, or even the archaic Greeks themselves, can actually improve the environment. There is a great deal of unused land world wide that is unsuitable for farming, but that could serve as rugged grassy pasture, and responsible meat production methods could even have a positive environmental impact in these areas.

Another famous example of meat eaters are the Eskimos, who the European explorer Stefansson lived among for years. In reviewing his time among the Eskimos, an interesting article was written in 1935 which is often quoted in defense of meat diets.

Stefansson averaged about 2650 calories a day; 2100 consisting of fat and 550 of protein. Carbohydrate in the meat varied between 20 and 50 calories a day... Mr. Stefansson has been in excellent general health since his exclusive meat diet.

A Year's Exclusive Meat Diet and Seven Years Later, Clarence W Lieb

While a high fat, all-meat diet may in fact be relatively benign for health, it is of course not necessary to go to such an extreme. However, we moderns have been led in the other direction by medicos and agribusiness and government. It would be one thing to give up red meat and replace it with full fat dairy or fatty fish, it is quite another to replace red meat with grains or beans or tofu or

peanuts butter – but this is exactly what is recommended. In reality, patients often do even worse than this, replacing red meat with processed grain foods and sweets.

White meats such as chicken or rabbit are supposed by medicos to be healthier than red meat, however, there is no empirical basis for this claim. It is an extension of the fact that these meats are lower in fat, saturated fat, and therefore calories – which is an invalid basis. Furthermore, these meats are ultimately cheaper to produce, which encourages agribusiness to foist them on the consumer. This low-fat lean meats can never, by themselves, be a very healthy food, since as we have seen fat is the fundamental macronutrient for health, growth, and good development.

A classic, but under-appreciated beneficial aspect of red meat is its effect on the blood, after all the redness is essentially the same as our blood's redness. Man instinctively attributes to blood a quasi-mystical life giving property, but it was not until William Harvey's work in the early 1600s that the true nature of blood and circulation began to be understood. Since then, science has come to understand blood, and especially "red blood" in tremendous detail, down to understanding the most exact atomic details of the structure of the oxygen carrying molecules. Blood is a liquid – mainly salt water, with some proteins floating around in it. Additionally blood contains cells – the white cells which have immune function, and the red blood cells which carry oxygen from the air in the lungs to the body tissues – an essential function. A single red blood cell contains approximately 300 million copies of a protein called hemoglobin – the critical oxygen carrying molecule. Hemoglobin is composed of four amino acid polypeptides called "globin," each containing a smaller non-protein chemical called a "porphyrin ring." At the center of this porphyrin ring is a single ionized iron atom, which, due to its chemical arrangement, is able to reversibly bind to oxygen molecules. Depending on the local oxygen concentrations, this iron will bind or release the oxygen – it is this principle that allows red blood cells to "pick up" oxygen in the oxygen rich alveoli of the lungs, and "drop off" oxygen in the oxygen deficient end organs, such as muscle or brain.

Today "anemia" is defined as a decrease in the amount of red blood cells or hemoglobin in the blood, or a problem with their function. The word "anemia" existed long before the modern technical definition based on laboratory measurements, and comes from the Greek meaning "without blood." Classic symptoms of "without blood" include paleness, fatigue, shortness of breath, etc. Will a woman "without blood" be as able as a healthy mother to adequately gestate and nurse her child? We can answer this question intuitively, and the empirical evidence validates our expectations, as many studies show worse natal outcomes for mothers with anemia.

A cubic centimetre of a newborn baby's liver has five times the amount of iron that is in a cubic centimetre of its mother's liver. Mother's milk, however, contains practically no iron, so iron taken from the placental blood is stored in the fetal liver to enable the newborn to have a sufficient oxygen-carrying substance in its red cells during the period of breast feeding. The importance of a liberal iron intake will be impressed by these facts upon the mind of a pregnant woman...

It may not appear at first sight to be the place to discuss blood conditions in pregnancy, but it is a subject which, in my opinion, is not generally given the attention its importance demands. I have rarely seen a good example of natural labour in a woman whose hemoglobin has been allowed to remain below 70 percent from thirty-three to thirty-four weeks onwards. I do not mean that their babies arrive with difficulty, but not infrequently labour is long, exhausting and painful, with a slow recovery during the

puerperium. I do not refer to severe cases of macrocytic and microcytic anaemia or the 'blood diseases,' but to women who are short of iron apart from the gross blood cell changes.

Childbirth without Fear, Dick-Read, 1942

Low levels of hemoglobin during the first half of pregnancy was associated with preeclampsia ($p = 0.024$). Moreover, low levels of hemoglobin during the second half of pregnancy was associated with the risk of preterm premature rupture of membranes ($p = 0.01$). In addition, mothers with lower blood dilution, as a physiological process during pregnancy, were more prone to preeclampsia ($p = 0.04$).

The relationship of hemoglobin and hematocrit in the first and second half of pregnancy with pregnancy outcome, Khoigani, Goli, Zadeh, 2012

The vast majority of contemporary anemia world wide is the "iron-deficiency" variety – in other words it is due to an inadequate diet. Global estimates suggest that as many as 1/3 of women worldwide suffer from this condition – especially vegetarians and vegans. The foods which contain the body's preferred for of iron are, not suprisingly, the blood-red meats, including muscle, liver and kidney. Ironically, many female medical students and young doctors (of childbearing age) have anemia, and themselves are dealthy pale from years sitting in windowless libraries and eating bloodless food. These same women become our obstericians, and there is no way that they will be writing young mothers the appropriate prescription:

Grass Finished Beef Rib Steak 500 g

Disp: Thirty (30) Steaks

Sig: Take 1 Steak Black and Blue PO BID until you don't have anemia anymore



A Rehash of the Corroborative Evidence Against Modern Healthy Lifestyle Practices – Part 6, The Paleo Diet

Posted on [admin](#) Posted in [Book](#)

The Paleo Diet

For a modern disease to be related to an old fashioned food is one of the most ludicrous things I ever heard in my life.

TL Cleave

Guided by our principle of conservatism, we can approach diet in two ways. The first is the look at the traditional food cultures and practices that served civilizations for thousands of years. Examples of these would be traditional Italian, French, Chinese, or Indian cuisine. Especially if we could get ahold of an older cookbook for the recipes, these culinary traditions probably embody the requisite wisdom to develop children well, at least when compared to modern American diets.

The second way is to recognize that even the ancient cuisines of the world's great civilizations are young, relative to our species. The genus *Homo*, of which humans are a surviving species, has been distinct for over two million years. *Homo sapiens*, the species to which anyone reading this book belongs, has been distinct for at least two hundred thousand years. These spans of time dwarf even the oldest cuisine of civilization, which can at most be a few thousand years old. Although human evolution has taken place in the ten thousand years since the Neolithic revolution and the advent of civilization, we can expect that humans are better adapted to the sorts of diet that they had available during the majority of their evolutionary history. The third way is the standard modern diet of cultureless Americans.

The three tiers of diet:

Tier One – An ancestral human diet, approximating the foods available to humans before agriculture. Grains are typically not included. This diet is associated with optimal heights, robust skeletons, well developed heads, good occlusion, and minimal dental decay. People do not get fat on this diet.

Tier Two – A traditional cuisine diet. These make use of the embodied wisdom of very old food culture. These diets make use of agricultural products unknown to our ancestors greater than ~10,000 years ago, including grains. The switch to agriculture correlated with decreased height, decreased skeletal robustness, worse occlusion, and increased dental decay. However, it is likely that judicious use of these traditional cuisines could produce similar outcomes to a ancestral human diet, if “rich” foods are included. People tend not to get fat on this diet. We know that the wealthy classes avoided many of the problems accompanying humanity's shift to agriculture. If we follow the aristocratic traditional cuisine diet, we would likely be quite safe.

Tier Three – The modern, refined “food” diet. This diet abandons all embodied wisdom of culture, instead relying on marketing and industrial food scientists. Highly refined carbohydrates are

included in the form of white flours, high fructose corn syrup, and other sugars. Refined fats are included in the form of chemical extracted “vegetable” oils (corn oil), which are often hydrogenated for stability. Even the proteins are refined, as soy-protein isolate is transformed into various foodlike substances. This diet causes obesity, and tooth decay. It also causes a host of other common modern chronic diseases. It is unsafe and is a cause of physical (if not mental and moral) degeneration.

This principle illustrated above is widely recognized, and forms the basis of the popular “Paleo” diet. Today we have an absence of high quality evidence about which diet is best for human growth and development (or health in general). This is because good studies about diet are notoriously difficult to perform.

With all due respect, we don't have hardly any paleo research on coronary artery disease, in fact we have none. And we have over 3000 vegan studies on coronary artery disease. And I'm still driven by evidence based medicine.

Joel (((Kahn))), Cardiologist , MindBodyGreen.com interview

But dietitians find its restrictive, even finicky, requirements such as sticking with very lean, pure meats and plants, unrealistic. As Scientific American put it, “The Paleo diet is founded more on privilege than on logic. Hunter-gatherers in the Paleolithic hunted and gathered because they had to. Paleo dieters attempt to eat like hunter-gatherers because they want to.” Any diet that restricts certain food groups and emphasizes others isn't balanced, these experts say, and there isn't strong science to prove that Paleo-eaters live longer, or are healthier than those who don't follow the diet.

The Paleo Diet Craze, Time, Sachs, 2014

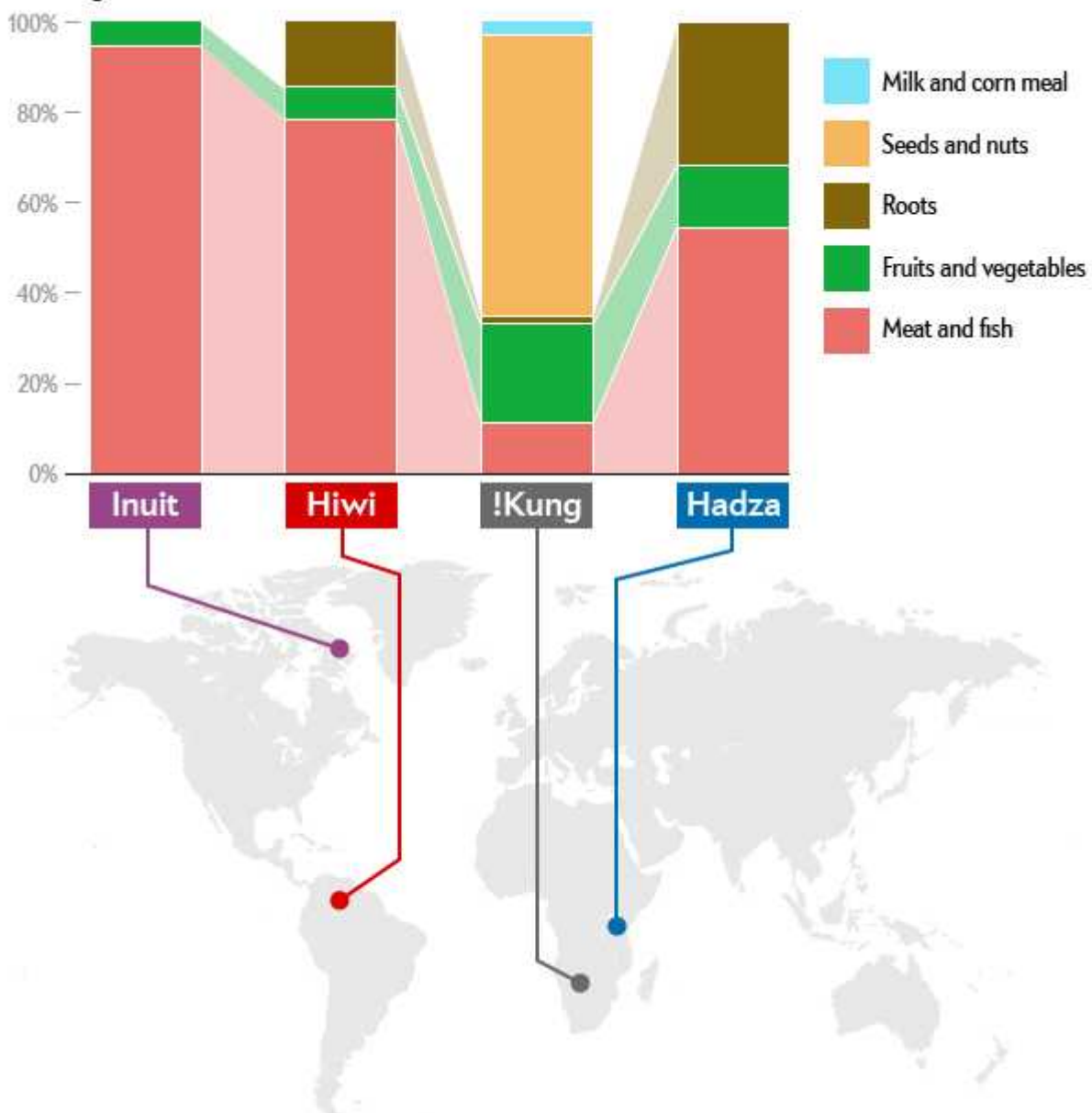
Some medicos make the error of relying on low quality evidence to replace traditional practice. But if we stay faithful to our guiding philosophy, we ought to be *as conservative as possible* when it comes to diet. However, mimicking pre-historic eating patterns leads us to a serious issue: do we have high quality evidence about what pre-historic people actually ate?

The answer is yes, and what they ate turns out to vary tremendously on the basis of their local geography. Foods varied with the season, and included many things that the average Waffle House patron may hardly recognize as food, including fibrous vegetable matter, bone marrow, and organ meat. Certainly nothing was packaged or processed, and even old-fashioned long term storage technology (salting, pickling, etc.), outside of freezing during winter, was limited.

This still does not answer the question of which macronutrients constituted the bulk of the diet for prehistoric man. Well, it turns out that even this is highly variable. A chart from a Scientific American article demonstrates how that bulk of the diet varied with geography.

How Hunter-Gatherer Diets Vary by Geography

Percentage of Different Foods in Diet



This simple chart was part of an article intended to “debunk” the Paleo diet as a fad. It does, however present accurate and relevant information. First, we can see that majority of the diet of three of the four groups represented comes from meat and fish. This is generally the preferred diet of ancestral humans, *assuming they can get it*. The !Kung, who are pygmy hunter gatherers living in the Kalahari desert, get the majority of their calories from abundant mongongo nuts, as discussed earlier. They therefore do not feel the same urgency to hunt, and it is further worth mentioning that they have been gradually pushed to the most marginal land possible, in a time which available large game to hunt is decreasing due to industrialization. Additionally, there is every reason to assume that desert pygmies don’t represent especially good hunters as far as humans are concerned, as their adult men are about the height of a European boy, and they have some of the most primitive technology of any extant human groups.

Hadza and the Hiwi are charted as getting the majority of their food from meat and fish, however these people live environments very close to the equator, and therefore have access to abundant plant foods most of the year. Despite this, they prefer meat and fish, and other groups behavior in a similar fashion.

The diet consisted of almost anything that was edible. However it would seem that flesh food was preferred, and formed the major portion of the aboriginal's diet... Shortage of game would no doubt drive him to less favored articles of food; but I have been informed by close observers that vegetable and cereal items were more or less incidental to his staple meat diet.

Dentition and palate of the Australian aboriginal, T. D Campbell, 1925

In the frozen Northern latitudes where they Inuit live, nearly all their calories come from seal meat and fish (especially from fat), as there is little vegetable matter available during the long winters.

Seals... are probably the most prized game these people surviving in an Ice Age environment could get, they are big bags of fat.

Dennis Stanford

To a lesser extent, the need to survive off of animal foods during cold winters was characteristic of the pre-agricultural Europeans and Asians in general.

Even among the !Kung, just like nearly all pre-agricultural humans, successful hunting, especially of large game, confers high status upon the hunter. Meat-sharing is a solemn practice of ancestral humans, and is used in honorific rites. The fact that meat, hunting, and fishing are so universally socially valued in prehistoric man testifies to their survival value. This evolved behavior has lived on into civilization as well, as we saw in the practices of the Bronze age Greeks..

The magistrates receive the full-grown and fatter portion, and they from their share always distribute something to the boys at the table who have shown themselves more studious in the morning at the lectures and debates concerning wisdom and arms. And this is held to be one of the most distinguished honors.

The City of the Sun, Campanell, 1602

Fatty meat from large animals has always been especially prized. Indeed in Europe at least they were so successful in hunting large game that today no wild elephants, rhinos, aurochs, lions, leopards, and barely even boar survive extant – whereas these were abundant in the Paleolithic. Had we never developed a global conservation ethos, the presumably delicious megafauna of Africa and Asia would likely have been eaten up by now as well. In fact despite conservation efforts, one of the biggest threats to African apes, for example, is hunting for bushmeat.

Just like today, economics governed the diets of many hunter-gatherer groups, and meat and fish were much cheaper than they are today. As the practice of agriculture expanded, the relative economy of meat has fallen.

But the relative values of those two different species of food, bread and butcher's meat, are very different in the different periods of agriculture. In its rude beginnings, the unimproved wilds, which then occupy the far greater part of the country, are all

abandoned to cattle. There is more butcher's meat than bread, and bread, therefore, is the food for which there is the greatest competition, and which consequently brings the greatest price.

The Wealth of Nations, Smith, 1776

However, this change in economics does not change which diets are wholesome and good for viriculture. We should be especially wary of the modern food industry's attempt to feed the swelling masses of humanity with the cheapest inputs possible.

While there is validity to the Paleolithic diet in principle, it is often abused in practice. Dieters will occasionally go to great lengths to bend the rules, and create "paleo" versions of their favorite modern processed sweet or crispy foods. Common examples of such cheating might be using agave or maple syrup instead sugar, nut flour instead of wheat flour, or eating McDonald's burgers without the bun. If we are really intent on optimal development, instead of simply following some food fad, we ought follow to true spirit of these recommendations, rather than look for loopholes. In the world of modern pseudo-food, spiritual grounding and self-possession becomes even more important for the health and development of ourselves and our children.

One remaining question is whether pre-agricultural man had superior nutrition at all. We can find arguments favoring both sides:

Clearly, primitive nutrition is superior to modern nutrition. In supply many times the quantity of nutritional factors as the latter, it indicates an important approach to the optimum standards of nourishment which are normal to animal life in a condition of nature.

Primitive Man and His Food, Arnold Paul De Vries, 1952

Studies show that, from a purely nutritional viewpoint, the dietaries of most primitive people are poor, monotonous, and inadequate. It is erroneous to ascribe the well-developed jaw bones and muscles and the healthy teeth of the primitive to good nutrition.

The Human Masticatory Apparatus, Klatsky and Fisher, 1958

Contemporary primitives are not as fortunate as the peoples who live in a state of civilization... Their diet is not as abundant, varied, mixed or balanced as is ours. Even the most fortunate savages who occupy rich and luxurious land seldom boast a diversified diet which can supply all the necessary nutrients.

?

In reality, it is impossible to say whether prehistoric diets were superior in nutrition to our modern diets, and both vary so much that generalization is difficult. Despite this difficulty, it should be clear that a meager primitive diet consisting mainly of roots, fruit, and nuts would not yield viriculture results as well as an ad-libitum diet in the classical French culinary tradition prepared by Escoffier, rich in butter, cream, pastured meats, and wild fish. On the contrary, the reality of the modern American diet is essentially all processed quasi-confections, with little real food to be found. Compared to this, the pre-historic hunters who brought down auroch and feasted on bone marrow

and fatty organ meat, supplemented with wild vegetables would certainly develop stronger bodies, faces, and minds.

An interesting blog post that criticizes feeding children traditional diets contains both some good and bad advice regarding children's diets.

Needless to say, you should not put your baby on the Paleo Diet. If you do, you're a bad parent. In fact, you should probably be in prison...Just do a quick search for "paleo baby" in Amazon and you'll see that there are plenty of Americans who think that a romanticized version of "what the cavemen ate" is healthy for a child. It's not... Yes, adults should be able to eat whatever the hell they want. But when you start putting babies on a diet that's hurting them, you really need to rethink the science behind your new diet-cum-cult. Why? Because every one of these faddish diets is based on calorie restriction. And babies don't need calorie restriction, they need calories. We need to stop pretending that something like the Paleo Diet or the Atkins Diet (or most diets, really) are based on anything but calorie restriction... If you don't want to eat bread or pasta or any "modern" food inventions, then don't. If it makes you feel great to abstain from beer and pizza and other fantastic calorie-dense innovations, then do that. But don't project your calorie restricted neuroses onto your kids. The Flintstones wasn't a fucking documentary.

Matt Novak, 2015

The author seems to have hopelessly misunderstood the role of hormones in body fat regulation. And of course, traditional diets ought not to be classified as "fads," as that is the exact opposite of what they are. However, this silly commentary does bring up a valuable piece of advice for feeding children – do not restrict their calories.

Calories *per se* as an important determinant of growth. They are also critical for children to have sufficient energy to learn, play, keep warm, and generally feel good. This makes a high calorie diet essential for good viriculture, it allows your child to reach his genetic potential. Of course, as we know the composition of the diet, and patterns of consumption are important as well. But the total caloric intake cannot be neglected.

A sad reality is that intelligent, socially responsible women of child-bearing age are the targets of messages to lose weight and eat a low calorie diet. This would have negative consequences for gestation, as we have discussed, but mothers must also not let these attitudes pass along into the diets of their children.

A particularly tragic phase of this problem of borrowing from the bone is seen in growing girls and is chiefly due to their ambition to avoid enlargement of their bodies to keep down their weight. The girls deprive themselves of body building material at a time when their bodies are growing and are requiring considerable new mineral. Forming bone has a prior claim on minerals, which is sufficiently commanding to induce the individual to borrow from bones that are already formed to provide for the necessary lengthening and growth. By this process many of the bones of the body are softened, particularly the bones of the spine. Curvatures develop, one of the expressions of which may be round or stooped shoulders. Among primitive races this type of girl, so commonly seen in our modern civilization, is absent. Probably not one of these girls has ever suspected the suffering and sorrow that is being stored up for future life as a result of this bad management at a critical time in her development.

Nutrition and Physical Degeneration, Price, 1939

Whether or not researchers can agree that the nutritional content of pre-historic diets was superior to our contemporary diets, essentially all agree that the masticatory load of the primitive diet was significantly greater.

In the preparation of his food the native undoubtedly adopted only the curdest methods, and those which are very far removed from so-called refinements of modern cooking. Whatever preparation his food did get, it was undoubtedly in such a condition when eaten as to require very vigorous masticatory effort. The whole structure and condition of the aboriginal's jaws and teeth point very clearly to this.

Dentition and palate of the Australian aboriginal, T. D Campbell, 1925

We can therefore conclude our brief assessment of the paleolithic style diet by saying that, while no exact food composition was universal, the following trends characterized the human diet for most of human history:

No processed foods

Diet varied depending on geography and season

Hunting and fishing were socially valued

Meat and fish were preferred foods when available

Meat and fish were relatively more "economical" than today

Grains were rare

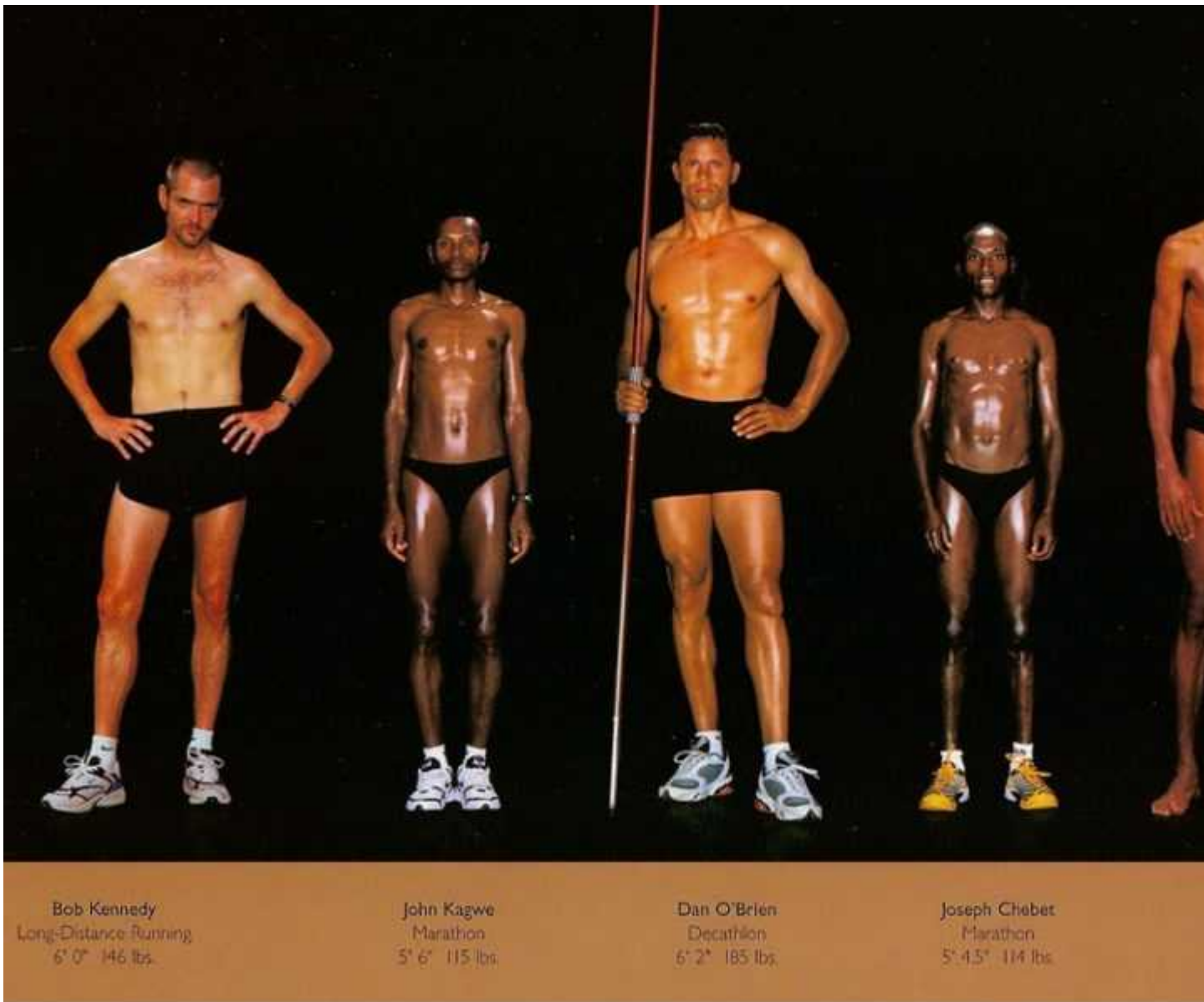
No refined carbohydrates

Fruit was seasonal

Sweets and starches were rare

Bone marrow and organ meat was consumed

Masticatory loads were much greater



A Rehash of the Corroborative Evidence Against Modern Healthy Lifestyle Practices – Part 7, Exercise

Posted on [admin](#) Posted in [Book](#)

Exercise

Exercise is essential for health and for viriculture. However, a great deal of modern exercise propaganda suggests that exercise will help fat people become thin, which it does not. The following quote from the American Heart Association and American College of Sports Medicine was used by (((Gary Taubes))) to help explain the current state of evidence.

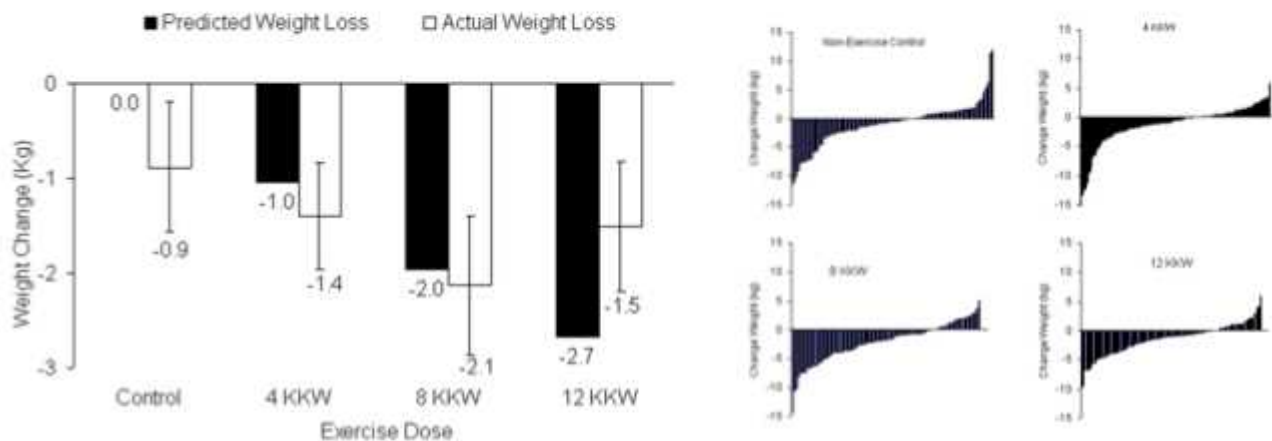
It is reasonable to assume that persons with relatively high daily energy expenditures would be less likely to gain weight over time, compared with those who have low

energy expenditures. So far, data to support this hypothesis are not particularly compelling.

Physical Activity and Public Health: Updated Recommendation for Adults, 2007

Further studies that evaluated the relationship between exercise and weight loss failed to find a strong link.

Exercise and Weight Loss



Not Statistically Significant, No Dose Response

Timothy S. Church
PLoS ONE, 2009

Changes in Weight, Waist Circumference and Compensatory Responses with Different Doses of Exercise among Sedentary, Overweight Postmenopausal Women

Early Hellenic education consisted of two primary subjects, “music” (the Muses domain) and gymnastics.

Socrates: Can we do better than the traditional education which has two divisions, gymnastics for the body and the arts for the soul?

Adeimantus: I don't see how we can do better.

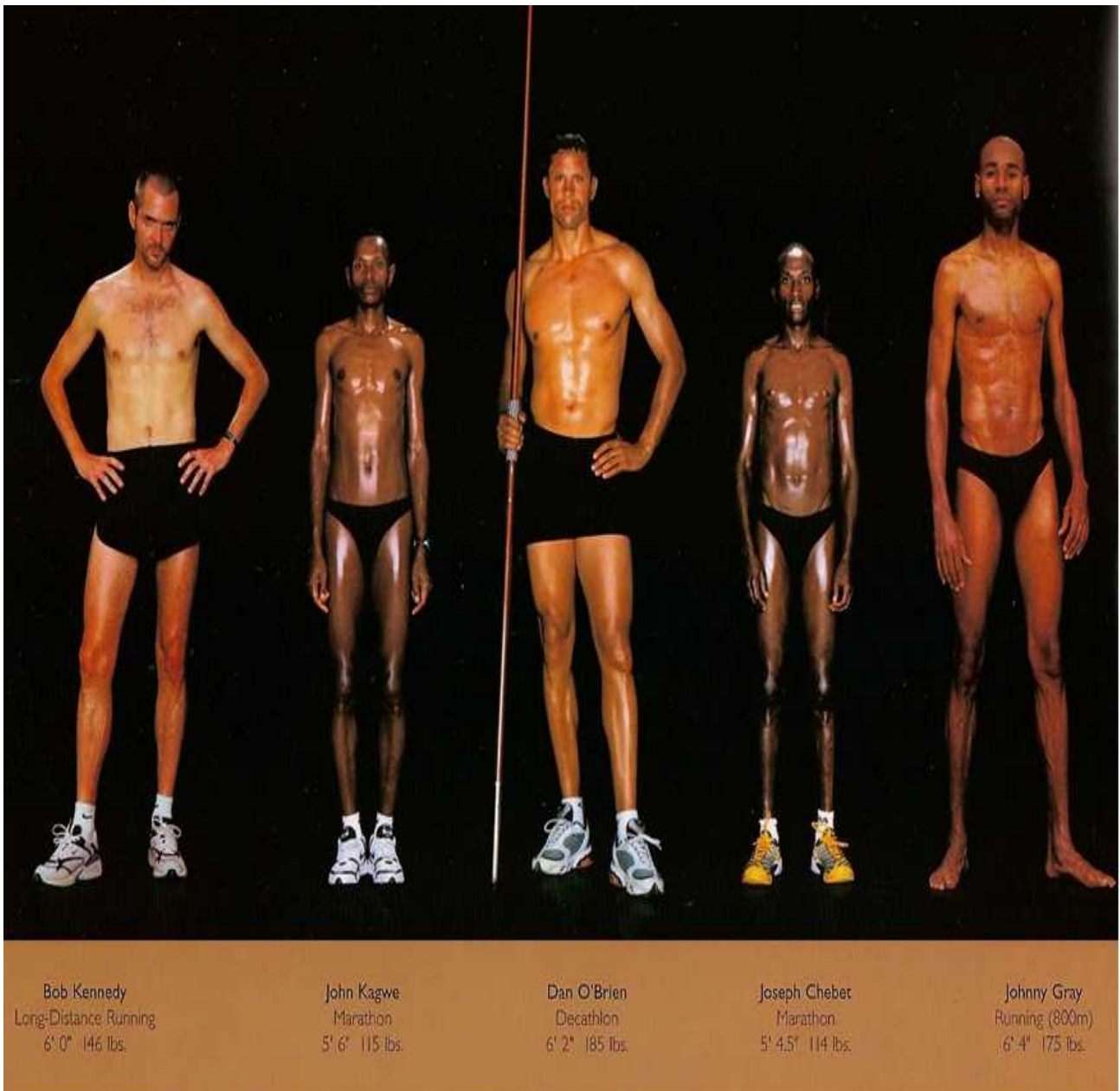
Republic, Plato, circa 380 BC

These two, which if done correctly, might still make up the entirety of a good education, are the most neglected today. Gym class in public school *could* go a long way in making all citizens us healthy, beautiful, and strong. Working models to achieve these goals have been proven many times, notably in 1960s California with the La Sierra High School physical education program instituted under JFK. Videos of this program have been preserved and made it to YouTube, and it is clear that essentially all of the students are ripped. In America today, however, gym class usually

accomplishes nothing of value, and implementing programs that are actually effective would likely hurt too many feelings.

It is important to realize that the calorie theory of weight maintenance and health ignores the main aspects of exercise that makes it healthy and good for growth. The mechanical functional stress placed on the body represent environmental signals, which are transduced by our cells into a language that they understand. This information, often in the form of hormones, is then used to make muscles and bones strong in a the appropriate ways. Fat too may be affected, but this is more due to hormonal messages causing fat to be distributed in a healthy and beautiful way, rather than caloric effects. Since bone, muscle, and fat distribution are so consequential in viriculture, and in adult life.

Bodies react in a non-linear way to exercise intensity. While “moderate intensity” exercise performed for a long duration may burn as many calories as shorter high intensity, the important cellular events may not be activated to the same degree. Neither does moderate intensity exercise make as rigorous demands on the pulmonary or cardiovascular system – both of which benefit from exercise as much as our muscles. Long duration moderate intensity exercise (such as long distance running, the favorite exercise of medical students nationwide) also increases the risk of repetitive stress injuries. Empirically, many professional athletes today use high-intensity-interval training, in which short duration very high intensity bursts of exertion yield excellent results. For these reasons, short duration high intensity exercise, such sprinting, or wrestling, or circuit training with heavy weights is the optimal variety. For proof of this, compare the bodies of long distance runners with those of sprinters, or even an amateur weight lifter at the local gym – champion long-distance runners look like they might drop dead at any minute.



While short term high intensity exercise is excellent for health and body building, long term low intensity exercise, such as walking or stretching, is excellent for relaxation and mediation – especially when done in nature. This type of exercise also lends itself to conversation – indeed Plato’s dialogue *Laws* takes place on the long, leisurely walk from Knossos to the temple of Zeus.

Instead of associating exercise with counting calories and losing weight, we should be honest and say simply that exercise is essential for health. A beautiful and strong body is a key aspect of viriculture, and this requires judicious exercise.

Sympathy for Fat People

The modern dietary guidelines endorsed by medicos and nutritionists are so far from being healthy that they are almost the opposite of healthy. Whether they exist as a result of mass-scale

incompetence of the medical community, or rather the outcome of the insidious influence of government/corporate food business (promote to the masses the cheapest types of edibles as “healthy”), we may never know. However, we can be sure that the vast majority of “experts” have 1) no idea what they are talking about when they discuss optimal diet for health, and 2) eat pretty much all of the wrong things themselves. We can see then that standard medical dietary advice will not help chronically ill patients, and certainly won’t yield good viriculture results.

So much of “medical care” is really unnecessary, and would never even be needed in a population that ate healthy food. However, doctors themselves honestly do not know which foods are healthy and which are not. Their entire education on the topic came from a one hour lecture in medical school by a nutritionist, who also knows nothing. We therefore tend to grossly mislead patients.

Doctors generally expect that patients will not follow our orders when it comes to dietary changes. For this reason, it is much easier to assign the blame to the patient, when an obese man fails to lose weight with “lifestyle modifications,” rather than to the doctor, for issuing vague and empirically invalid recommendations. Many doctors realize they need help, and an entire profession (registered dietitians) exists to counsel patients in healthy diets. Despite their good intentions, this profession uses the same invalid diet advice as doctors themselves (they just know it more thoroughly), and therefore affects little positive change.

Of course, for many unhealthy people, the struggle with diet is more out of an urge to lose weight and appear more attractive. The modern obese person, who would have passed for monstrous to the Greeks, is now one of almost 40% of Americans. This is a disgrace to our great human heritage, but I hesitate to assign the blame to the obese individual himself. Indeed, our medical and government “expert” defenders of health have betrayed us so badly that surely we must hold some responsibility for the perpetuation of false doctrines. I am very sympathetic to fat people, since essentially all of the information they get, especially from experts, is wrong.

Drink Water when you’re thirsty

The common enlightened mantra to drink eight glasses of water each day is another non-traditional practice without evidence to recommend it. Seeking out water in response to thirst is the behavioral consequence of an exquisite evolved mechanism for maintaining fluid homeostasis in our body. One-size-fits-all advice from a medico that supersedes something our bodies do naturally should always be approached with suspicion. Even on the face of it, the recommendation that *everyone* drink eight glasses *each* day, regardless of size, diet, and activity level is far too blunt to be reasonable. This is enlightened lifestyle claim that has been thoroughly debunked, even by mainstream medicos.

There’s nothing wrong with liking water, but there is no scientific proof stating that you need to drink anywhere near eight glasses a day. One doctor who has made this his research focus, Dr. Heinz Valtin, searched through many electronic databases and also consulted with nutritionists and colleagues who specialize in water balance in the body. In all of his research, and in all of the research we conducted to double-check his work, no scientific evidence could be found to suggest that you need to drink eight glasses of

water a day. In fact, scientific studies suggest that you already get enough liquid from what you're drinking and eating on a daily basis. We are not all walking around in a state of dehydration.

Don't swallow your gum, Carroll, 2009

Ultimately, there is no evidence for this claim. I do not know about water drinking practices in traditional societies, but I expect that we can trust our evolved instincts if we are drinking the type of liquid that was available during the time those instincts evolved (water). Wait for the randomized controlled trial before you concern yourself with drinking 8 glasses a day.

Sunscreen

Another common quasi-medical intervention that has never really been proven safe is sunscreen. This product is a massive money-maker for cosmetics companies, so like any other drug it is pushed as a magical anti-cancer agent, or, for women an elixir of youth.

While sunburns are bad for health, regular sun exposure of moderate intensity to bare skin should be considered a requirement for physical and mental health. Sun exposure is an ancient aspect of human life, and there is no reason to think that we moderns have somehow evolved beyond the need for it, even if we spend all day working under fluorescent lights making someone else money. Sun exposure has been linked to improved subjective feeling of well being, and decreased depression. Furthermore it is a key way that the body repletes stores of vitamin D, a critical nutrient for skeletal growth and development. For something as old and universal as sun exposure, we do not need to worry ourselves with "evidence" to establish its "efficacy." Instead, we should be suspicious of drastic modern changes to sun exposure, or modern interventions designed to alter our exposure.

One major change brought about by modernity is the movement of peoples into latitudes where the evolved pigmentation of their skin tone is not suited to intensity of the sun. Dark skin in low sun climates causes chronic vitamin D deficiency, and subjective mood symptoms. Light skin in high sun climates leads to sunburns, and early aging due to sun exposure. While I know of no solid evidence to support their use, artificial sun lights may function as a technology that restores the traditional norm for light exposure to darkly pigmented people living in low light areas.

As far as the sun exposure of fair people, there were many perfectly serviceable solutions to excessive solar intensity prior to sunscreen. Consider that English functionaries served for centuries in the most torrid corners of the globe before anyone was sold sunscreen. They managed by using sun protective clothing, hats, and parasols, and limiting their exposure during the peak hours of insolation. These traditional methods spare us the distasteful smell and feel of sunscreen, industrial chemical application, and cost, and are generally more aesthetic. However, they cannot save a fair individual who exposes himself, unclothed, to direct mid-day summer sun.

Religious sunscreen use in combination with a low fat diet is an especially pernicious modern combination. It can lead to low vitamin D levels, and bone problems in adults, and, even worse, improper skeletal development of a fetus during gestation.

Sun exposure is something that we truly do need to find a individual balance for. The diversity of skin tones in modern countries has shaken up our sun exposure cultural norms, however there should be little trouble using old fashioned physical sun protection, such as clothing and hats instead of chemical sunscreen.



A Rehash of the Corroborative Evidence Against Modern Healthy Lifestyle Practices – Part 8, Medical Care

Posted on [admin](#) Posted in [Book](#)

Routine Medical Care

I deny neither drugs nor disease. I deny the physician.

The Hunchback of Notre Dame, Hugo, 1831

Medicos generally recommend that we see them on a regular basis – since that is how they make money. In reality medicos cannot make healthy people healthier, and therefore we should only go to the doctor when we are sick. Raw vegan yogi hippies care about health, doctors care about disease.

The consideration I shall here have of *health*, shall be, not what a physician ought to do with a sick and crazy child; but what the parents, without the help of physick, should do

for the *preservation and improvement of an healthy, or at least not sickly constitution* in their children.

Some Thoughts Concerning Education, Locke, 1693

Health is a viriculture topic, sickness is a medicine topic. Even when we are sick, the potential benefits of medical interventions increase as the severity of disease increases, meaning that for most mild issues, interventions do more harm than good.

That wise man, Locke, who had devoted part of his life to the study of medicine, advises us to give no drugs to the child, whether as a precaution, or on account of slight ailments. I will go farther, and will declare that, as I never call in a doctor for myself, I will never send for one for Emile, unless his life is clearly in danger, when the doctor can but kill him.

Emile, Rousseau, 1762

Aegrescit medendo.

The disease worsens with the treatment.

This statement, by Virgil, is also translated as, “The remedy (cure) is worse than the disease.”

As we have seen, although doctors do know how to treat some diseases, they do not actually know how to make us healthy – and often their advice is the opposite of helpful.

The public grossly overestimates how much of our increased life expectancy should be attributed to medical care and is largely unaware of the critical role played by public health and improved social conditions determinants... Misattribution of credit may also contribute to overfunding the medical sector of the economy and impede efforts to contain health care costs.

The Contribution of Public Health and Improved Social Conditions to Increased Life Expectancy: An Analysis of Public Awareness, Merrill, et al, 2014

Hygiene is the only useful part of medicine, and hygiene is rather a virtue than a science. Temperance and industry are man’s true remedies.

Emile, Rousseau, 1762

In rare cases, doctors have something to offer healthy patients which is actually beneficial, such as certain vaccines. And some people might not know if/when they are sick, and these people might benefit from medical-ish surveillance. But for most adults, routine medical care has no benefit. And don’t forget that the history of medicine is full of harmful examples of naïve interventionism such as hormone replacement therapy, routine tonsillectomy, radiation for acne, etc.

Routine medical care at a “check-up” is essentially a series of screening tests which are shots-in-the-dark looking for diseases in asymptomatic patients. Dentists routinely screen for cavities,

periodontal disease, and cancer. Doctors routinely screen for eye, ear, heart, lung, skin, neurological, and musculoskeletal disease. These screening tests do not improve our health, but rather try to find cases of disease we already have. At least dentists are checking up on many existing restorations which occasionally need a turn up like an old car. Theoretically, if doctors find disease before symptoms arise the final outcome for the patient will be less morbidity and mortality than if the patient waited until he felt symptoms and then called the doctor, or until he dropped dead. In reality this is not usually the case. In fact, screening asymptomatic patients for disease is not just a waste of resources, but it ends up actively harming patients in many cases – and the harder we look for disease, the more harm we do.

Understanding how screening asymptomatic patients ultimately harms them is a little tricky, but it ultimately rests on the fact that many people who have verified medical “diseases” will never be bothered by them and never die from them. In medicine, this concept is known as over-diagnosis, and increases when we screen more asymptomatic people more closely. For every medical intervention there is always “number-needed-to-treat” to prevent some adverse outcome. Depending on the morbidity of the treatment, this number would help guide the patient and doctor to a satisfactory outcome.

An illustrative example occurs with modern breast cancer screening practices. Asymptomatic women over the age of 50 are strongly encouraged to submit to mammography every few years. This advice comes strongest from people who don’t know what they are talking about, but ultimately rests on the fact that some lives are saved through screening and the resultant cancer removal surgeries. Of course, if we skipped the screening and cut off all breasts, many lives would be saved from breast cancer as well, so it is important that we look for a philosophically sound medium between treatment and no-treatment. The number-needed-to-treat for asymptomatic women screened with mammography varies with age, with approximately 1/1000 women around the age of 60 who are screened over ten years benefiting.

Screening is likely to reduce breast cancer mortality. As the effect was lowest in the adequately randomized trials, a reasonable estimate is a 15% reduction corresponding to an absolute risk reduction of 0.05%. Screening led to 30% overdiagnosis and overtreatment, or an absolute risk increase of 0.5%. This means that for every 2000 women invited for screening throughout 10 years, one will have her life prolonged and 10 healthy women, who would not have been diagnosed if there had not been screening, will be treated unnecessarily. Furthermore, more than 200 women will experience important psychological distress for many months because of false positive findings. It is thus not clear whether screening does more good than harm.

Screening for breast cancer with mammography (Review), Gøtzsche, Nielsen, The Cochrane Collaboration, 2011

Furthermore, this same review found that, contrary to popular belief, early detection did not lead to less aggressive treatment, but to both more, and more aggressive treatment.

The documented increase in mastectomies contrasts with assertions by trialists, policy makers, websites supported by governmental institutions and advocacy, and invitational letters sent to women invited to screening that early detection spares patients more aggressive treatments, in particular mastectomy..

Grandma swears that doctors saved her life when they cut out her breast cancer found by asymptomatic mamography; she would never believe that 90% of patients in her situation would never have been bothered by the cancer had they never been screened.

This same principle applies to essentially all mass-scale cancer screenings on symptomatic individuals, especially the ones that look very closely, such as lung (spiral CT), colon (colonoscopy), cervical (PAP smear). I am always amazed at how many asymptomatic grown men line up to have a long, snake-like video camera put in their butt by strangers on a test that *maybe* 1/1000 people screened will benefit (the number happens to be similar to mamography) from over the next ten years. And this doesn't take into account the many cases of overdiagnosis and resultant unnecessary colon resection surgeries necessary to save that one life (most of the people who get surgery are not the person whose life is saved from surgery). As Rousseau implies, this type of medicine pushes our philosophy away from brave, death embracing, human, and fractal (death and rebirth), toward cowardly, death fearing, sterile, and smooth.

Hence the influence of physic, an art which does more harm to man than all the evils it professes to cure. I do not know what the doctors cure us of, but I know this: they infect us with very deadly diseases, cowardice, timidity, credulity, the fear of death. What matter if they make the dead walk, we have no need of corpses; they fail to give us men, and it is men we need...

Would you find a really brave man? Seek him where there are no doctors, where the results of disease are unknown, and where death is little thought of. By nature a man bears pain bravely and dies in peace. It is the doctors with their rules, the philosophers with their precepts, the priests with their exhortations, who debase the heart and make us afraid to die.

Emile, Rousseau, 1762

For someone who isn't sick, the routine check-up is essentially just a battery of screening tests on an asymptomatic patient. If we think broadly about health, routine screening tests are an unbelievable waste of resources, in a pitiful attempt to save lives from diseases which generally result from our own modern destructive lifestyle.

And living in this way we shall have much greater need of physicians than before?

Much greater.

Republic, Plato, circa 380 BC

Rather than diagnosing disease early (the medico's idea of "prevention"), we should *actually* prevent diseases by living in ways that don't cause disease.

Toward a new theory of modern chronic disease

And therefore our politic Asclepius may be supposed to have exhibited the power of his art only to persons who, being generally of healthy constitution and habits of life, had a

definite ailment; such as these he cured by purges and operations, and bade them live as usual, herein consulting the interests of the State; but bodies which disease had penetrated through and through he would not have attempted to cure by gradual processes of evacuation and infusion: he did not want to lengthen out good-for-nothing lives, or to have weak fathers begetting weaker sons; –if a man was not able to live in the ordinary way he had no business to cure him; for such a cure would have been of no use either to himself, or to the State.

Republic, Plato, circa 380 BC

Given the disastrous inability of medicos to combat out most common modern killers, they may benefit from a simple, accurate, but imprecise, framework for understanding chronic diseases of modernity. Indeed the diseases with the greatest mortality in the West today have been treated so poorly by our contemporary medical theories and treatments that new theoretical framework could hardly yield worse clinical outcomes. Keep in mind that the merit of a medical theories need not always be simply on how precisely it conforms to molecular reality, but rather in the real clinical outcomes for patients – in the objective terms of morbidity and mortality. Modern diagnoses, with the notable exception of “metabolic syndrome,” do not arrange the pathologies of modernity into an easy to grasp, easy to cure scheme. I believe that the following theoretical approach, which is presently half-jokingly, provides a better system for understanding and curing the biggest modern killer diseases, such as heart disease, stroke, cancer diabetes, kidney disease, and Alzheimers.

Warning – To those without a sense of humor, the following is a satirical treatment of a serious topic

The Crusty / Sweet Theory of Modern Chronic Disease

<u>Pathologic State</u>	<u>Associated Diseases</u>	<u>Physical Exam</u>	<u>Cause</u>	<u>Cure</u>
Crusty/ Decrepit	Heart disease, stroke, peripheral vascular disease, dementia, atherosclerosis, depression	Dry, crusty, flaccid skin, low muscle mass, acne, steroid hormone imbalance, hypertension	Inadequate intake of saturated fats / cholesterol leads to inadequate body lubrication and inadequate steroid hormone production	Eat real foods with an adequate proportion of cholesterol and saturated fat.
Sweet/Stressed	Cancer, kidney disease, diabetes, heart disease, stroke, dementia, peripheral vascular disease, obesity, anxiety	Inflamtmion, central obesity, hypertension, hypermetabolic state.	Elevated intake of carbohydrates and elevated stress (glucocorticoids) leads to chronic high blood sugar and gradual caramelization	1. Decrease intake of sweet and starchy food 2. Establish high social status

Crusty/Decrepit – Ironically, it seems that medicine has overlooked an exceedingly important aspect of saturated fats, their health *benefits*. As our nation followed their “expert advice” and ate less and less saturated fat, we got sicker and sicker. Saturated fats are part of a healthy and beautiful body. They keep our body well lubricated inside and out. Eating tallow and butter will give your skin an waxy outer coat, especially if one doesn’t take a hot soapy shower twice daily, which bathes the skin in moisture and prevents crustification (and probably aging). In the same way, a high saturated fat diet provides the hair of the head and body with a wax that, if one does not shampoo according to the unnatural modern once-a-day schedule, develops into almost a natural pomade. We clearly find the prescience of such a wax attractive, as the very shampoo companies which encourage you to wash away your natural oils turn around and sell you expensive moisturizers and hair and beard oils to replace them. Consider that a shiny coat is an indication of health in all other mammals, and is an oft-touted selling point of dog *food* (although commercial dog food is, in reality, not even fit for consumption by a dog). Subcutaneous saturated fats bulk up the skin and add to facial beauty (the opposite of a wrinkly, gaunt face), and beautiful, full, healthy fat stores (especially in the thighs, butt, and breasts of a well fed woman). On the inside, body fat stores may be even more important to health, as they are one of the major factors that prevent “crustification” of delicate anatomic structures (think fine blood vessels and nerves). The difference between a “crusty” and a well lubricated body is plainly evident during gross anatomy cadaver dissection. While some corpses have adequate body fat tissues to protect and lubricate fine structures, many elderly corpses are dry and crispy, with fascia and tissues crusted together and difficult to isolate and identify. In general aging is associated with this sort of decrepit crustiness, while youth is associated with pliable, well lubricated anatomic structures. The cadaver I was assigned to dissect during anatomy class was of the crispy variety, and the structures were so difficult to identify that I would leave her behind to learn from a less emaciated specimen.

Like withered tree, that wanteth iuyce,

She old and crooked were

The Faerie Queene, Spencer, 1590

Years later, once I begin to see those same structures in anesthetized patients, alive and carrying the very essence of human sensation and animation, did it dawn on me that there is no way that crusty decrepit anatomic structures can perform their vital functions as well as a “well lubricated machine” of a healthy body with appropriate fat stores. Peripheral vascular disease, heart disease, and neurologic disease are associated with the decrepit/crusty body. This crustification of the vessels also plays a role in hypertension and endothelial dysfunction, both of which are major risk factors in for heart attack or stroke.

Sweet/Stressed – A different type of pathologic body state, arising from overly sweet blood, is of separate origin, but is often concurrent with the “crusty/decrepit” state, arises from a different cause, that is overly sweet blood). Overly sweet blood comes from too much glucose (a useful energy currency in the body) floating around in the blood.

Elevated blood sugars come from two main causes, which account for a great mass of modern disease. The first is from elevated physiologic stress, which leads to elevated circulating glucocorticoid hormones (classically cortisol). In other words hormones that make your blood sweeter. In an acute scenario, this evolved response provides our brains and muscles with the sugar energy to run away or battle an enemy. When chronically elevated however, this fight-or-flight hormone has number of deleterious effects (discussed elsewhere), but notably glucocorticoids increase blood glucose levels.

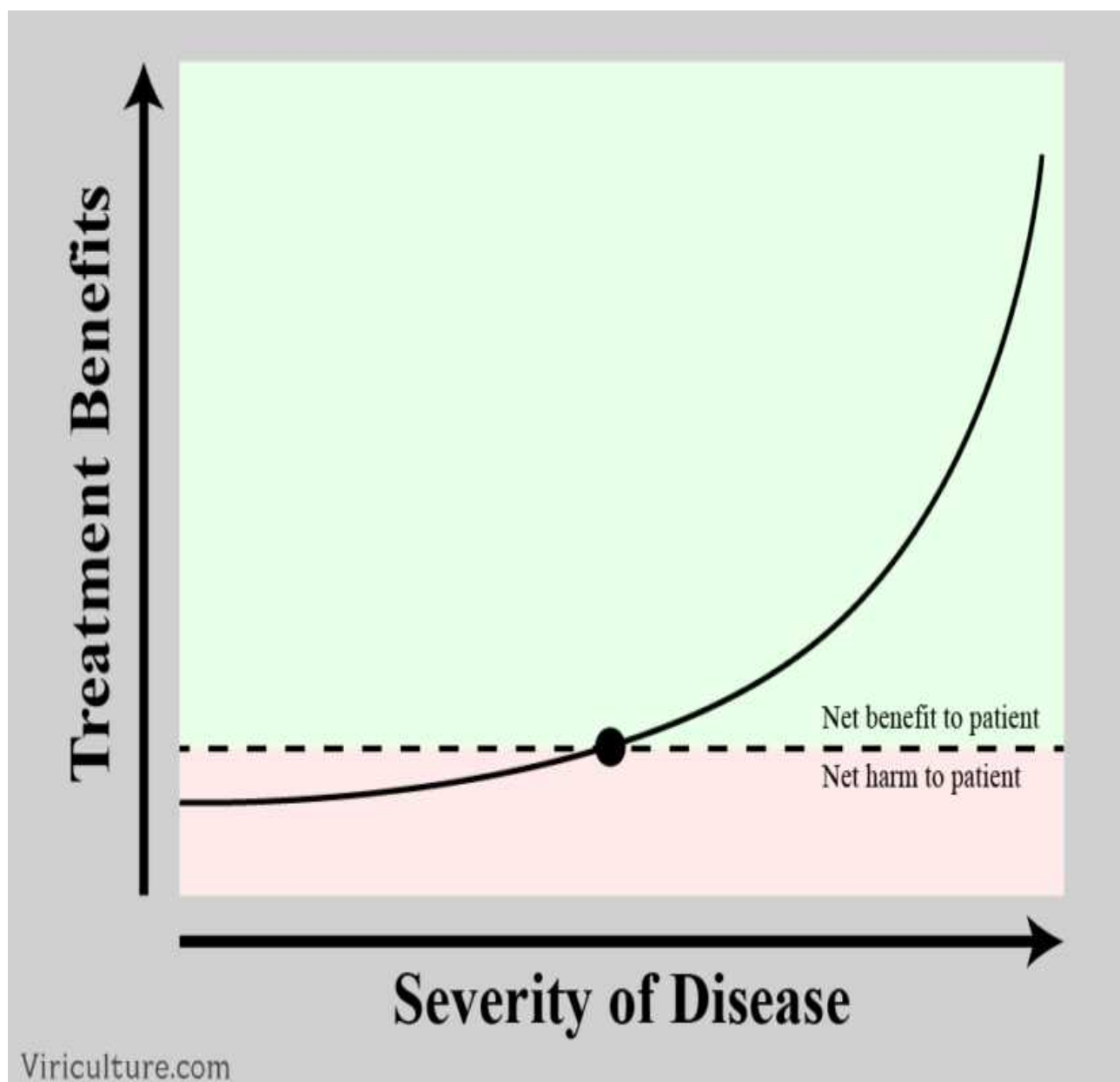
The second cause of elevated blood sugar is the intake of too many carbohydrates. The average carbohydrate consumption of a modern is approximately ten times greater than our ancestral norms (although there was seasonal variation). This elevated blood sugar from increased intake is the fundamental cause in diabetes, which is simply a disease whose consequences stem from the pernicious effects of high blood sugar.

Chronic high blood sugar destroys our bodies in four main ways 1. the sugar is osmotically active, leading to hypertension, and osmotic effects in the lens of the eye (blindness), and peripheral nerves (neuropathy leading to foot amputations). 2. The elevated level of sugar increases the rate at which our body undergoes a “caramelization” or “Maillard” reaction. Just like we can create sticky caramel on the stove using only heat and sugar, the same reaction occurs in our bodies from the inside, and the rate at which it progresses is correlated with the blood sugar level. On the stovetop at 600 F the reaction takes minutes, at the bodies 98F the reaction proceeds perhaps 10,000 times slower, but after 50 years the effects are clear. This process, known as “non-enzymatic glycation” leads to molecular dysfunction at the protein level, as sticky sugars gunk up the cellular machinery. Indeed the modern method of diagnosis for diabetes, the hemoglobin A1c test, measures the proportion of a common blood protein (hemoglobin) which has a sticky sugar molecule attached to it – doctors and nurses love to talk about this test, but they rarely understand the significance in the scheme of how sugars effect health. These same sticky sugars clog up the small arteries of the retina leading to colateral angiogenesis (diabetic retinopathy), the peripheral vasculature (peripheral vascular disease), and the vessels supplying the heart and brain itself (heart attack, stroke, dementia). 3. Chronic elevated blood sugar promotes chronically elevated insulin which prevents the catabolism of fat stored in fat cells, thus leading to obesity. 4. Chronic elevated blood sugar provides a rich soil to meet the steep metabolic demands of the inevitable episodes of uncontrolled cell growth that occur in living systems. Cancers are highly metabolically active, and without the fuel of super sweet blood, they would burn out rather than grow, Indeed the way doctors “find” where a cancer is in the body is by radiolabeling glucose and then taking a 3D xray of the body. We take it for granted that the tumor is located in the area of unusually high glucose consumption.

These two disease states, both preventable, are along with smoking, the major causes of modern chronic disease.

Our diseases, including the chronic killers, the physical deformities, and even our psychological pathologies are, in the vast majority of cases, consequences of our flawed modern approach to life. Our medicos “know more” about the body than ever before, but despite this we are sicker than ever. Without the guiding wisdom of traditional culture, we have become unhealthy, ugly, and depressed on an unprecedented scale. The spiritual failure of modernity has seeped into our bodies and minds.

In seeking viriculture we must recognize the frailty of our “knowledge” and maintain humility in toward the embodied wisdom of ancient practice.



When to Trust Great-Grandma Over Your Doctor

Posted on [admin](#) Posted in [Uncategorized](#)

When to Trust Great-Grandma Over Your Doctor

In some cases, traditional practices can be safer and better than their modern counterparts. This general principle applies to viriculture in particular. Many seemingly “unusual” traditional child rearing practices may actually lead to superior outcomes in objective terms. This is because, unlike our modern methods, the old-fashioned practices are time-tested. In keeping with our overarching

philosophical approach of “being conservative,” we ought to err on the side of traditional practice in cases where evidence for determining best practice is not strong.

However, despite our lack of evidence about the superiority of modern interventions, we do not often see mothers following traditional child rearing practices in our world. Even if we are convinced that a traditional practice is the better choice in some domain, there are often practical inconveniences which hinder the implementation. Luckily, organizations exist that encourage and support modern women in motherhood practices similar to those of ancient societies. These organizations provide mothers with the tools to achieve a close approximation to traditional infant care in our society. Different organizations have different focuses, but networks of support exist to aid mother in pre-natal, nutrition, gestation, birth, nursing, and infant care.

Medicos have their own standards of care when it comes to these necessities of life. But we should be wary of their advice.

He’s the best physician who knows the worthlessness of the most medicines.

Benjamin Franklin

Their advice is too new, and many of their practices lack the high quality evidence base for us to trust them. We know well the story of modern medicine failing to keep babies safe by advocating formula over breast milk – but other contemporary examples still exist. There are many ways in which their new practices are harming our infants, without a meaningful benefit.

At the same time, there are some modern interventions for babies that are endorsed by western physicians which actually do have a legitimate evidence base. The worthiest medical intervention for asymptomatic infants is vaccination. Vaccinations provide the immune systems of a baby with the information it needs to protect itself from getting sick in the future. Vaccines simply appropriate the baby’s natural defense system, without exposing her to the virulence of an actual disease. Vaccines do have risks, as do all interventions. *In some cases* these risks are outweighed by the benefits, and medical intervention for an asymptomatic baby is reasonable.

While check-ups for asymptomatic patients typically have no benefit, visits to the doctor can be life saving in situations when a baby is ill. Do not misinterpret my encouragement of traditional childcare in situations where we lack evidence to guide decisions with a dismissal of the usefulness of medicine! Traditional practice should be encouraged for healthy or mildly ill babies – *in situations where high quality evidence does not exist!* Doctors save the lives of many children who would have surely died from injury or illness without their technology and expertise.

Below is a chart that explains when babies would be best served by going to the doctor, or listening to medical advice, and when it would be best to ignore medical recommendations in favor of ancient wisdom.

<u>When to take Baby to the Doctor</u>	<u>High Quality Evidence Exisits for Intervention</u>	<u>No/Low Quality Evidence for Intervention</u>
<u>Baby is Healthy</u>	Doctor ¹¹	Grandmother's Wisdom (Traditional Practice)
<u>Baby is Very Sick</u>	Doctor	Personal Philosophy Doctor's Experience Grandmother's Wisdom (A difficult decision)

When the baby is healthy, we must demand a very high quality of evidence of safety and efficacy before exposing her to intervention of any kind.

The doctors are not content with having control over the sickness; they make health itself sick, in order to prevent people from being able at any time to escape their authority.

Montaigne

Even well meaning recommendations of doctors will likely be worse than traditional wisdom in this case. Keep in mind that a trip to the doctor does not make a healthy baby healthier.

The best way to raise a healthy child is to keep him away from doctors, except from emergency care in the case of an accident or an obviously serious illness. If you child displays symptoms of illness, monitor his condition closely, but don't seek medical help until there are clear indications that he is seriously ill. Most doctos ignore the fact the the human body is a wonderous machine with an astonishing capacity to repair itself. If you take you sick child to the doctor, he probably won't allow it to do that. Instead, he will interfere with the body's natural defenses by giving your child treatment he doesn't need and shouldn't get, with side effects that his body is not designed to handle.

If you become convinced that you should accept my advice, and avoid your doctor whenever it makes sense to do so. You will learn to avoid the traps that pediatric medicine has laid for your child. The first of these is the "well-baby visit" – a cerished ritual of pediaticians that enhances their income, but does nothing constructive for your child.

In all my years as a pediatrician I do not recall ever having dicovered an illness during a well-baby examination that was not revealed in a timely manner by taking a careful history on taking a careful history on the child's initial visit or by the subsequent development of observable symptoms.

Robert Mendelsohn

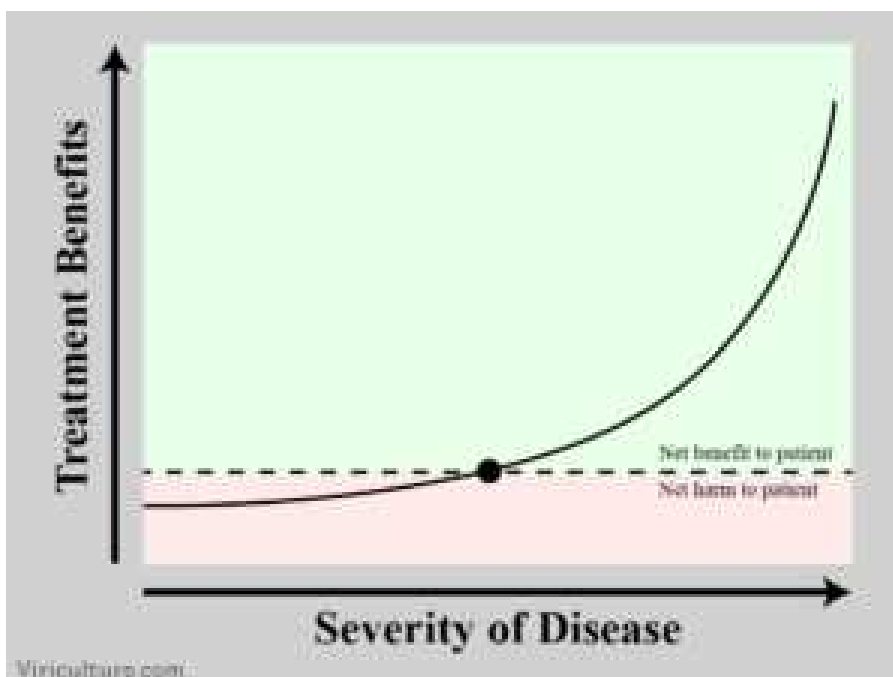
The exception to keeping Medicos away from healthy babies is in those cases where high quality evidence exists to support the intervention. The length of time that this high quality evidence has been available should also contribute to the decision to intervene. As discussed above, vaccines provide the best example of an evidence-based intervention suitable for healthy babies.

Before my readers accuse me of being anti-medicine or anti-technology, I would like to point out that, in cases where high quality evidence really does exist, it is *always* better to follow that evidence. Unfortunately this evidence exists only rarely, as it is very hard to come by. Often people will pretend to have high quality evidence when they do not.

When a baby is truly ill, the inherent risks of modern medicine are more easily outweighed by the potential benefits.

This reflects a second principle: *people with milder abnormalities stand to benefit less from treatment than those with severe abnormalities.*

Overdiagnosed



In cases when a baby is ill, and the intervention is supported by high quality evidence, modern medicine is a no-brainer. An example of this may be use of antibiotics for a life-threatening infection, or orthopedic setting of bones after trauma.

If a baby is very ill, but the intervention has no or low quality evidence to support its use, the decision is difficult. An example may be a baby with a rare cancer, for which experimental chemotherapy may provide some benefit. In these unfortunate cases, the parent's philosophy and the doctor's experience may be valuable in deciding which course to take. Perhaps Jesus himself best described the optimal approach to dealing with medicos:

But when Jesus heard that, he said unto them, "They that be whole need not a physician, but they that are sick."

Matthew 9:12, KJV

We ought to resist interventions that lack high quality evidence, unless we are very sick. This philosophy leads us to the heuristic described by Taleb called "via negativa." Because few modern interventions have an evidence base, and few of us are very sick, a good rule of thumb is that our

lives can be improved by simply removing harmful interventions. Examples could include cigarettes, chairs, shoes, sugar, iPhones, Facebook, sunscreen, cars, etc.

Further, pharmaceutical companies are under financial pressures to find diseases and satisfy the security analysts. They have been scraping the bottom of the barrel, looking for disease among healthier and healthier people, lobbying for reclassifications of conditions, and fine-tuning sales tricks to get doctors to overprescribe. Now, if your blood pressure is in the upper part of the range that used to be called “normal,” you are no longer “normotensive” but “pre-hypertensive,” even if there are not symptoms in view. There is nothing wrong with the classification if it leads to healthier lifestyle and robust *via negativa* measures – but what is behind such classification, often, is a drive for more medication.

I am not against the function and mission of pharma, rather, its business practice; they should focus *for their own benefit* on extreme diseases, not on reclassification or pressuring doctors to prescribe medicines. Indeed, pharma plays on the interventionism of doctors.

Another way to view it: the iatrogenics is in the patient, not in the treatment. If the patient is close to death, all speculative treatments should be encouraged – no holds barred. Conversely, if the patient is near healthy, then Mother Nature should be the doctor.

Taleb

We can now generalize our previous table to address all situations and questions of intervention.

	High Quality Evidence	No/Low Quality Evidence
No urgent danger	Modern evidence based practice	Traditional practice
Urgent danger	Modern evidence based practice	A difficult decision

Let's consider four questions.

1. It's 1930 and ((Robert Moses)) wants to build highways on the NYC waterfronts. Should he?

Is there an urgent danger? – No

Is there high quality evidence of the net benefits of waterfront highways? – No

Therefore our answer is:

No. In this case we should favor traditional practice to modern intervention.

2. There is a local smallpox outbreak. Should I be vaccinated before I contract the virus?

Is there an urgent danger? – Yes.

Is there high quality evidence of the net benefits of smallpox vaccine? – Yes.

Therefore our answer is:

Yes, you should follow the modern evidence based practice.

3. I feel healthy and have no symptoms of disease. My doctor measured my blood pressure and it was 195/121 mmHg. She recommends that I begin drug therapy to lower my pressure. Should I?

Is there an urgent danger? – No.

Is there high quality evidence of the net benefits of drug therapy for patients with blood pressures at this level? – Yes.

Therefore our answer is:

Yes, you should follow the modern evidence based practice.

4. Should I wear shoes?

Is there an urgent danger? – Yes, my feet might get hurt.

Is there high quality evidence of the net benefits of shoes? – No.

Therefore our answer is:

This is a difficult decision. Your course of action should depend on the true risk of danger, conventional attitudes on the subject, difficulty in executing the intervention, laws, etc.

In conclusion, medicos are being naughty when they give “expert advice” to healthy patients without high quality evidence to support their claims. Alas, nearly all nutritional advice is of this quality. This is why doctors’ recommendations and “expert” editorials can be so contradictory – none of them have the appropriate authority to say what is actually true.

The Fundamental Error of “Evidence Based” Decision Making

The term “evidence-based” decision making is often invoked to lend an air of scholastic authority to a debate or discussion. Although evidence based decision making is in theory the optimal approach, we have seen that in many cases there exists no relevant evidence. Furthermore, we ought to be skeptical that any purported evidence is really of the high quality variety, as most topics of real human interest are simply not amenable to such study – and this is without assuming any deliberate deception on the part of the research patrons, which is a growing problem now that most researchers are employees who work for a paycheck rather than independent aristocrats as in the past.

Despite their good intentions, “evidence-based” proponents are often the unwitting perpetrators of another error of judgement, often made by individuals who have spent too much time in school. I call this error “fundamental,” as committing it completely undoes the real value that high quality evidence can bring to decision making.

The Fundamental Error of Evidence Based Decision Making:

A modern intervention based on low quality evidence should supersede
a traditional practice based on no evidence.

This is an error. It is wrong because low quality evidence is very often worse than no evidence for decision making. It increases our confidence, but does not increase our knowledge. The correct approach is:

A modern intervention based on low quality evidence *should not* supersede
a traditional practice based on no evidence.

Medical decision-making is rife with examples of this fundamental error, often committed by well-credentialed individuals in influential positions. A few examples of the error are below:

With all due respect, we don't have hardly any paleo research on coronary artery disease, in fact we have none. And we have over 3000 vegan studies on coronary artery disease. And I'm still driven by evidence based medicine.

Joel (((Kahn))), Cardiologist , MindBodyGreen.com interview

Bradley Straatsma, M.D., was interviewed by the U.S. News and World Report for its April 25, 1977 issue. When asked "Is too much reading harmful?," Dr. Straatsma replied, "We do have scientific questions about the use of the use of eyes for close work – reading specifically- and its relationship to the development of myopia. In practical terms, however, we have no evidence that the use of the eyes for reading is detrimental."

The Myopia Myth

I've looked into this paleo diet and what little data (aside from "experts" pontificating) I can find seems to support it. I conclude that there must be something to it. But, I won't be treating it as a panacea. It inspires me to increase consumption of lean meat vs processed meat and to reduce consumption of starches. That's not hard, though, I already don't like starchy food. Long story short: It sounds good, but don't go all in just yet.

Internet commenter

Senators don't have the luxury that the research scientist does of waiting until every last shred of evidence is in.

George McGovern

Let's also look at a couple examples of thoughtful decision-makers who are caught fighting against the fundamental error in their own work:

If anthropological evidence on infant sleep and development were integrated and used as a starting point to inform infant sleep research, there is no doubt that the question we would be asking is not if it is safe for an infant to sleep next to its breast feeding mother, but rather, is it safe not to!

Why is the burden of proof on the environmentalists? We are doing nothing that could be considered harmful. Let those who are taking payment for prescribing concave lenses

prove that what they are doing is not harmful. Let them conduct studies which prove that concave lenses do not hasten the progress of myopia.

If someone tells you that you don't have "evidence" to doubt their claim about health, don't let that affect your decisions. Philosophy, not "evidence" is the key to making safe decisions under uncertainty.

Religion is a Bastion of tradition and embodied wisdom in practice

Whoever forsakes the old way for the new knows what he is losing but not what he will find.

Having introduced the meme as the unit of cultural selection, let's now use concrete examples to show how meme frequency and age correlates inversely with a meme's detrimental impact on a society. Keep in mind that "detrimental impact" here is meant in terms of survival and reproduction of members of that society, and that "detrimental" and "destablizing for societies" mean the same thing. Many perisitant and common memes which improve survival and reproduction can be argued to be "detrimental" in an ethical sense. Some readers may even consider human survival and reproduction itself detrimental! But our focus in the book is on how old memes are more likely to keep us safe – and biological safety is associated with increased survival and reproduction.

Religion is an example of a meme that has increased societal stability. In discussing this idea online, I once recieved this criticism:

The mid east is incredibly stable due to religion. Europe has never had a war because they had religion. You're giving it far too much credit, the only time a religion is stable is when a particular brand of it controls an entire region or continent, even then you get protestant vs catholics, sunni vs shia vs souffi. It's devisive to everyone, and all claim they are the only ones who are right, most are admonished to kill unbelievers if they don't convert.

It is of course true that religion can be divisive, and religious rivalries exists. Religious supernatural claims may be dubious, and religion may lead to intolerance. But perhaps tolerance itself may lead to the end of societies. "Stability" in my definition does not mean a lack of war, it simply refers to a society's ability to persist and thrive over long periods.

They knew and valued the advantages of religion, as it is connected with civil government. They encouraged the public festivals which humanise the manners of the people. They managed the arts of divination, as a convenient instrument of policy: and they respected as the firmest bond of society, the useful persuasion that, either in this or in a future life, the crime of perjury is most assuredly punished by the avenging gods.

Gibbon

Common world religions do this in a number of ways. First they are self perpetuating, as parents indoctrinate their children into their same religion. Secondly, they encourage members to convert others. Thirdly, they encourage procreation. Fourthly, they impose an omnipotent enforcer of the traditional prescriptions. These ways are obvious. It is likely that religion is a stabilizing force for society in other subtle or unknown ways as well.

Religion is more than a single meme. It is better described a memplex, a collection of memes. Another example of a stabilizing meme that is very old and common in human societies, and tends to be associated with religion is monogamous marriage and prescriptions against adultery.

Monogamy is older than religion, though humans have a tendency to be imperfectly monogamous. An interesting finding in mammals is that the average size difference between males and females is linked with mating behavior. In species where males and females are of equal average size, such as gibbons, monogamous pair-bonding is most common. In species where males are on average much larger than females, such as gorillas, males tend to develop "harems" of many females. In these species, many males do not get a chance to mate.

Humans are somewhere in between gibbons and gorilla, with men tending to be larger on average than women. A consequence of our biology is that the fittest men with access to the most resources would accumulate, on average, more than one female. Because males and females are born at the same rate, this leads to some less fit males with access to no females. In hippos and elephant seals for example, these less fit males are beaten in physical contests by the stronger males, who maintain control of their harems. The "unfit" males may never mate at all. This, to a lesser extent, likely occurred among early humans as well.

But human technology has changed this natural state of affairs. The earliest clear evidence of human weapons such as spears is hundreds of thousands of years old. Spears or other weapons are a killer-app for intraspecies rivalry. Physically unfit males with weapons now pose a much more significant threat to their fit rivals. This technology may have also democratized control of important resources, such as food animals. Furthermore, cooperation among groups of unfit males could greatly shift the balance of power.

Human groups that maintained the natural tendency for fit men to accumulate women while unfit men went sexless put themselves at an increasing risk of overthrow by teams of armed, sex-deprived men. In order to avoid this underclass of angry sexless men, strict monogamous regulations were instituted to curb our natural tendencies. Any society while developed in the absence of the strict monogamy meme put itself at risk of revolution, and change of memes. The fact this revolution was a real and powerful threat to societies is evident in the global predominance of strict monogamous marriage in most cultures.

The meme of monogamous marriage was eventually enshrined in the religious memplex, and made more palatable with the poetic concepts of chastity, fidelity, honor etc. Associated memes were added to discourage divorce and remarriage, female pre-marital sex, and female promiscuity in general. In traditional Abrahamic religions, these sins are punished by God. Today in the West, enlightened legal and ethical scholars accidentally have undone this ancient stabilizing force. As a result, we have reverted somewhat to the natural state of successful men claiming multiple women at the expense of male "losers."

Another example of a meme that was adopted into the religious memplex is the prohibition against non-procreative sex. Reasonable people today recognize that there is nothing unethical about most consensual sex practices. But we must not be so naive as to assume we are the first generation who realized this. Why do religions tend to have regulations against these practices? Possibly because religions that encouraged non-procreative sex were out-procreated.

Certain stabilizing memes overlap with biological instinct. An example of this is the human tendency to avoid incest, along with our laws and prohibitions against this practice. Incest is well known to lead to decreased fitness. In this case, there is both genetic and memetic selection pressures against this practice. This is why sex between relatives still *seems* wrong, even when it is consensual, and no offspring result.

Let's consider the modern religious stance against, atheism, female promiscuity, and non-procreative sex. Of course these actions are not unethical. Consenting adults should be allowed to do whatever they want. But the unfortunate reality is that societies allowing or encouraging atheism and contraception may be outbred by others. The religious Mormons, Muslims, and Catholics have religious memplexes that may be better at encouraging societies to persist. Non-religiousness represents a competing, destabilizing meme. It is destabilizing since there are typically none of the "arbitrary" religious prescriptions against birth control, or pre-marital sex, and for traditional gender roles.

Keep in mind that the personal beliefs of members of a society do not matter here, only their behavior. A society which adheres to religious traditions, but whose members are inwardly atheist would be as stable as a honestly religious society. For example, if an atheist is outwardly Catholic, and does not use birth control, that society stability benefit of Catholicism is maintained.

There are other examples of memes which are unusual from a global and historical perspective. Due to their absence in world history, we can expect that they have some detrimental effect on societal stability. Universal suffrage in a democracy is a good example of a meme that has not stood the test of time. We happen to live in a time where this is the norm in developed countries. Perhaps this is better than the alternatives from an ethical standpoint. But the vast majority of societies have been ruled by some sort of aristocracy, and perhaps this is because those societies outcompete the alternatives.

It may therefore be asserted, as a general proposition, that the purpose of a democracy in the conduct of its legislation is useful to a greater number of citizens than that of an aristocracy. This is, however, the sum total of its advantages.

Aristocracies are infinitely more expert in the science of legislation than democracies ever can be. They are possessed of a self-control which protects them from the errors of temporary excitement, and they form lasting designs which they mature with the assistance of favorable opportunities. Aristocratic government proceeds with the dexterity of art; it understands how to make the collective force of all its laws converge at the same time to a given point. Such is not the case with democracies, whose laws are almost always ineffective or inopportune. The means of democracy are therefore more imperfect than those of aristocracy, and the measures which it unwittingly adopts are frequently opposed to its own cause; but the object it has in view is more useful.

De Tocqueville

Religion has additional stabilizing functions. It serves as a safeguard for traditional wisdom and practice. The book *Religion for Atheists* does a good job in describing some potential benefits of these traditions in domains such as community, education, art, architecture, and emotional support and fulfillment.

file: 1390608610198.jpg (35 KB, 254x300, scribe2.jpg)



Anonymous 01/24/14(Fri)19:10 UTC-5 No.29757715 Replies: >>29758315 >>29758618 >>29758664 >>29759193 >>29760465 >>29760622 >>29760818 >>29760899 >>29760903 >>29761003 >>29761055 >>29761087 >>29762176

- >Be Irish monk
- >Spend childhood learning to read and write
- >Love books and knowledge, particularly the Ancient Greek authors (why is Plutarch so based?)
- >Spend most of my life copying books by hand
- >Fucking Vikings attack
- >Run away carrying all the books I can
- >Find new monastery, start all over again
- >Have to trek all the way to Rome to get copies of burned books.
- >Beaten and robbed by bandits on the way, left for dead
- >Fall sick
- >Spend months in a farmer's cottage healing
- >Get on ship
- >Ship attacked by more Vikings (why do people today idolize these assholes?)
- >Spend year as a slave

- >Escape, continue on to Rome
- >Spend months petitioning the Pope to give me copies of the lost books
- >Start back home
- >Almost drowned in a storm on the way back
- >Attacked by bandits again
- >Almost killed
- >This time am saved by a local king, still I almost shit myself
- >Get back to monastery
- >Spend the rest of life copying books so future generations will have the knowledge.
- >1500 year later
- >Be in heaven
- >Look down to see what happening
- >See fedora-fags writing

"Oh if only the Church had never existed society would be so much more advanced because of how hard they worked to burn books and destroy knowledge." Yes if there were no Christianity we'd be in space age society by now, fuck those guys."

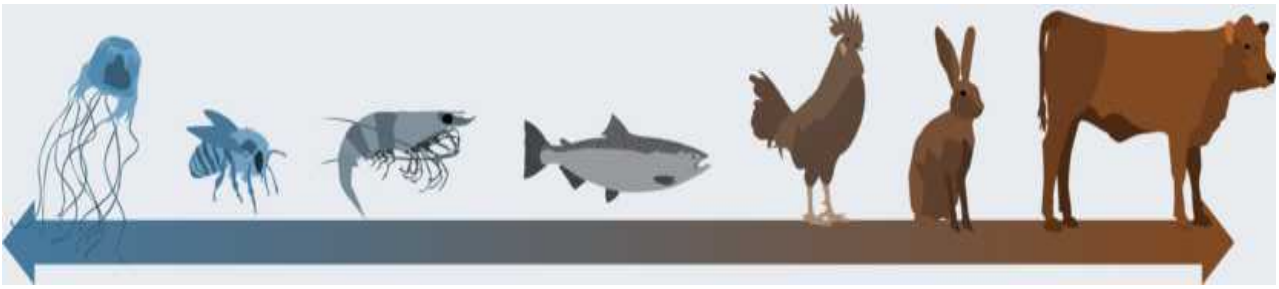
>mfw

While the harms of religion are easy to identify, many of the benefits of religion are opaque.

Scientists don't know what they are talking about when they talk about religion. Religion has nothing to do with belief, and I don't believe it has any negative impact on people's lives outside of intolerance. Why do I go to church? It's like asking, why did you marry that woman? You make up reasons, but it's probably just smell. I love the smell of candles. It's an aesthetic thing.

Taleb

For the purposes of viriculture, it does not matter why religion leads to stable societies. It is enough to note that memes which produce stable societies are unlikely to be harmful to people's health. This is because, if they were overtly harmful, societies holding healthier memes would, over time, have a survival and reproduction advantage, allowing for gradual conquest and meme replacement.



Animals

Posted on [admin](#) Posted in [Book](#)

People seldom do what they believe in. They do what is convenient, then repent.

((Bob Dylan))

Animal products have been used by all traditional human societies. We have evolved to find animal foods delicious, and we find products made from animals useful or beautiful (wool socks, leather jackets, Kolinsky sable watercolor brushes). As hinted at previously, animal foods are required for viriculture. However, many animals have brains and feelings. This creates a controversy over whether we should be using animals to satisfy our own needs. This interlude is a discussion of how we can deal with this dilemma.

It is important that we distinguish the *ethical* question of using animal products from the *health* question. It may be true humans thrive on a diet high in animal products, but the methods used to raise and obtain those animal products are unethical. Therefore, we must address these two concerns independently, weigh them, and then discuss practical solutions.

We saw in [a previous post](#) that the modern “enlightened” advice to eat a plant-based diet is based more in ideology than evidence. Humans are naturally omnivorous, and some human societies eat few animal foods. But all traditional human societies eat and enjoy animal foods when they can get them.

How do we know that eating meat is superior for growth and development? Obviously there is no high quality evidence to support this claim. Ultimately, it is based in philosophy, our understanding of evolution, and observations of traditional peoples. This will be explored in greater depth in the next chapter, but believe me, I really wish it were true that we could optimally develop our children on vegan diets – sadly this is not the case.

If we concede that animal products are useful for viriculture, we must still explore the the ethics of using animals. Just like the medical industry and the grain industry, there is an animal products industry whose main goal is maximizing profits. Corporate profit maximization is useful in some domains, but when the “products” on the assembly line have brains and feelings, conflicts of interest arise. The same conflict of profits vs suffering that we recognize in human slavery exists with the animals we raise.

Nearly all animals we raise for their products are enslaved and tortured. While there is a range of evilness, the vast majority is so abusive that no thoughtful person can be proud to support it. The

true nature of this industry is well known, but if you haven't seen it for yourself, some Youtube videos could quickly bring you up to speed. These evil practices continue because we want our animal products as cheap as possible. Vegetarianism and veganism are attempts to solve this problem.

Of course, animals are different than people. Certainly they are dumber than we are. But anyone with a dog knows that they share many of our emotions, and certainly our capacity to suffer. We rightfully are kind to mentally handicapped humans, even if they are not smart, because we know they have feelings like we do. In fact, intelligence is irrelevant in our decisions not to torture or enslave fellow humans. It should be so as well with animals. This is why vegans can accurately consider themselves ethically on par with abolitionists of the past.

For the true enslaver of a people is he who can put an end to their slavery but has no care about it.

History of the Peloponnesian War, Thucydides, circa 400 BC

Veganism is a logically consistent way to deal with the problem animal torture. Even if we are somewhat less healthy as a result of the diet, many vegans justify this self-sacrifice. Here is one example from a reddit.com comment:

I'm vegan and have been for 6.5 years, and will never go back. I don't know if it's more healthy (though of course it's cholesterol-free!), but I wouldn't care anyway. Obviously my diet isn't BAD for my health. Is it optimal? I don't know. Would that make a difference to me? Absolutely not. The suffering of hundreds or thousands of creatures isn't worth me having the end all be all healthy diet.

I mention all this because I'm afraid you may be going about this the wrong way. There are tons of studies that will tell you a whole foods, vegan diet is the way to go. Others will tell you that having a little fish or chicken in your diet is even better for you. But if you're trying to compile evidence on your own, you don't start by trying to prove how a vegan diet is healthiest. You look at evidence and weigh both sides.

That said, when a total casual tries to tell me about whether my diet is healthy or not, and then goes and smokes a cigarette or stuffs his face with some Cheetos, a great rage wells up within me.

In some ways I agree, however if we are considering becoming parents then this attitude is no longer justified. The dangers to your child of a vegan diet should not be ignored. Anyway there are other ways to avoid animal torture than veganism.

Vegans also object to animal products on the grounds that living things should not be killed. Ultimately, philosophical belief determines whether a good life can compensate for an early death. My own belief is the act of killing an animal itself is less important than whether the animal suffered in its life. I think we ought to treat animals the way we would like to be treated. If someone was nice to me and took good care of me my whole life, and then one day snuck up behind me and shot me in the head, who am I to care? Furthermore, not all animals merit equal consideration. Sea sponge and mussels seem to me to animals suitable even for "vegan" consumption. These

considerations ought to be based on the presence of a nervous system capable of feeling pain. As Todd Ingram says,

I partake not in the flesh nor the breast milk nor the ovum of anything with a face.

Scott Pilgrim vs. the World, 2010

In the Abrahamic tradition, God gave man dominion over animals. God also gave man dominion over his family. In neither case is the man at leisure to abuse or neglect. The very words “husband” and “pastor” are used both for humans and for our farm animals. In both cases, the implication is that he manages, cultivates, and cares.

How our animals were treated while they were alive should be our primary concern whenever we use their products. Animals should be provided with conditions in which they behave naturally. As we saw above, this is rarely the case. Even the “organic” label doesn’t guarantee welfare. The US legal criteria for organic is:

Organic meat, poultry, eggs, and dairy products come from animals that are given no antibiotics or growth hormones. Organic food is produced without using most conventional pesticides; fertilizers made with synthetic ingredients or sewage sludge; bioengineering; or ionizing radiation.

Unfortunately, this organic certification does not guarantee an adequate level of welfare. The best insurance that your animal products are non-evil is to buy from a nearby farm that you have inspected first hand. These small operations exist near every major city, and a quick internet search will find them. This ought to be done for all animal products, including meat, milk, leather, fur, wool, hairs, feathers, etc.

I insist that every time we use animal products, we ought to look into the practices of the specific farm the animals came from. Of course not all animal products come from farm animals. The wild animals we eat had the luxury (unlike most of us) of living free. Wild animals quickly killed seems to me greatly ethically superior to nearly all meat sold in grocery stores.

Wild fish present a special complication to ethical consideration in animal products, because they are the most likely of our foods to be vulnerable in terms of conservation status. Certain species of fish are overfished. This is an issue in itself, but also creates a chain of unintended ecological consequences. Lists of fish and their conservation status exist, which can help us navigate these issues. A useful heuristic for Americans is to buy fish caught on US waters, as the regulations for overfishing are stricter than South America or Asia, for example. But even so, complications arise. Not all salmon are equal, for example. Some are great, others are evil and toxic. Not all tuna are equal. Some get canned, and others are tracked down with helicopters and priced at \$100 a pound.

If taking the time to identify the provenance of our animal products seems inconvenient, you are right. But the benefits are worth the effort. Firstly, you avoid the severe abuse that is common among most animal products. Secondly, animal products raised humanely often have superior meat, milk, and eggs, both in terms of flavor, and nutrient content. And lastly, you establish relationships with real farmers and fishermen sincerely interested in producing high quality, untainted food; and thereby avoid paying tribute to the industrial food monstrosities of Kraft, Nabisco, ConAgra, Monsanto, and company.

If you are sincerely concerned about using only non-evil animal products, but are yourself poor, do not despair. I spent eight years using these sorts of animal products exclusively on total annual income of no more than \$25,000 a year including housing in Boston and NYC. The practical details of how to actually go about buying these sorts of animal products are discussed in the lifestyle considerations chapter.

The Problems with Vegetarian, Vegan Weight Loss and Health Propaganda aimed at women of childbearing age.

When we try to convince others about something, we use as many lines of reasoning as possible in our argument. Naturally, this has happened in the vegetarian and vegan communities. The ethical argument made by vegans is unquestionably valid. However vegetarian propaganda often seems to emphasize a health argument as well. The health benefits of plant based diets are dubious, and such a diet is harmful to viriculture.

The situation is even worse among non-vegan vegetarians. These people eat eggs and dairy, and often the evil industrial varieties. In doing so they fail to uphold the ethical goals of vegetarianism. But they also, under a false understanding of diet and health, eschew eating many animal products essential for viriculture. This sort of vegetarianism is especially popular among college age women. They are not strictly principled about it, and can't logically defend their practice. They don't care about the ethics. They have a vague belief that being vegetarian will keep them from being fat. They are afraid of actually consuming fat. They buy factory-farmed eggs, cheese, leather shoes, leather purses, leather seats, wool sweaters etc. This is why, to me "vegetarianism" represents the worst of both worlds – not ethical and not healthy.

Sadly, the adoption of pure veganism by the most compassionate, intelligent, logically consistent, and socially responsible young women will only speed the decline of those very traits in the next generation. Veganism leads notoriously to anovulatory cycles in women (our bodies telling us we are not ready to have children). Such women are easily outbred by people who buy their hot dogs at Walmart. Even if they do manage a conception on a vegan diet, the outcomes in terms of growth and development will be poor.

The influence of maternal diet on the foetus is excellently illustrated in the results of the "fruit diet" advised by certain vegetarians. Here the children become, as Elise Berwig has recently shown, rickety, irritable, peevish, liable to convulsions, morally peculiar, and otherwise defective in contrast with children born of the same parents without "fruit diet" during pregnancy.

Degeneracy: Its Causes, Signs, and Results, Talbot, 1898

Vegan breastfeeding has caused an 11 month old baby to die and the parents are charged with neglect after an autopsy indicated the baby suffered from deficiencies in vitamin B12 and Vitamin A – both known to be critical to a child's development and sorely lacking in a vegan diet.

Vegan Breastfeeding Kills Baby, thehealthyhomeeconomist.com

I fear that the most educated socially responsible women who realize the ethical merits of veganism will be duped by the false health claims into having poorly developed children.

While I doubt that good viriculture can be achieved through vegan diets, it may very well be possible to achieve good viriculture with a vegetarian diet (including eggs and dairy). If a mother wants to attempt this, the rules of seeking out ethical animal products should be followed.



Non-Education Viriculture – Part 1, Prenatal Nutrition

Posted on [admin](#) Posted in [Book](#)

Now, dear Sir, what if any accident had befallen him in his way alone!—or that through terror of it, natural to so young a traveller, my little Gentleman had got to his journey's end miserably spent;—his muscular strength and virility worn down to a thread;—his own animal spirits ruffled beyond description,—and that in this sad disorder'd state of nerves, he had lain down a prey to sudden starts, or a series of melancholy dreams and fancies, for nine long, long months together.—I tremble to think what a foundation had been laid for a thousand weaknesses both of body and mind, which no skill of the physician or the philosopher could ever afterwards have set thoroughly to rights.

Tristram Shandy, Sterne, 1759

With all of the background out of the way, we can finally turn to recommendations for viriculture itself. This series of posts is my prescription for how best to develop our children outside of

education. It is the soul of the work, and my main message. It's sister series, *Educational Viriculture*, rounds out the discussion.

Physical development overlaps with mental, emotional and social development. The same children who never reach their physical potential due to neglect suffer emotionally and socially as well. Many very important physical and cognitive aspects of human excellence stabilize before formal education has even begun. Pre-educational influences are of great import to a child's mind as well as her body.

Indeed, many valuable human traits are subject to environmental influencers of development but have nothing to do with education. Examples include beauty, height, and strength. Even IQ, which we erroneously attribute to learning, is really quite independent of education. Because they are subject at least in part to environmental influences, they are potential targets for viriculture.

Traditional child rearing practices have largely been replaced in the United States. However, this modernization was not motivated by high quality evidence demonstrating that the new practices are superior to the old. In fact, little evidence exists to help decide which child rearing practices are best for viriculture. Because of this lack of evidence, we can expect that the safest practical choice for viriculture is to revert to more traditional practices. Ought we to change all of our child rearing practices to more traditional versions? No, we can be selective. However we can also expect that, in the absence of evidence, traditional child rearing practices will tend to be safer and superior for viriculture than modern interventions.

We shall see that some of those solutions—for instance, some of the ways in which traditional societies raise their children, treat their elderly, remain healthy, talk, spend their leisure time, and settle disputes—may strike you, as they do me, as superior to normal practices in the First World. Perhaps we could benefit by selectively adopting some of those traditional practices. But we should also not go to the opposite extreme of romanticizing the past and longing for simpler times.

The World Until Yesterday, Diamond, 2012

How do we know what traditional child rearing practices are? The answers come to us through anthropology. Through detailed observation of “primitive” societies, and extensive analysis of ancient ones, anthropologists have identified changes that occur with the shift from a traditional society to a modern one. These broad trends are of the greatest interest to us, because those memes that were universally shared by ancient or “primitive” cultures (but abandoned by our own) are most likely to prove advantageous for viriculture. Essentially, we ought to be selective and demand evidence, but only when replacing traditional practices with modern ones.

What are some of the child-rearing practices that are common in the modern world, but unusual in the broad view of human history? Below is a list of traditional practices with their corresponding modern “improvements.” In each case the “improvement” is dubious.

Traditional Practice	Modern "Improvement"
Extended family lives together	Nuclear family lives together
Butter, Cream	Margarine, Skim Milk
Apprenticeship, atelier	"College" (Expensive vocational school)
Traditional gender roles	Men and women educated the same
Towns	Suburbs
Breastmilk	Infant Formula
Fault Divorce or No Divorce	No Fault Divorce
Walking	Cars
Training	Textbooks
Education as part of life	School
Mother sleeps with baby	Baby sleeps alone in a crib
Mother nurses on demand	Mother nurses on schedule
Children of all ages play together	Children age segregated

Some of these examples can lead us to solutions for viriculture. Breastfeeding instead of infant formula is useful for non-educational viriculture. Encouraging training instead of textbook learning is useful for educational viriculture.

There are some cases in which modern interventions without evidence may be warranted. This includes technology that allows us a more close approximation of a traditional environment. Taleb uses the example of modern floor to ceiling glass-pane windows, an architectural development that allows us to return to the traditional aesthetic experience of natural surroundings. Other examples include minimalist shoes, reverse osmosis water filtering to remove artificial contaminants from water, “artificial foreskins” for circumcised men, sunlights for people with dark skin during temperate winters, and using electric fencing to mimic natural patterns of herd migration in ranching. If it turns out that our modern facial deformities are due primarily to a decrease in the mechanical consistency of food, dense chewing gum may be a modern intervention that could help approximate our traditional environment.

In this series we explore the details of non-educational viriculture – those practices which are practically most likely to ensure optimal development of a child’s body, face, mind, and emotions.

When mankind will properly love *and* marry and then rightly generate, carry, nurse and educate their children, will they in deed and in truth carry out the holy and happy purpose of their Creator. See those miserable and depraved scape-goats of humanity, the demented simpletons, the half-crazy, unbalanced multitudes which infest our earth, and fill our prisons with criminals and our poor-houses with paupers. Oh! the boundless capabilities and perfections of our God-like nature and, alas! its deformities! All is the result of the ignorance or indifference of parents. As long as children are the accidents of lust instead of the premeditated objects of love, so long will the offspring deteriorate and the world be cursed with deformities, monstrosities, unhumanities and cranks.

[A post on traditional wisdom](#) explored which situations traditional child-rearing practices are most valuable – when baby is healthy and doctors don't have evidence-based advice. We have seen descriptions of “ancient” practices at work among traditional people, but how can we achieve them for our own children?

Whether through intentional imitation or independent discovery, a few moderns have adapted these practices to our world. Various organizations and books provide parents with the tools to achieve a close approximation to traditional infant care in our society. These groups have different focuses, but networks of support exist to aid mothers in pre-natal nutrition, gestation, birth, nursing, and infant care.

Parents are an appropriate age

Special pre-natal nutrition, continuing through gestation and nursing,

Pre-natal and natal fitness/exercise

Minimum 3 year birth interval

Relaxed lifestyle during pregnancy

Natural birth

No circumcision

Constant contact between mother and infant

Nursing as exclusive feeding for 6 months with supplemental nursing for years

Sleeping with infant

Elimination Communication

These practices differ greatly from the contemporary American norms. For example we do not push mothers to participate in a period of special feeding before pregnancy; there is little emphasis on maintaining a three year birth interval; women often work away from their baby soon after delivery; only about 1/4 of American mothers breastfeed exclusively for six months, and sleeping with infants is considered dangerous. It is considered “liberating” that mothers are now free to live however they prefer, but the loss of traditional social pressures has come at the expense of good child development.

Behold now, thou art great with a man-child; nourish him well and with good heed, and the child shall be the noblest and most famed of all our kin.

Volsung Saga, circa AD 1200

Some of the practices listed above may be so foreign that readers may dismiss them as impractical or even too silly to attempt. Below I provide a description and justification for each, as well as reference to my favorite resources to achieve them in practice.

Prenatal and Gestational Diet of the Mother

“There can be no doubt from these findings that, if the mother’s diet during pregnancy is poor, she will in all probability have a poor infant from the standpoint of physical condition. If the mother has a good or excellent diet, she will probably have an infant in good or excellent condition.”

Let’s Have Healthy Children, Davis, 1951

While it has been known that certain injuries were directly related to an inadequate nutrition of the mother during the formative period of the child, my investigations are revealing evidence that the problem goes back still further to defects in the germ plasms as contributed by the two parents. These injuries, therefore, are related directly to the physical condition of one or of both of these individuals prior to the time that conception took place.

Nutrition and Physical Degeneration, Price, 1939

Well prior to pregnancy, women must also accumulate in their bodies the necessary materials for building a well developed child. The importance of diet during pregnancy is well understood by medicos. Many large organizations have published guidelines for optimal health of the mother and child. Unfortunately, these guidelines tend to emphasize things that aren’t important, ignore very important topics, and present certain outright incorrect information.

The *Mayo Clinic Guide to Healthy Pregnancy* introduces the concept of pre-natal health in a section titled “Is Your Body Ready.” The first recommendations include visiting your doctor for advice, getting any missed immunizations, adjusting medications, stopping birth control, and stopping any drug use. The guide then moves on to important pre-natal vitamins and mineral supplements, such as folic acid, iron, and calcium. They mention that it is better to get vitamins from foods than pills. This is all good advice in general. However, in detail the pre-natal diet advice is not so good. The following come from the *Mayo Clinic Guide*:

Don’t eat too much salt

It’s nearly impossible to eat enough foods to get the 30 mg of iron you need daily during pregnancy. This is double the amount of iron needed by adult women who aren’t pregnant. Therefore, an iron supplement – along with a diet that includes iron-rich foods – is necessary

Shellfish such as clams, oysters and shrimp should be boiled four to six minutes

Skip medium or rare burgers or sausages.

Measure fish at its thickest part and cook 10 minutes per inch at 450

Eat Fortified Breakfast Cereals

Eat Bread

Eat Banana

Eat Lean Red Meat

Eat Tofu

Other similar recommendations suggest avoiding raw cheeses, sushi, lightly cooked eggs, cured meats, “liver,” etc. Most of this advice is given with the goal of avoiding a foodborne illness that may disturb the pregnancy. This is certainly a good aim. However, this comes at the expense of overcooking all your food – a totally non-traditional practice. In fact the “risks” of raw eggs, fish, dairy, and meat are more from the modern industrial food production system than the foods themselves. They can just as easily be avoided by buying decent non-evil versions of these products from responsible producers. Artisan raw cheese, and rare meats and fish should be considered health foods and certainly not avoided during pregnancy. Furthermore, the senseless emphasis on “lean” meat has no historical precedent, and no basis in science.

The dietary recommendations of the popular *What to expect when you're expecting* are similarly flawed. They emphasize the same enlightened modern diet of “lean protein, whole grains, a rainbow of fruits and vegetables, and healthy fats.” These pregnancy recommendations aim for a mediocre, rather than optimal diet. They seem to appeal to weak-willed readers, recommending low fat chips instead of full fat chips, yoghurt with cereal instead of ice cream, Fig Newtons instead of cookies, and grilled instead of fried chicken. Why do authors feel the need to pander to pregnant women by allowing them to indulge their sweet tooth “in moderation.” What basis is there for this allowance? Why not tell them the truth – that their indulgences come at the expense of their baby’s development.

Sprung from my bed a godlike hero came,

The bravest far that ever bore the name;

Like some fair olive, by my careful hand

He grew, he flourish'd and adorn'd the land

Iliad, Homer / Pope, circa 800 BC

A related book about pre-natal diet, *The Fertility Diet*, is another re-hash of modern diet “science,” being targeted to women of child-bearing age, and having the authority of being authored by a couple of MDs. This diet recommends the same enlightened lifestyle practices for health including lots of whole grains, fruits and veg, polyunsaturated fats from vegetable oils, and minimal red meats. The authors claim that this information comes from “science,” but of course no such science exists. It really comes from the Nurses Health study, an observational survey, not an experiment. These general recommendations for future mothers to avoid “bad” saturated fats is echoed in *Making Babies*, a guidebook about fertility and conception that states,

You do need to make smart choices about which fats you eat. And, of course, you need to eat them in sensible quantities... Saturated fats from animal products harm your heart and contribute to insulin resistance, endometriosis, and polycystic ovarian syndrome.

This is fear-mongering. Ironically, the highest quality piece of evidence on which *The Fertility Diet* book is based seems to conflict with the general thesis – a study conducted by one of the authors, titled *A prospective study of dairy food intake and ovulatory infertility*. The conclusion of this study is that women who consume *high fat* dairy are less likely to suffer anovulatory infertility than women who consume low fat dairy

In this cohort of healthy women, we found that intake of low-fat dairy foods was associated with a greater risk of anovulatory infertility, whereas intake of high-fat dairy foods was associated with a lower risk of this condition... Clarifying the role of dairy foods intake on fertility is particularly important since the current Dietary Guidelines for Americans recommend that adults consume three or more daily servings low-fat milk or equivalent dairy products (United States Department of Health and Human Services and United States Department of Agriculture, 2005); a strategy that may be deleterious for women planning to become pregnant.

Chavarro et al. 2007

Their evidence supports the use of traditional full fat dairy. Considering that the results of his own study clearly show the superiority of high fat over low fat intake for fertility, you might expect that *The Fertility Diet* would take the side that I do – that saturated fats have been unfairly demonized. This is not the case. In their starkly incongruous recommendations, they suggest women hoping to conceive eat “one serving of full-fat dairy” per day, but avoid butter! Their own study showed a dose-response of increased fertility with increased dairy fat. It seems crazy to think that the benefits end with the switch from one glass of skim to whole milk. For fertility, if skim is worse than whole milk, might whole milk be worse than heavy cream or butter? Certainly we can interpret this study as a contradiction of their own recommendation to consume polyunsaturated plant oils (a modern invention) in abundance – since the only difference between skim and whole milk is the saturated animal fats! In their defense, the authors of this study are trying to be responsible and not extrapolate their results. However, my own interpretation of this study is that increases in dietary saturated fat improve fertility.

Another study about conception and dairy products comes to a conclusion that I think is misguided. A 2006 report titled *Mechanisms of Twinning VII – Effect of Diet and Heredity on the Human Twinning* noted a five-fold decrease in the rate of twinning among vegan mothers. Twins tend to be less healthy than single babies, and so the authors made the recommendation that “women attempting conception should avoid milk and dairy products.” It seems to me that this advice is mixed-up – vegan mothers are less likely to produce twins because their bodies “know” that they cannot successfully gestate two children. The nutrients in dairy provide the mother with increased ability to gestate a child, making it more possible for twins to be brought to term.

Despite the flawed advice being foisted on pregnant women, not all popular pregnancy recommendations are so misinformed.

The body uses cholesterol in making hormones including progesterone and testosterone, and if you don't have enough cholesterol, you won't have the right building blocks to make hormones.

If we go back further in time, we get pre-natal diet advice that is even more in line with viriculture.

At no time during your life are your nutritional requirements so high as when you are pregnant or are nursing your baby. If you are to stay well and your infant is to be physically superior, your nutritional requirements must be met. Nature deals cruelly with any carelessness or failure.

Let's Have Healthy Children, Davis, 1951

We must remember that we are made of essentially bones, muscle, and fat. Should it be a surprise than that the foods most critical to the growth of a new person are indeed bone, muscle and fat? Jonathan Swift's satirical *Proposal* actually comes closer to a viriculture diet than that of the average modern mother. Modern diet insanity has pushed pregnant mothers toward eating salads, *Special K*, and "watching their calories." When the doctor actually does permit them to eat *ad libitum* (as should always be the case) the foods that might have provided true nutritive value – chicken or perhaps ice cream – are found in processed pseudofood versions utterly incompatible with viriculture. The "chicken" is breast meat with organs, fat, skin and bones removed, and the "ice cream" is frozen milk, with fat removed, sugar added, and stabilized with xanthan gum.

My Recommendations for Pre-natal Nutrition

A very important phase of my investigations has been the obtaining of information from these various primitive racial groups indicating that they were conscious that such injuries would occur if the parents were not in excellent physical condition and nourishment. Indeed, in many groups I found that the girls were not allowed to be married until after they had had a period of special feeding. In some tribes a six months period of special nutrition was required before marriage.

The scope of this work, accordingly, becomes of direct interest in many fields including the various branches of the healing arts, particularly medicine and dentistry, and the social organizations that are concerned with betterment of the racial stock. Similarly, the educational groups are concerned directly since, if we are to stem the tide by passing new information on to the parents of the new generation, it must be done prior to the time the emergency shall arise. This involves a system of education directed particularly to the high school age pupils.

Nutrition and Physical Degeneration, Price, 1939

Having dispensed with the standard medical advice, we are now ready to outline my prescriptions for optimal pre-natal and gestational nutrition for viriculture. In brief, in the years leading up to and during pregnancy, a woman should eat a varied, filling diet rich in high fat, high cholesterol, traditional real foods. These include fatty fish, fatty pastured meats, offal, bones/bone broth, and butter, supplemented with vegetables and fruit.

If you care about viriculture outcomes for you children, follow the rules and don't cheat!

Patterns of Eating

Viriculture Prescription #1: Engage in a period of special nutrition prior to conception. Maintain a high quality diet during gestation and nursing.

The best diet [during pregnancy], however, cannot overcome the harm done by years of living on cokes, coffee, cigarettes, and products made from white flour and refined sugar. The longer your diet has been inadequate and the more inadequate it has been, the longer you should stay on an excellent diet before conceiving.

Let's Have Healthy Children, Davis, 1951

In the first place, the primitive peoples have carried out programs that will produce physically excellent babies. This they have achieved by a system of carefully planned nutritional programs for mothers-to-be. It is important to note that they begin this process of special feeding long before conception takes place, not leaving it, as is so generally done until after the mother-to-be knows she is pregnant. In some instances special foods are given the fathers-to-be, as well as the mothers-to-be. Those groups of primitive racial stocks who live by the sea and have access to animal life from the sea, have depended largely upon certain types of animal life and animal products...The cattle tribes of Africa, the Swiss in isolated high Alpine valleys, and the tribes living in the higher altitudes of Asia, including northern India, have depended upon a very high quality of dairy products. Among the primitive Masai in certain districts of Africa, the girls were required to wait for marriage until the time of the year when the cows were on the rapidly growing young grass and to use the milk from these cows for a certain number of months before they could be married. In several agricultural tribes in Africa the girls were fed on special foods for six months before marriage.

Nutrition and Physical Degeneration, Price, 1939

Following those traditional peoples, women ought not conceive before they have undergone a period of feeding sufficient to accumulate the necessary material to gestate a fine baby.

Viriculture Prescription #2: Eat until you are full

Let your body guide you about when you are hungry and full. Do not try to count calories or follow "expert" advice about the proper amount of food to eat.

Viriculture Prescription #3: Do not fear missing a meal

Feasting and fasting characterized ancestral human diet. If you miss a meal, your body will compensate by having you eat more when you finally do get a chance. Varied intervals between food consumption is human. You do not need to follow a strict eating schedule, as long as you do not make a habit of going hungry during pregnancy.

Viriculture Prescription #4: Eat after exercise, not before

Traditional people exercise to find food, and then rest and relax after eating. This same pattern is likely safest for a gestating child.

Composition of Food

We, like the successful primitives, can establish programs of instruction for growing youth and acquaint it with Nature's requirements long before the emergencies and stresses arise. This may require a large-scale program of home and classroom instruction, particularly for the high school girls and boys. This would be in accordance with the practice of many of the primitive races reported upon in the following chapters.

If the individuals in our modern society who are sufficiently defective to require some supervision are in part or largely the product of an injured parentage, who should be held responsible? Is it just for society to consign these unsocial individuals which it has made to a life of hard labor or confinement in depressing environments? Is it just for society to permit production of physical and mental cripples? Many primitive races apparently have prevented the distortions which find expressions in unsocial acts. If so, cannot modern society do this by studying and adopting the programs developed through centuries of experience by the primitives? Nature uses a written language which, without the keys, is made up of meaningless hieroglyphics, but which, with the proper keys, becomes a clear story of racial and individual history. The hieroglyphics indicate racial and individual disaster for modernized groups who heed not the warning story. The primitive races have some of these keys and have used them successfully in avoiding many of the disasters of our modern society. The following chapters record many of the excellent practices of the primitives and they are presented here with the hope that they will be helpful in a program designed to relieve mankind of some of the misfortunes common in the present social order and to prevent disorders for future generations of civilized peoples.

Nutrition and Physical Degeneration, Price, 1939

Viriculture Prescription #5: Don't eat processed foods

This is a very important prescription for viriculture. Modern processed edibles should not even be considered suitable for human consumption. Even traditional processed foods, such as air dried salami, are not as wholesome if made a pillar of the diet.

Viriculture Prescription #6: Vary your foods

Day to day, as well as seasonally, foods should be different. Our instinctive taste for dietary variation is an evolved preference to help us avoid accidental nutritional deficiencies due to monotony in food consumption.

Viriculture Prescription #7: Cook from "first principles"

By this I mean only cook with foods made of one ingredient. This is easy enough for produce and meat. But in the case where we have to use foods that come in a can (such as tomatoes) or a carton (heavy cream), select versions that only contain a single ingredient.

Viriculture Prescription #8: Don't eat things that taste sweet, and especially don't eat sugar

They are British subjects, and where they have had supervision, in the districts near the ports and on those islands on which sugar plantations have been established, they have suffered very greatly from the degenerative diseases.

The individuals in the modernized districts were found to have widespread tooth decay. Many had facial and dental arch deformities and much susceptibility to diseases. These conditions were associated with the use of refined cereal flours, a high intake of sweets, canned goods, sweetened fruits, chocolate; and a greatly reduced use of dairy products.

Nutrition and Physical Degeneration, Price, 1939

Excepting some fruit, and the *occasional* sweet potato, avoid all foods that have a sweet taste. We evolved a taste for sweetness because it helped our ancestors survive and reproduce. However, in our modern setting sweetness is so intertwined with processed pseudofoods that avoiding sweetness is now a useful heuristic for maintaining a diet safe for viriculture.

Viriculture Prescription #9: Eat Plenty of Fat

As we saw in the [post on fat](#), it has been unfairly vilainized. In fact, abundant dietary fat is essential for viriculture. Not only is fat an abundant source of calories necessary for gestation, it is also the exclusive source of vitamins ADE&K, which are so critical to growth and development. This prescription only includes traditional fats, such as extra virgin olive oil, butterfat, lard, tallow, and fish oil. Modern fats that require advanced technology to extract, such as canola oil, safflower oil, shortening, and margarine, are dangerous pseudofoods that should be shunned.

Viriculture Prescription #10: Don't worry about saturated fat

In eating plenty of fat, do not fear consuming too much saturated fat. The risks, if any, to eating saturated fat *ad libitum* are infinitesimal for a woman of child bearing age. Furthermore, we have seen from experimental data that the addition of saturated fat, in the form of milkfat, increases fertility among healthy women. I suspect that this is because the body knows when it has the necessary building blocks to develop a fetus successfully, and resists conception otherwise. Saturated fat has not been proven dangerous, and is a component of traditional animal foods. It should not be avoided just because the AHA or your medico think they know what's best.

Viriculture Prescription #11: Don't worry about cholesterol

Just like saturated fat, warning against mother's eating too much cholesterol is bad advice. Gestating baby brains need cholesterol to grow. Sex hormones, which play a major role in dimorphism (and therefore attraction) are literally made out of cholesterol. Similair, out nerves and brains require cholesterol to function correctly. For viriculture, cholesterol should be considered a health food.

Viriculture Prescription # 12: Eat the entire animal

They cut out the thigh-bones, wrapped them round in two layers of fat, and set pieces of raw meat on the top of them. These they burned upon the split logs of firewood, but they spitted the inward meats, and held them in the flames to cook. When the thigh-bones were burned, and they had tasted the inward meats, they cut the rest up small, put the pieces upon spits, roasted them till they were done, and drew them off.

Iliad, 800 BC, Homer / Samuel Butler

Animal foods are most healthy if they are consumed in the way carnivores and traditional humans did – by eating all parts of the animal. For our purposes, that means that mothers should consume

not just muscle meat, but liver, bone marrow, eyes, brains, bones, and offal of our fish and food animals.

In the choice animal foods the primitive is likewise at an advantage. Instead of restricting his choice of flesh chiefly to muscle meat, which is the least nutritious of all animal parts, he is usually a whole-carcass eater, consuming all edible parts of his quarry. The vital organs are given particular preference, and these are of high nutritional value. The Indians of northern Canada make a special effort to include in their diet the adrenal glands and walls of the second stomach of all the moose they kill. The Eskimo prefers certain layers of skin in one of the species of whale. It is known that these animals parts are extremely rich in vitamin C, and thus are important for preventing scurvy, which otherwise might develop on a near-carnivorous diet. Many primitives also make it a point to consume the eyes of all fish, along with the tissues immediately back of the eyes. Recent nutritional inquiry indicates that these are of exceptional value; the eye retina and the tissues mentioned are among the richest of all animal sources in vitamin A content. The marrow of animal bones, so preferred by the primitive, adds as well to the supply of fat-soluble vitamins.

Nutrition and Physical Degeneration, Price, 1939

Viriculture Prescription # 13: Bones, marrow, and bone broth

Bone products and the sauces made from them provide a rich, delicious way of consuming the calcium, phosphorous, and other nutrients locked in animal bone. Bone marrow itself is also extremely nutrient dense.

Or, did you ever see a dog with a marrowbone in his mouth, —the beast of all other, says Plato, the most philosophical? If you have seen him, you might have remarked with what devotion and circumspectness he wards and watcheth it: with what care he keeps it: how fervently he holds it: how prudently he gobbets it: with what affection he breaks it: and with what diligence he sucks it. To what end all this? What moveth him to take all these pains? What are the hopes of his labour? What doth he expect to reap thereby? Nothing but a little marrow. True it is, that this little is more savoury and delicious than the great quantities of other sorts of meat, because the marrow (as Galen testifieth) is a nourishment most perfectly elaborated by nature.

Gargantua and Pantegruel, Rabelais, circa 1550

Bones are very wholesome foods, and rich people have always been making liberal use of them in their cooking. Consider the quantity of bone recommended by Escoffier, arguably the greatest chef of all time, for making just “Four Quarts of Plain Game Consomme:”

3 lbs. of neck, shoulder, or breast of venison

1 1/2 lbs of hare-trimmings

1 old pheasant or 2 partridges

4 oz. of sliced carrots, browned in butter

1/2 lb of mushrooms, likewise browned in butter

1 onion, oven-browned, with 2 cloves stuck into it

1 medium-sized leek and 2 sticks of celery.

1 bunch of herbs with extra thyme and bay leaves

Your local doctor might balk at the richness of classical French *haute-cuisine* (too much fat, too much cholesterol – eat dry quinoa instead), but he will also likely die younger than Escoffier, who lived to 88 in the days before antibiotics. The expensiveness and concentrated richness of this Classical cooking makes it excellent for viriculture. For those readers not ready to run a *brigade* in their own kitchen, home cooks have traditionally made many rich and delicious dishes with bones stock made from left over beef bones and chicken frames. Instead of throwing out these precious bones – thereby throwing out your children’s potential future bones as well- save them in the freezer until there are enough to make a concentrated stock.

Viriculture Prescription # 14 : Eat abundant fatty seafood

During these investigations of primitive races, I have been impressed with the superior quality of the human stock developed by Nature wherever a liberal source of sea foods existed.

Nutrition and Physical Degeneration, Price, 1939

Observational studies have found higher birthweight among women with moderate to high intake of marine food, rich in n 3 long-chain polyunsaturated fatty acids (n 3 LCPUFA) during pregnancy, compared with women with low intake of marine food.

Relationship between dietary intake of cod liver oil in early pregnancy and birthweight,
Olafsdottir et al, 2005

Fatty fish makes excellent food for viriculture, provided that the fish we eat is clean. Published guidelines can help us source fish that is neither overfished, nor full of toxins such as organic mercury compounds or PCBs. For American readers, stick with fish caught in US waters, as the regulations ensures cleaner and more responsible food. These are real concerns, and may have a practical negative effect on viriculture, so be vigilant. Once you do find clean fatty fish, eat it a lot! It has everything need to develop growing children’s muscles, bones, and brains. Frying whole fish in butter provides a savory crunch that can be hard to find outside of modern pseudofoods. You should even eat the little bones for added nutrition, just don’t choke on them.

Viriculture Prescription # 15: Eat properly sourced animals

As discussed in our first interlude, most animal products are dirty and evil. There are many confusions with labeling here, since “organic” and “free-range” usually don’t mean what we might hope. Establishing a relationship with a butcher or farmer who embraces ethical practices is a helpful step to finding healthy pastured meat, dairy, and eggs. Eating fish has its own set of problems, including overfishing and accumulated toxins and heavy metals. Numerous guides exist online to navigate these difficulties, but it takes some effort.

Viriculture Prescription # 16: Eat high fat dairy

Full-fat dairy, such as butter, cream, or rich cheese make excellent foods for viriculture. Look for farmers or artisans making traditional versions. Modern industrial dairy cows are artificially

stimulated to produce additional milk with bovine growth hormones. These same cows suffer from infections at increased rates, and are routinely treated with antibiotics. Furthermore the industrial milk cow hardly spends her life pasture eating grass as we might expect a cow to do. These sorts of practices undoubtable have a consequence on the result dairy products. This industrial dairy has never been shown to be superior in any to traditional dairy, and is allowed simply because people want keep milk and butter at the grocery store. Like all animal products, the best choice is to find a responsible farmer with decent practices and buy your cream directly from him. Increasingly grocery stores are catering to consumers who realized the toxicity of industrial food, and many now carry dairy from responsible local farms. Some companies with decent practices have become national brands.

Viriculture Prescription # 17: Don't eat starchy foods

Although starchy foods are a source of calories, they are marginal foods for growth, lacking essentially all of the raw materials for good human development. They also displace more valuable foods for viriculture. A diet rich in starchy foods will no produce good viriculture outcomes, and really there is no reason to eat these foods at all, except that they are cheap.

Viriculture Prescription # 18: Don't drink coffee or caffeine

Coffee is a drug, and while it seems to be pretty benign in adults for health, drug use during pregnancy should be avoided. A number of studies have established that coffee during pregnancy is associated with a increased rate of spontaneous abortions, and this alone is reason to avoid it.

Viriculture Prescription # 19: Don't ignore Morning Sickness

Morning sickness is an evolved response to prevent pregnant mothers from eating things that may harm their fetus. Ignoring (or worse taking pills to suppress) morning sickness is not in the interest of the developing child. If a food gives you morning sickness, it might be best to avoid it, as your body knows more than we do about what is best.

described elsewhere [23,24]. During the period June 1987 to June 2000 (months) [25].

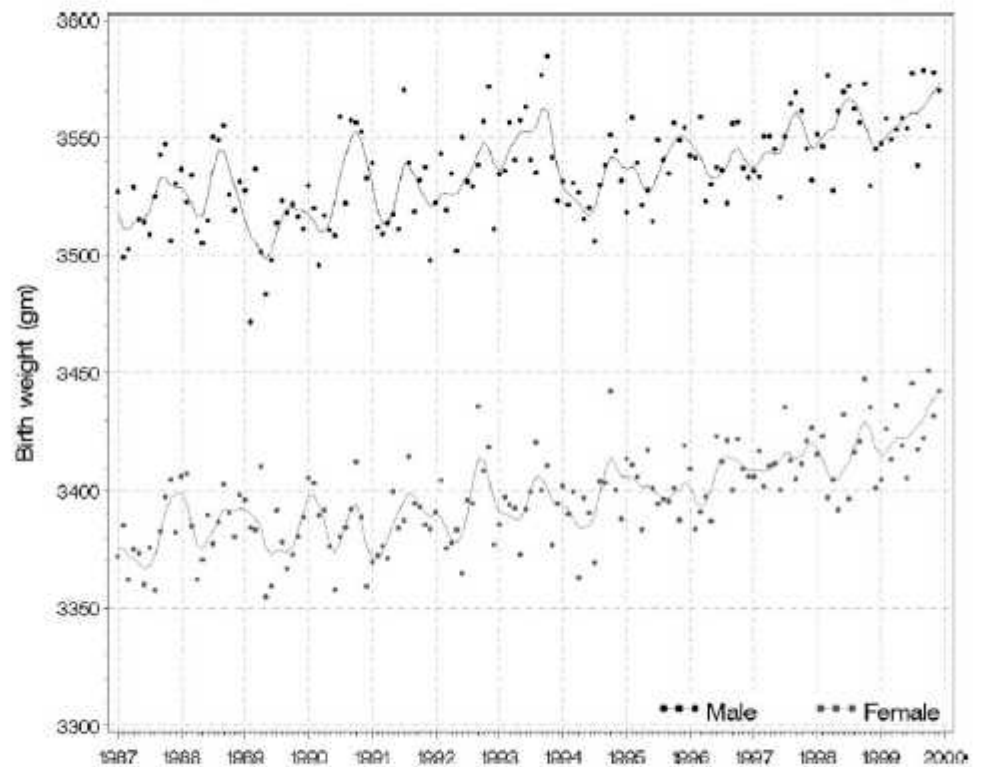


Figure 1 Time series of mean monthly birth weight, by sex (males are heavier), for singleton pregnancy weeks (male=179,899, female=170,272), with a smoothing spline superimposed.

Non-Education Viriculture – Part 2, Fertility Conception and Gestation

Posted on [admin](#) Posted in [Book](#)

Fertility and The Age of the Mother

The parents ought to be in the prime of life, which for a man may be reckoned at thirty years—from twenty-five, when he has ‘passed the point at which the speed of life is greatest,’ to fifty-five; and at twenty years for a woman—from twenty to forty. Any one above or below those ages who partakes in the hymeneals shall be guilty of impiety; also every one who forms a marriage connexion at other times without the consent of the rulers.

Republic, Plato, circa 380 BC

The most important factor impacting a woman’s ability to become pregnant is her age. Women in their thirties and forties are just not as fertile as those in their twenties.

A Baby At Last, (((Goldstein))), 2010

Viriculture Prescription #20: Plan so that your pregnancies occur between the ages of 18 and 35.

The age at which the mother conceives is consequential for viriculture. It is well known that fertility declines with age, and precipitously after a mother turns 35. This is a fact of nature, and no amount of wishful thinking can change it. It seems that the same physiologic aging process that decreases fertility may also lead to a decrease in a mother's ability to optimally gestate a fetus. The body, which "knows" when to ovulate on the basis of environmental factors such as age, weight, diet, temperature, etc. restricts fertility in order to protect both the mother and the fetus. Only when a woman's body expects a reasonably good gestational outcome on the basis of her current health will the body allow conception. In this way, advice to increase fertility may also be a rough guide to increase viriculture.

It is clear that the negative effect of a mother's age on viriculture is not necessarily large, as we can picture children of older mothers who are well developed. However, I suspect that on average, mothers in their 40s will not produce children as physically and mentally superb as mothers in their 20s. This fact is beyond argument when it comes to the likelihood of explicitly obvious birth defects, most famously down syndrome.

A woman in her twenties is likely to have healthier eggs than older women, which generally makes it easier to conceive. high-quality eggs also translate into a lower risk of birth defects.

A Baby At Last, (((Goldstein))), 2010

I believe that this same trend likely extends to children born free of *outright* deformity. One interesting study found that birth order correlated with malocclusion – but these results did not hold for mothers under the age of 25. It may be that young mothers are better able to resist the environmental stressors which negatively affect gestation.

The children, moreover, that are borne by mothers during the prime of life are heavier and larger, and therefore probably more vigorous, than those born at other periods.

The Descent of Man, Darwin, 1871

This bit of advice alone is likely of little importance to viriculture. If a prescription can possibly be gleaned from it, it is that women who want children should plan ahead. Rather than using modern interventions to gestate a baby in a woman's 40s, a humility to Nature, and a recognition of the embodied wisdom in the traditional age of motherhood seems safer for your child.

Viriculture Prescription #21: Don't smoke, drink, or use drugs before or during your pregnancy, or while nursing. Avoid infection diseases, and nutrient deficiencies.

People smoke, Elaine. My mother smoked. It didn't hurt me.

George Costanza, (((*Seinfeld*)))

The toxic agents which influence the race toward degeneracy, exert that deterioration in a mode which closely resembles that of the degenerative powers of the acute and chronic contagions and infections. The acute poisonings by these toxic agencies

resemble the acute, nervous and other exhaustion caused by the toxin of the germs underlying the infections and contagions. The chronic conditions due to these toxic agents agree in many respects with the chronic states produced by the infections and contagions. The toxic agencies are divisible into those belonging to the condiments, medicines, foods and beverages, and those arising from occupations. Tobacco is the most common, while alcohol and opium contend for second place both as to use and as to deleterious effects. Alcohol has been repeatedly charged with being the factor in degeneracy.

Degeneracy: Its Causes, Signs, and Results, Talbot, 1898

Wherefore Diogenes, observing an emotional and crack-brained youth, said, “Young man, your father must have been drunk when he begot you!”

The Education of Children, Plutarch, circa AD 100

In addition to counseling women to get pregnant while they are still young, medicos have a few other accurate recommendations about increasing fertility which also apply to viriculture. They recommend against any drug or alcohol use before and during pregnancy. They also recommend against smoking. These well known factors decrease fertility, but are also obvious culprits which impede viriculture.

They also recommend the control of contagious and infectious diseases, some of which can be “vertically transmitted” from the mother to the child. The classic vertically transmissible diseases are taught to medical students with the mnemonic ToRCHES

Lastly, medicos have been very successful in decreasing the incidence of degenerate deformities that are caused by a *single* nutrient deficiency in the maternal diet. The classic example of this is the reduction in cases of spina bifida in children when the mother is supplemented with folic acid. No matter what the diet, it is important not to succumb to a particular nutrient deficiency.

Viriculture Prescription # 22: Mothers should achieve a body fat percentage of between 20% and 29% before conception.

As a result we have hundreds of young and middle-aged women fat, shapeless, loose, engaged in a continuous struggle with their buttons; or scrawny umbrellas of women, with every curve a hollow, and every bone trying to make itself felt and seen.

Physical Beauty, how to Keep it, Annette Kellerman, 1918

Furthermore, medicos working in obstetrics understand the importance of maintaining the proper weight in order to achieve fertility. Traditional as well as modern advice requires that mothers not be too thin, or they may not have the adequate “raw material” to gestate an excellent baby.

Women who are very lean, have miscarriages when they prove with child, until they get into better condition.

Hippocrates, circa 400 BC

Too little body fat is a classic cause of inovulatory cycles in women. Having a BMI or a body fat percentage of less than 18 is likely to induce menstrual cycle disorders. Below is a chart to estimate

how much body fat 18% looks like for a woman. Essentially, if you can see well defined abs, you may not have sufficient body fat to gestate a baby.



A complication in determining a woman's potential for good viriculture on the basis of regular menstrual cycles is that many future mothers are on hormonal birth control. Hormonal birth control causes women to menstruate who naturally would not. I have first-hand witnessed girls who have "menstruated normally" their whole adult lives, but when they stop taking hormonal birth control they do not get periods. This seems especially common among aggressive dieters, long distance runners, or vegan women. Once the false signal of hormonal birth control is removed, the natural message of these women's bodies is "I am not healthy enough to ovulate." Many of these women are well educated, and form an especially important group to learn about viriculture. I fear that they learned that "low-calorie diets lead to health" too well, and actually took it to heart. This will prove to be a disaster for their children. It would be very sad to have the children of our best educated and most health conscious women develop inadequately.

I am not recommending that you "target" a specific body fat percentage and then use diet and exercise to achieve it. I believe that your body knows best. If we place our bodies in a environment

that mimics a traditional one in key ways, our bodies will know what to do without any thought on our part.

Underweight and aggressive dieting can be a problem for viriculture, On the other hand, overweight and obesity can also impede fertility.

I have no fancy, Flaccus, for a mistress extraordinarily thin, who can make my rings serve her for bracelets; who scrapes me with her hips and pricks me with her knees; whose loins are rough as a saw, or sharp as a lance. Yet I have no taste for a mistress weighing a thousand pounds; I am a lover of flesh, but not of fat.

Epigrams, Martial, circa AD 75

Overweight and obese women are also more likely so suffer from a number of destructive pregnancy complications such as pre-eclampsia, cesarean birth, pre-mature birth, and stillbirth.

Again, our bodies seem to know when the future health of the baby is at risk due to the mother's health. Sadly, overweight mothers are officially advised to gain substantially less weight during pregnancy, as if this might compensate for being fat in the first place. This may ultimately leads to poor fetal gestation.

Underweight mothers may gain enough weight, but they may not have the initial body stores needed for excellent gestation. This is why the period of special nutrition prior to pregnancy is critical.

Nature seems to have done the human race a great favor by silently screening potential mother's health before the are allowed to conceive. Drug users, smokers, older women, fat women, stick thin women, vegans, etc. are prevented from conceiving by involuntary infertility. This is Nature's way of protecting unborn babies from the inadequate development which goes hand in hand with these environmental exposures. It is sad that modern interventions attempt to supersede our bodies' natural wisdom about who is healthy enough to conceive. I suspect this comes at a detriment to the viriculture of the children.

Conception Timing

As Homer says, that the child, which Neptune begot upon the nymph, was born a whole year after the conception, that is, in the twelfth month. For, as Aulus Gellius saith, this long time was suitable to the majesty of Neptune, that in it the child might receive his perfect form. For the like reason Jupiter made the night, wherein he lay with Alcmena, last forty-eight hours, a shorter time not being sufficient for the forging of Hercules, who cleansed the world of the monsters and tyrants wherewith it was suppressed.

Gargantua and Pantegruel, Rabelais, circa 1550

Viriculture Prescription #24: In the Northern Hemisphere, conceive in January for an October birth. In the Southern Hemisphere, conceive in July for a April birth.

In our modern world we are little aware of how our choices affect outcomes of child development. Despite certain facts being well known for many years, there is simply no one using this information to make prescriptions. Among *researchers*, it is well understood that birth month is

correlated with birth-weight, limb-length at birth, and quality of adult dental occlusion. These measures are highly relevant to viriculture. In fact, even lifespan itself is correlated with birth month. These factors together point to something about birth month being important in physical development of the child.

What is the reason that certain birth months are superior for viriculture? There are a few narrative explanations, but I will summarize only the most convincing one: Birthweight is a meaningful correlated with lifelong health and growth. Birth weight is highest in babies born in Autumn, peaking in October – but only in the Northern Hemisphere. In the Southern Hemisphere, the highest birthweights occur in April. This geographic pattern immediately suggests some seasonal environmental factor. The influence of weather on gestation occurs in two main ways, through the effect of temperature, and through the effect of sunlight.

Children undergo general body morphogenesis in the first trimester, and continue to grow in the second. The peak rate of “height” gain for a fetus occurs at around the fifth month of gestating. But the greatest proportion of absolute weight gain occurs in the third trimester. An average fetus is 2 lbs at 26 weeks, but 8 lbs at 40 weeks. Creating these six additional pounds requires raw material, energy, and information. Exposure to balmy Summer and early Autumn temperatures during the third trimester allows the mother to use less energy to maintain her own temperature, and more to be used by the fetus during this critical period of growth. Additionally, the bright sunshine of the Summer and early Autumn provides abundant Vitamin D, which is essential for skeletal growth. Vitamin D is fat soluble, and stored for some time in our bodies, so that the Summer sunlight repletes stores well into Autumn.

discussed elsewhere [23,24]. During the period June (months) [25].

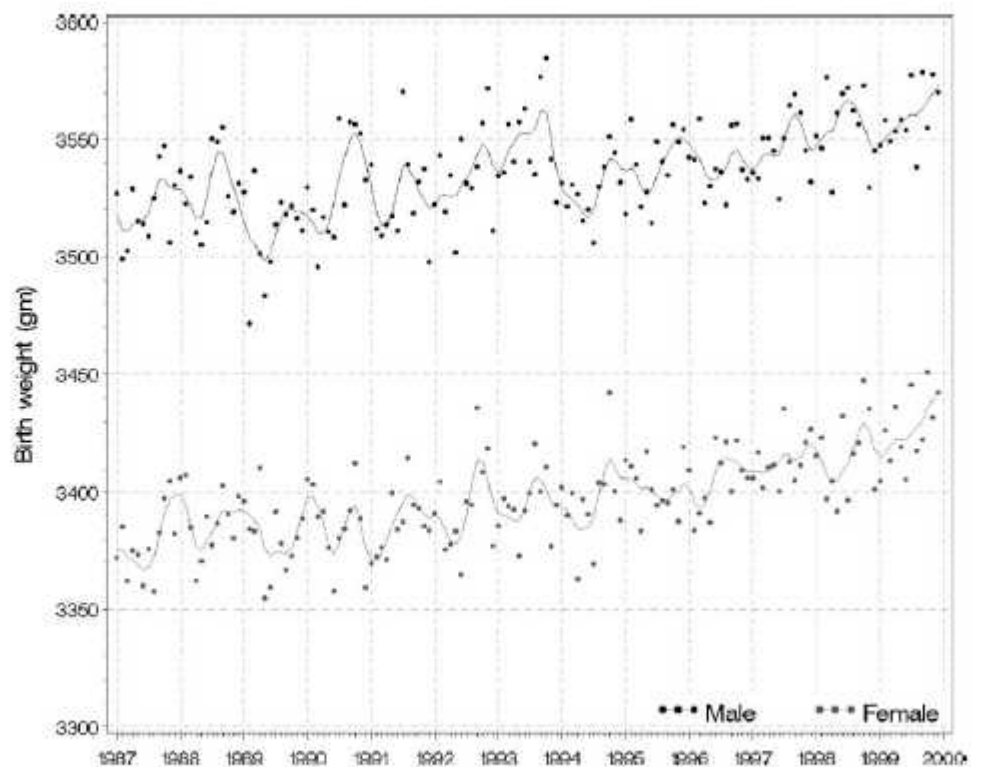


Figure 1 Time series of mean monthly birth weight, by sex (males are heavier), for singleton pregnancy weeks (male=179,899, female=170,272), with a smoothing spline superimposed.

Seasonal Fluctuations in Birth weight

How large are the seasonal fluctuations in birthweight? The absolute average effect on birthweight is small – a seasonal difference of about 50 out of 3500 grams. It could be, like the small effects of salt intake on blood pressure, there is an effect too small to be of practical consequence on an individual basis. However, birthweight itself is only the tip of the iceberg. Human lifespan depends on birth month:

Month of birth influences adult life expectancy at ages 50+. Why? In two countries of the Northern Hemisphere–Austria and Denmark–people born in autumn (October–December) live longer than those born in spring (April–June). Data for Australia show that, in the Southern Hemisphere, the pattern is shifted by half a year... These findings are based on population data with more than a million observations and little or no selectivity. The differences in lifespan are independent of the seasonal distribution of deaths and the social differences in the seasonal distribution of births. In the Northern Hemisphere, the excess mortality in the first year of life of infants born in spring does not support the explanation of selective infant survival. **Instead, remaining life expectancy at age 50 appears to depend on factors that arise *in utero* or early in infancy and that increase susceptibility to diseases later in life.** This result is consistent with the finding that, at the turn of the last century, infants born in autumn had higher birth weights than those born in other seasons.

Lifespan depends on month of birth, Doblhammer, Vaupel, 2001

In a different study on dental outcomes of birth month, being born in April – June correlated with a 50% increase rate of poor occlusion (absolute risk increase of about 5%).

discussed elsewhere [23,24]. During the period June 1987 to June 2000 (114 months) [25].

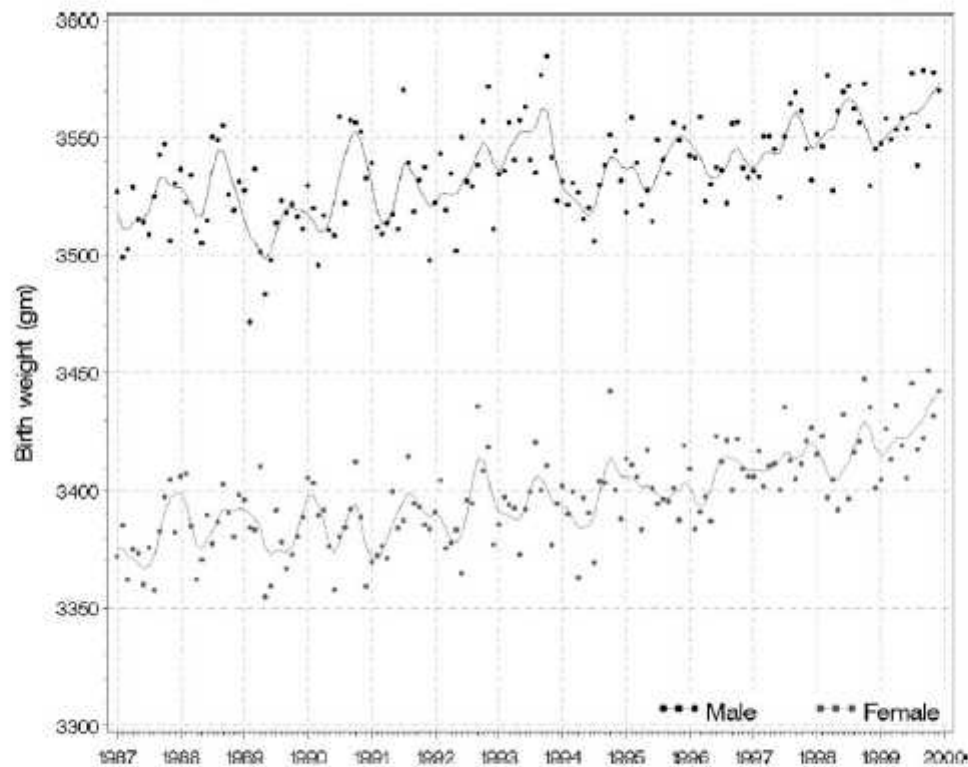


Figure 1 Time series of mean monthly birth weight, by sex (males are heavier), for singleton pregnancies (male=179,899, female=170,272), with a smoothing spline superimposed.

Birth Characteristics and Malocclusion, Janerich, Carlos, 1968

Because of the high frequency of malocclusion in the general population, the fact that birth month correlates with malocclusion this strongly is an incredible result. Furthermore, the occlusal scores used in these studies as the basis for normal or malocclusion were coarse measurements. I suspect that the proportion of individuals with truly superb occlusion was more variable than the simply “good” or “bad” in the two groups. Remember that the dentofacial complex is a more sensitive indicator of environmental stressors of development than the body. We would therefore expect a greater absolute difference in dentofacial measures of development than corporeal measures in the context of a stressor (in this case cold temperature and lack of sunlight). This may account for the greater absolute impact of birth month on malocclusion than on birth weight.

An obvious next step for research (and an easy to perform study) could be to correlate facial attractiveness to birth month. It would come as no surprise if malocclusion, ugliness, poor development, and lack of vitamin D were all positively correlated.

It might be expected that, as nutritional and habitat conditions improved, the impact of vitamin D from the sun and ambient temperature would decrease, and the consequence of birth month would become smaller. This is exactly what researchers have found. However, the effect of birth month persists even in developed nations today. The effects of birth month on corporeal measures of development are clear (statistically significant), even if they are small. The effects on dentofacial measures of development are clear, and they are not so small. And keep in mind that birth weight is not only a measure of development, but a predictor of developmental outcomes, such as adult

height, as well. A composite metric of corporeal and dentofacial measures of development would likely be strongly correlated with birth month, and of a magnitude that warrants our practical consideration.

Birth month has also been correlated with other health consequences as well, consider this chart below regarding schizophrenia and neural tube defects.

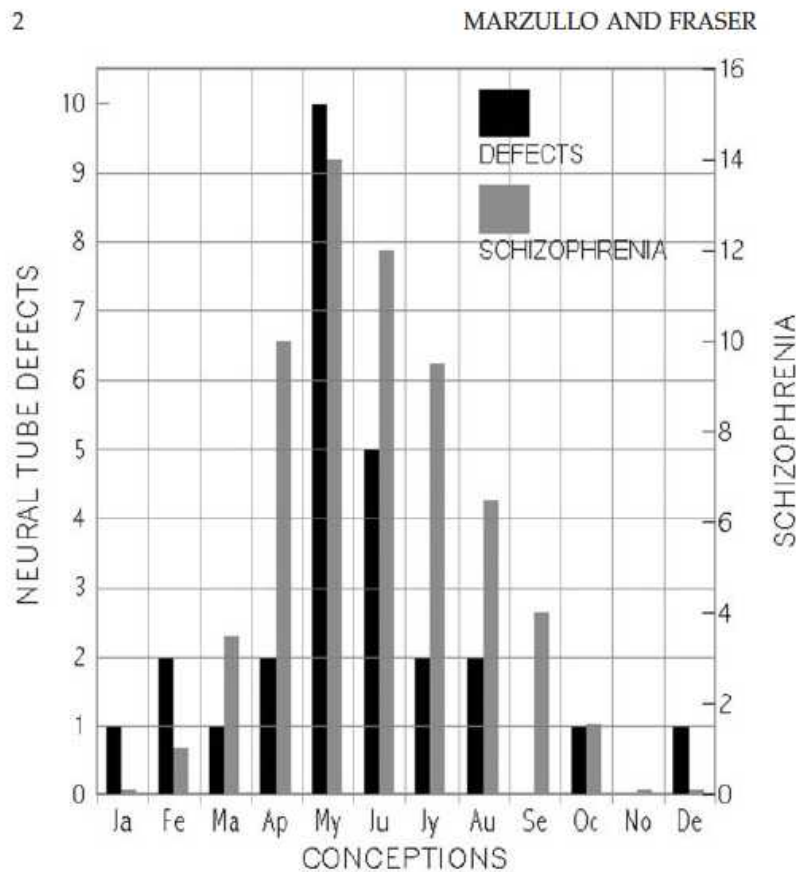


Figure 1. Conception rates in schizophrenia and NTDs. Schizophrenia data was obtained from the table in Figure 1 of Torrey et al. (1997). Columns denote number of studies showing a significant excess for that month, whether the original analysis was by months or trimesters. Neural tube defect (NTD) data was obtained from the review by Fraser et al. (1986) and seven subsequent studies (see text). The conception-month estimates were adjusted for the shorter duration average of neural-defect gestations.

Similar rhythms of seasonal conceptions in neural tube defects and schizophrenia: A hypothesis of oxidant stress and the photoperiod, Marzullo, 2005

In order to take advantage of the benefits afforded to babies born around October (Northern) or April (Southern), we can follow the heuristic of conceiving around the deepest part of winter.

Viriculture Prescription #25: Space your children so there are three years between conceptions.

Another important feature of the control of excellence of child life among the primitive races has been the systematic spacing of children by control of pregnancies. The interval between children ranged from two and a half to four years. For most of the tribes in Africa this was accomplished by the plural-wife system. The wife with the youngest child was protected. The original Maori culture of New Zealand accomplished the same end by birth control and definite planning. In one of the Fiji Island tribes the minimum spacing was four years.

Nutrition and Physical Degeneration, Price, 1939

As interesting and consequential as the effect of birth month is on development, the effect of birth *interval* on development may be even greater. There is a well documented association between a short birth interval and low birthweight or infant mortality.

A 1999 article in the *New England Journal*, *Effect of the Interval Between pregnancies on Perinatal Outcomes* came to the following conclusions, complete with narrative explanation:

We found that infants conceived 18 to 23 months after a live birth had the lowest risks of low birth weight, preterm birth, and small size for gestational age; both shorter and longer interpregnancy intervals were associated with higher risks... The relation between short interpregnancy intervals and adverse perinatal outcomes has been attributed to maternal nutritional depletion and postpartum stress. However, it is unknown why a long interpregnancy interval is associated with adverse perinatal outcomes. We offer two hypotheses that might explain the association. One is that pregnancy may help mothers gain growth-supporting capacities (such as increased uterine blood flow and other physiologic and anatomical adaptations of the reproductive system). After delivery, those capacities may gradually decline, and the mother's physiologic characteristics may become similar to those of primigravid women if another fetus is not conceived for a long time. This hypothesis is supported by our additional finding that births to primigravid women were associated with a higher risk of adverse outcomes than were those of infants conceived 18 to 23 months after a live birth. Another possibility is that metabolic or anatomical factors that we did not measure may cause both delayed fertility and adverse birth outcomes.

Along these same lines, other studies have confirmed that not only indicators of health, but mortality itself is affected by birth intervals:

This analysis uses data from Bangladesh and the Philippines to demonstrate that children who are born within 15 months of a preceding birth are 60 to 80% more likely than other children to die in the first two years of life, once the confounding effect of prematurity are removed.

Birth spacing and child mortality in Bangladesh and the Philippines Miller et al, 1992

On the basis of survival as well as important measures of development, there seems to be an optimal birth interval – approximately three years. An infant conceived about two years after a live birth implies a birth interval of about three years.

Interestingly, our biology has a special mechanism to ensure exactly this amount of contraception post-partum. How is this? In an traditional child care setting, mothers do not ovulate for at least 2 years after birth. The mechanism of this anovulation is associated with breast feeding. Frequent nursing of an infant creates a cascade of hormones in a mother that impedes fertility. This is known as lactational amenorrhoea. In traditional settings, nursing was more frequent and was extended for a longer time – only after about 20 months did nursing become infrequent enough for ovulation to begin again. Lactational amenorrhoea is an evolved safeguard against the dangers to both the mother and child of short birth intervals. By allowing about two years to replete nutrients before a second gestation, net survival of infants was increased.

The reader may be unfamiliar with lactational amenorrhoea. This is because, outside of the context of traditional nursing practices, mothers begin ovulating soon postpartum. Even if the mother is

breastfeeding, very few American mothers nurse with the frequency of traditional people – the frequency necessary for lactational amenorrhoea. In some traditional cultures, this biologic tendency was further reinforced by cultural shaming of parents of children born in too rapid succession. These safeguards were put in place by nature and the traditional wisdom of culture to prevent the mother from bearing poorly developed children, or more children than she could care for at once. ((Jared Diamond))) describes the change in birth interval that accompanies a shift from a traditional to more modernized setting:

But in settled agricultural populations and among hunter-gatherers trading with farmers, those weaning ages and birth intervals of two and a half to four years for nomadic hunter-gatherers decrease to an average age of two years, because farmers do have livestock milk and soft cereal gruels onto which to wean a small child.

The World Until Yesterday, Diamond, 2012

The general notion that gestation depletes a mother's store of child-building material is a major concept for viriculture. The traditional safeguards described above allow for adequate repletion of this material before gestation of the next child begins. In our modern context, the traditional inability to conceive too quickly after a live birth no longer exists. We must therefore go out of our way to make sure that mothers do not gestate a second child before repeating the necessary vital material for superior viriculture.

One way this can be done is by creating an environment that mimics that of traditional mothers. If a modern mother engages in attachment parenting, on-demand nursing, "extended" nursing and, sleeping with her baby, then her evolved safeguards will function properly, and lactational amenorrhoea will prevent pregnancies in too rapid succession.

That high nursing frequency of hunter-gatherer mothers has physiological consequences. As mentioned above, nursing hunter-gatherer mothers usually do not conceive for several years after a child's birth, even if the mother resumes sexual activity. Evidently, something about traditional on-demand nursing acts as a contraceptive. One hypothesis is termed "lactational amenorrhoea": suckling releases maternal hormones that not only stimulate the secretion of milk but that may also inhibit ovulation (a woman's release of eggs). But that inhibition of ovulation requires a constant regime of frequent nursing; a few bouts of nursing per day do not suffice... Many educated Western mothers have heard of lactational amenorrhoea, but fewer have heard that it is effective only at high nursing frequencies. A friend of mine who recently, to her dismay, conceived again only a few months after the birth of her previous child thereby joined the long list of modern women exclaiming, "But I thought that I couldn't conceive while I was nursing!"

The World Until Yesterday, Diamond, 2012

Modern medical research has confirmed the viability of lactational amenorrhoea as birth control.

The findings indicate that lactational amenorrhoea method, with its high acceptance and efficacy, is a viable method of family planning and can safely serve as an introductory method for breastfeeding women.

Clinical study of the lactational amenorrhoea method for family planning, The Lancet, 1992

But this natural method of birth control serves to underscore the unnatural contemporary Western norm of having children in too rapid succession. The consequences of not repleting the mother's nutrient store's before gestation of a second fetus results in a poor development that has been called "second sibling syndrome" by Shanahan. Here she introduces the term:

Unless the mother gives herself ample time and nutrients for her body to fully replenish itself, child number two will not be as healthy as his older sibling... It's not that they got "unlucky" genes. the problem is that, compared to their older sibling, they grew in a relatively undernourished environment *in utero*... Studying siblings enables us to see *why* we aren't all perfect. It enables us to see that nutrient deficits change a child's growth in ways that are both predictable and easy to measure. I call it Second Sibling Syndrome not because it only affects second born children, but simply because the effects of maternal malnutrition on a child's body are most readily visible in the faces of children born in a short time after an older sibling who, presumably, shares similar genes and thus serves as a kind of control.

Deep Nutrition, 2009

Why does Second Sibling Syndrome manifest itself most apparently in the face? It is because the dentofacial complex is the part of the body most sensitive to environmental stressors of development. The "tolerance" of facial symmetry is much greater than, say leg symmetry (since the ecological fitness disadvantage of asymmetrical legs is greater). Thus faces are the most visible reflection of our developmental history. This in turn makes the face (along with the other secondary sexual ornaments sensitive to developmental stressors) information-rich to mates. It is an honest signal of important influences, which have meaningful future relevance for fitness of mates and offspring. Our seeing beauty in well developed faces is simply Nature's way of motivating (through the aesthetic sense of beauty) use of this valuable information in mate selection.

Second sibling syndrome has been described by earlier authors as well:

The other day I saw a mother with a boy 3 years old, a girl 11 months younger, and a baby of a few months. The boy was a beautiful child, the girl a pathetic little thing, and the baby, who had been ill since birth, was a sad picture indeed. The mother told me, with apparent surprise, that the oldest child had been so easy to care for, the second one had been considerable trouble, and the third had caused them constant worry and anxiety. You can find hundreds of similar examples if you look for them.

Let's Have Healthy Children, Davis, 1951

And of course, Shanahan's second sibling syndrome has its roots in the work of Weston Price, who himself described the phenomenon:

The fact that this condition so frequently shows a progressively severe injury in the younger members of the family is a matter of great importance in tracing the causative factors.

Nutrition and Physical Degeneration, Price, 1939

The "Second Sibling Syndrome" can be manifest even in first children, provided the maternal prerequisites for viriculture are not met. Price had further reason for believing that child spacing was important for physical development – many traditional cultures enforced it:

It is significant that while these important factors are just coming to light in our modernized civilization, the evidence clearly indicates that several so-called primitive races have been conscious of the need for safeguarding motherhood from reproductive overloads which would reduce the capacity for efficient reproduction. For example, G. T. Baden (3) in his book "Among the Ibos of Nigeria" states:

It is not only a matter of disgrace but an actual abomination, for an Ibo woman to bear children at shorter intervals than about three years. . . . The idea of a fixed minimum period between births is based on several sound principles. The belief prevails strongly that it is necessary for this interval to elapse in order to ensure the mother being able to recuperate her strength completely, and thus be in a thoroughly fit condition to bear another child. Should a second child be born within the prescribed period the theory is held that it must inevitably be weak and sickly, and its chances jeopardized.

Similarly, the Indians of Peru, Ecuador and Columbia have been familiar with the necessity of preventing pregnancy overloads of the mother. Whiffen (4) in his book "North-West Amazons" states:

The numbers (of pregnant women) are remarkable in view of the fact that husbands abstain from any intercourse with their wives, not only during pregnancy but also throughout the period of lactation—far more prolonged with them than with Europeans. The result is that two and a half years between each child is the minimum difference of age, and in the majority of cases it is even greater.

It may also be important to note that the Amazon Indians have been conscious of the fact that these matters are related to the nutrition of both parents. Whiffen states that:

These Indians share the belief of many peoples of the lower cultures that the food eaten by the parents—to some degree of both parents—will have a definite influence upon the birth, appearance, or character of the child.

This problem of the consciousness among primitives of the need for spacing children has been emphasized by George Brown (5) in his studies among Melanesians and Polynesians in which he reports relative to the natives on one of the ((Solomon)) Islands as follows:

After the birth of a child the husband was not supposed to cohabit with his wife until the child could walk. If a child was weak or sickly, the people would say, speaking of the parents, "Ah, well, they have only themselves to blame."

These new data have a very important bearing on the problems of degeneration in our modern civilization.

Nutrition and Physical Degeneration, Price, 1939

Modern research has not been performed to rigorously measure the effects of birth order on facial development. Only low quality evidence exists to correlate birth order with outcomes relevant to viriculture. As we saw, birth order is correlated with severe malocclusion in mother over 25.

First-born children appeared slightly less likely to have high occlusal scores than expected, except those both to mothers aged 25 and younger... It is felt that two important points have been presented in this report. First, is a possible relationship

between malocclusion and environmental factors operating before birth. The second, and perhaps more subtle point is that the evidence presented here could imply that malocclusion, at least in some cases, is an oral manifestaion of a more general growth and development disorder which is not readily recongized.

Birth Characteristics and Malocclusion, Janerich, Carlos, 1968

The effects of repletion of maternal nutritional stores is visible in the correlation of birth order and other valuable characteristics as well. Second born children score on average one-fifth of a standard deviation lower on IQ tests.

The need for maternal repletion after pregnancies seemed to be better known in the past, as even Margaret Sanger used it as the basis for her family planning designs:

As for child spacing, unless the children are properly spaced the health of the mother is greatly depleted and the child is not born with a sound and healthy body. If during the pre-natal life it is not adequately nourished, i.e. unless the father's wage is such to provide the family with sufficient food, the child, of course, does not have a chance to develop and grow through early infancy.

Luckily, the lack of high quality evidence does not prevent us from making firm prescriptions for viriculture. The traditonal schedule for child birth was no more than one child per three years for a single mother. By adhering to this schedule, modern mothers can help maximize viriculte for their own children.

Gestational "Stress"

Viriculture Prescription #26: Minimize all forms of stress on the pregnant mother

We have seen that stress, broadly defined, is a common factor in poor development, and the case of a gestating fetus is no exception. The fetus and the mother are very nearly a single organism during pregnancy. Many of the hormonal messages downstream of a stress response in the mother will affect the developing child as well. There are many mechanisms by which the various stresses of the mother can be transmitted to the fetus, but we will leave those for a expert to flesh out in detail. It is enough for us to realize, as almost everyone always has since the beginning of time, that mothers who are not provided with adequate environmental resources to meet ancestral needs for food, shelter, warmth, space, cleanliness, sleep, safety, etc. will have resultant physiological cascades of stress which ultimately have a negative impact on viriculture.

A viriculture pregnancy is stress-free, in the oldest and broadest sense, for the mother. Traditional societies, indeed most mammals, solve this problem by having the father allocate resources to pregnant women, so that they could maintain the safe, secure, and relaxed lifestyle pace required to maximize fetal growth and development. As we have become poorer and poor, we have sought to sweep the biological realities of viriculture under the rug as we kept our pregnant women hard at work longer and longer into their pregnancy.

Many women realize there is something wrong with the modern situation, but are unwilling to give up their income or postpone their career for pregnancies. In total, large and rapid changes have occurred in the number of women working through pregnancies in the last 50 years.

The proportion of women in paid work 8 to 11 months after childbirth rose from 24% in 1979 to 67% in 1996 (Dench et al.2002). The norm of behavior for women with a child less than a year old has shifted from non-employment to employment in a period of less than 20 years.

The Effects of a Mother's Return to Work Decision on Child Development in the UK, Burgess et al, 2005

Certainly in the medical profession itself, pregnant doctors work into their eighth month (generously assuming a full term birth), with 10 weeks allowed for vacation (12 if she is lucky enough to have a C-section). Remember, this is normal practice among the women who are our obstetricians – so of course they condone the behavior, or at least don't consider it very harmful. Compare our modern attitude to the American attitude one century ago, when employers were fined for making pregnant women work too hard.

She pointed to the 1908 Supreme Court case Muller v. Oregon. Curt Muller, who owned a laundry business, was found guilty in a state court of making a female employee work more than 10 hours a day, then Oregon's workday limit for women. He appealed, but the Supreme Court upheld the conviction (and the \$10 fine). As one justice put it, because "healthy mothers are essential to vigorous offspring, the physical wellbeing of woman becomes an object of public interest and care in order to preserve the strength and vigor of the race."

Origins, Murphy Paul, 2011

The actual judicial decision being referred to is rich with the honest and clear-sighted judgment of that era.

That woman's physical structure and the performance of maternal functions place her at a disadvantage in the struggle for subsistence is obvious. This is especially true when the burdens of motherhood are upon her. Even when they are not, by abundant testimony of the medical fraternity continuance for a long time on her feet at work, repeating this from day to day, tends to injurious effects upon the body, and, as healthy mothers are essential to vigorous offspring, the physical well-being of woman becomes an object of public interest and care in order to preserve the strength and vigor of the race.

Education was long denied her, and while now the doors of the schoolroom are opened and her opportunities for acquiring knowledge are great, yet even with that and the [208 U.S. 412, 422] consequent increase of capacity for business affairs it is still true that in the struggle for subsistence she is not an equal competitor with her brother. Though limitations upon personal and contractual rights may be removed by legislation, there is that in her disposition and habits of life which will operate against a full assertion of those rights. She will still be where some legislation to protect her seems necessary to secure a real equality of right. Doubtless there are individual exceptions, and there are many respects in which she has an advantage over him; but looking at it from the

viewpoint of the effort to maintain an independent position in life, she is not upon an equality.

It is impossible to close one's eyes to the fact that she still looks to her brother and depends upon him. Even though all restrictions on political, personal, and contractual rights were taken away, and she stood, so far as statutes are concerned, upon an absolutely equal plane with him, it would still be true that she is so constituted that she will rest upon and look to him for protection; that her physical structure and a proper discharge of her maternal functions—having in view not merely her own health, but the well-being of the race—justify legislation to protect her from the greed as well as the passion of man. The limitations which this statute places upon her contractual powers, upon her right to agree with her employer as to the time she shall labor, are not imposed solely for her benefit, but also largely for the benefit of all. Many words cannot make this plainer. The two sexes differ in structure of body, in the functions to be performed by each, in the amount of physical strength, in the capacity for long continued labor, particularly when done standing, the influence of vigorous health upon the future well-being of the race, the self-reliance which enables one to assert full rights, and in the capacity to maintain the struggle for subsistence. This difference [208 U.S. 412, 423] justifies a difference in legislation, and upholds that which is designed to compensate for some of the burdens which rest upon her.

This old-fashioned sensibility, which emphasizes the natural differences between men and women, is entirely out of place in modern public discourse. However, no matter how many times *BuzzFeed* propaganda insists on the contrary, men and women differ in important ways, and this has consequences on the development of our children. If we care about viriculture, we have to live in the real world.

In practice, even the most career-focused women do not actually enjoy working up until the end of their pregnancy and only getting a few weeks maternity leave – they do it because they value either the income or their career advancement. They consider it a sacrifice, albeit a sacrifice in their personal comfort, not realizing that it is truly an irredeemable sacrifice in the human excellence of their unborn child.

Ironically, women today look for the same sort of legal protection that they fought against in the past. The modern calls for government mandates for employers to offer paid maternity leave represent the feminine potential solution to this problem. But this is more of a problem of the modern soul. The issues becomes more pressing we we consider that it is already known *for sure* that working during pregnancy increases infant mortality.

The numbers aren't huge. On average, providing 10 weeks of leave corresponds with a 1 to 2 percent reduction in infant mortality. But the improvements keep growing as the leave increases. Twenty weeks yields a reduction of 2 to 4 percent. Thirty weeks gives you between 7 and 9 percent. Infant health also improves.

Should You Bring Your Unborn Baby to Work?, *The Atlantic*, Velasquez-Manoff, 2015

These results support the hypothesis that an extension in the length of leave enhances child health through increasing parental time with the child. Since most countries have longer lengths of leave after childbirth than before childbirth, but generally less than one year, the strongest leave effects are seen on the postneonatal mortality rates. The results indicate that a 10-week extension in job protected paid leave is predicted to decrease

infant mortality rates, post-neonatal mortality rates, and child mortality rates by 2.6%, 4.1%, and 3%, respectively. However, the results again suggest the effects of other leave are insignificant on any age-specific infant mortality rates.

Consistent with earlier research on a smaller number of countries and shorter time period (Ruhm, 2000), this study found that the extension of weeks of job-protected paid leave has significant effects on decreasing infant mortality rates (Table 3). The largest effect was found on post-neonatal mortality rates (death rates between 28 and 365 days): a 10-week extension in paid leave is predicted to decrease post-neonatal mortality rates by 4.1% (Table 5).

Parental Leave and Child Health Across OECD Countries, Tanaka, 2005

Working during pregnancy also increases the rate at which babies are born with low-birth weight, with all of the consequential problems for viriculture.

The results indicate a significant relationship between paid leave and low birth weight, an important factor for infant health. Low birth weight has strong effects on most forms of infant mortality, yet controlling for low birth weight does not eradicate the effects of parental leave on infant mortality. This suggests that a reduction in low birth weight does not fully explain the effects of parental leave on infant mortality, therefore, other mechanisms, which may include prenatal care, breast-feeding, leave coverage, and length of leave taken by mothers and fathers, need to be examined.

Parental Leave and Child Health Across OECD Countries, Tanaka, 2005

Is it really such a surprise that hard, tiring work, and the stress, lack of sleep, lack of healthy relaxed meals, lack of physical comfort, lack of sunlight, lack of fresh air, and lack of exercise associated with the modern work-a-day career would take a negative toll on the fetus that is growing inside of this employee? One of the harsh realities of viriculture is recognizing that an asymmetrical burden falls on the mother to promote ideal development for a child. Since we have abandoned our traditional restrictions and prescriptions, we are free to make our own choices about parenthood, pregnancy, and nursing. But we must recognize that in abandoning those traditions, we have lost the embodied wisdom they contained. Today we have more choice but we also have more responsibility. If it is true that not breastfeeding an infant harms him, than we are responsible for that harm. If working a 9-to-5 job comes at the expense of the type of care that mothers were traditionally able to give, than we must take responsibly for the benefits and harms that job provides. This is in the best interest of the children, and is not mean, or cruel, or even *–gasp–* sexist. Respect and honor for the difficulty of a carefully planned and executed pregnancy is at the soul of the viriculture.

The development of the human race to a higher standard of mental and physical efficiency is granted a niggardly and disgraceful pittance. We do not demand greater numbers-the objective must be the quality of the child. As the quality of the mother so the nature of the offspring will vary; the mother herself has been moulded by the manner of her birth and the environment in which she was influenced by her parents as a small child. The bondage or the freedom of her puberty claims the urges of her teenage which guide her to accept the father of her own children and so, the cycle starts again in the birth of a baby. But no provision is made for this branch of education. The

teenager is not taught the elementary rules of womanhood. Examinations of school, colleges and universities do not include in their curriculum the supremely important subject of motherhood.

Childbirth without Fear, Dick-Read, 1942

Many of what I are claiming are “vices” standing in the way of ideal growth and development of a child are seen as acceptable indulgences that moderns are resistant to live without. Giving up these bad habits/ being diligent in those habits that are recommended is difficult. It is because of these difficulties that I suggest we view viriculture pregnancy and child care as full time jobs worthy of our respect (and worth giving up a career for).

My mother was the most beautiful woman I ever saw. All I am I owe to my mother. I attribute my success in life to the moral, intellectual and physical education I received from her.

George Washington

Moderns consider women working up until their due date as admirable, and perhaps some women may be able to balance the demands of working with the prescriptions made in this book. But I certainly couldn't! The more traditional, more animal, and indeed more human perspective is to realize that the ideal development of one's children is the most important household good, and well worth the loss of a second income. An ideal pregnancy (as will be detailed) would be much easier to accomplish if the mother has no other responsibilities.

Mother's choices have always been restrained by cultural norms and extended family traditional practices. Today mothers are free of many of these restraints. But do the mothers or children really benefit from this freedom? Traditional roles ought not to be looked down upon, since ultimately they are essential for the health and emotional well being of our society. Many of the traditional roles carried out by women were such because they *allowed the woman the freedom to carry out the necessary tasks associated with the gestation and development of children*. Some jobs better suit the demands of viriculture motherhood, and I expect that the strongest and best formed children would come from mothers who were completely free not to work at all. The father interested in viriculture, just like fathers throughout the animal world, must make sure that the nest is laid with all of the essentials for stress-free gestation prior to conception.

The non-philosopher passes through life in accordance with the cultural norms of his society. If our modern norms are twisted and monstrous, can blame be assigned to one of the many victims? While this book provides all of the fundamental information one needs for excellent viriculture, the actual execution of the advice may seem out of reach. Here is where the positive influence of honest, strong (not TV/movies strong), informed mothers will be most valuable to the health of future generations. Because the modern world presents superabundant, cheap (but unhealthy) means to satisfy our evolved palates, the caring mother must from the first defend against these poisonous influences entering her home. In most families, her's will be the trend followed by the household during childhood, and carried on into adulthood.

The mother has always been the protector of the health of the household, and she still is today. Once she has a grasp of accurate non-propaganda diet-health information, the day-to-day struggle of

actually enforcing the rules to children (and very often a childish father) in a hostile world begin. This is primarily a challenge of the soul. Around her kitchen she must erect ramparts against the modern cultural norms of low-fat chocolate milk, Corn Flakes, 99% fat-free industrial chicken breasts, birthday cake, Easter eggs, Tootsie Pops, and waffles with “syrup.” The viriculture mother must be undaunted by the relentless bombardment of evil and unwholesome foodstuffs made by corporo-government propaganda upon her home. When the brainwashing of food-candy advertising manages to infiltrate the mind of her child, she kindly but firmly denies him – for she knows that true compassion and motherly love is best shown by assuring, not that her children have their sweet-tooth indulged momentarily, but rather that they grow strong, sound, and beautiful in accordance with the universal and eternal human ideals. The mother’s firmness and strict observance of the prescriptions of viriculture are therefore no mere authoritarian exercise in arbitrary parental power, but instead the greatest gift a mother can give her child – the gift of being a good man or a good woman. For while a tenderhearted Christian mother may sincerely love even her most degenerate adult child, it is far more honorable for her to know that she, in spite of the powerful and unyielding forces to her opposed, has conducted her child through the modern gauntlet of destructive influences, and thereby given him, plainly evident in his very face and frame for all to see, the indelible marks of human excellence.

In practice, this romantic ideal relies just as much on the father, although in a very different way. While the mother, as consequence of her biology, must concern herself with the cyclical, physical needs of the children in their earliest years, the father must allocate the resources and coordinate strategically to make it possible for her to carry out her tasks as easily and free of stress as possible. If a couple agrees to pursue a viriculture pregnancy, the mother would be responsible for eating fat Alaskan King Salmon, but the father is equally responsible for actually making sure there is fat Alaskan King Salmon to eat. This is not merely a matter of the father paying for dinner, the architecture of the viriculture lifestyle will usually have to be implemented by the father, since the mother will already be occupied the difficult task of actually following viriculture prescriptions.

A denial of human nature will not help us toward viriculture. While biology dictates that an asymmetrical burden must fall of on the mother during gestation and early child-care, the father must take equal responsibility – but in very different ways – to ensure good development. Just as animals and traditional peoples have always done, each parent must use the innate strengths of his or her sex, rather than insisting on perfect uniformity of roles, to maximize the viriculture outcomes for their children.



Non-Education Viriculture – Part 3, Gentle Birth

Posted on [admin](#) Posted in [Book](#)

A “Gentle” Birth

The higher the civilization of a country the more generally has pain been accepted as a symptom of childbirth.

Childbirth without Fear, Dick-Read, 1942

Viriculture Prescription #27: Give birth at home with a midwife.

Most births in the US take place in hospitals. While it is true that maternity wards are somewhat separated from the sick wards, hospital births are an historical aberration that has no place in viriculture. Traditionally, mothers gave birth alone or with a small group of experienced women.

For healthy women with uncomplicated pregnancies, medicalized birth at a hospital will be more expensive, less comfortable, less enjoyable, and lead to worse outcomes in terms of morbidity. Access to family and friends is restricted, mothers are not allowed to eat and drink, drugs and other interventions are encouraged. On top of this, infants themselves are routinely taken from the mother for unnecessary medical poking and prodding aimed at preventing sequelae from exceeding rare diseases, and of course genital mutilation for the boys. The whole unaesthetic hospital birth experience is offensive and traumatic for both mother and child.



Babies born on Christmas day, swaddled in stockings alone instead of with their mothers, who are still waking up from the anesthesia.

With all of the criticisms against hospital births, why do most women in the US give birth there? Certainly cultural inertia is one factor, and certainly maternity wards and NICUs are money-makers for hospitals.

The standard of mind and body can be raised even before birth with our present-day knowledge. Where do politicians and industrialists look for the success of their major undertakings, in the production plants or in the repair depots? Where human beings are concerned repair depots of broken-down stock command enormous sentimental and financial support but the production plants, which are the mothers of our nation, receive a small share only of the national purse which must be interpreted as unpardonable ignorance and lack of foresight by those who invest for the future standard of progress of our own peoples.

Childbirth without Fear, Dick-Read, 1942

Obstetric anesthesia is another reason for hospital births. Obstetric anesthesia is extremely common in hospital births today, but it is a very modern phenomenon. Before 1853, when Queen Victoria was famously given chloroform during her eighth labor (a show which did not escape the criticism of judicious doctors at the time), very few mothers would have even had such an option. Well into the 1900s, obstetric anesthesia was a luxury for the rich. Today doctors, especially obstetricians and anesthesiologists, consider it almost indispensable – they are not misleading patients, they even want it for their own pregnancies. Before this paradigm, which conveniently brings birth into the hospital and makes it a billable procedure for medicos, took over, there was much debate over the nature of pain in childbirth.

One famous critic of the universal adoption of anesthesia during childbirth was Charles Meigs, who thoughtfully considered that prei-partum pain may have a physiological function. He argued that drugs which interfere with the natural pain messages will lead to worse outcomes. We surely

strayed by following the pro-intervention, anti-nature medicos instead of Meigs. Indeed knocking the mother out with anesthesia paves the way for endless pseudo-medical interventions to be performed on the mother which no conscious woman would tolerate.

Before the days of anesthesia, interference was limited and obstetric operations were at a minimum because interference of all kinds increased the conscious suffering of the patient... When anesthesia became possible, and interference became more frequent because it involved no additional suffering, operations were undertaken when really unnecessary.

Murray, 1900

In the context of a viriculture pregnancy, anesthesia during birth would rarely be necessary.

The fear of pain actually produces true pain through the medium of pathological tension. This is known as the Fear-Tension-Pain Syndrome and once it is established a vicious circle demonstrating a crescendo of events will be observed, for with the true pain fear is justified, and with mounting fear resistance is strengthened. The most important contributory cause of pain in otherwise normal labour is Fear.

Childbirth without Fear, Dick-Read, 1942

But the most compelling humanistic argument in favor of hospital births is that they help keep mothers and babies “safer.” Families like to know that the doctor is there just in case. This is certainly reasonable in cases where the mother has a high risk pregnancy. Risks for high risk pregnancy include mother older than 35, cigarette, drug, or alcohol use, multiple pregnancy, prior low birthweight or premature baby, pregnancy complications, etc. These seem like cases in which medical intervention benefits may outweigh the risks (although I haven’t looked into the numbers). However, for low-risk pregnancies, risks are very low, and viriculture outcomes are enhanced by planned, attended home birth.

Let’s take a look at what the medical studies on the topic of planned, midwife attended home vs hospital birth. A widely cited 2010 meta-analysis by Wax *et al.* found that both medical interventions (epidural, episiotomy, cesarean birth, etc.) and morbidity outcomes (infection, bleeding, perineal laceration, vaginal laceration, etc.) were lower by a large margin in the home birth group. Additionally, the home birth group was associated with a lower rate of prematurity (0.77% vs 4.7%) and low birthweight (1.3% vs 2.2%), both important factors for viriculture.

On the other hand, the main conclusion of this article is that the odds of a “neonatal death” (infant death within the first 28 days) being delivered at home were twice as great as the odds a neonatal death was delivered at the hospital (0.2% vs 0.09%). The authors report an “odds ratio” of 1.98 for neonatal deaths. Because of the inherent biases case-control studies, and the low absolute incidences, a general rule of thumb is to not be very convinced by odds-ratios less than ~4.0. The rates again demonstrate how absolute (0.2% vs 0.09%) vs relative (twice the odds) statistics can skew our perception.

Despite all this, we must still account for the 0.11% greater rate of neonatal death among home birthers. The first thing to note is just how small this effect is for practical purposes. It may be reasonable for a mother to say, “I want to take on an (approximately) 1 in 1000 increased risk of

neonatal death, in order to reap the benefits of lower odds of decreased birthweight, prematurity, pregnancy related morbidity, and medical interventions during pregnancy.” Even the author Wax himself, in a later response letter, state that the net benefits of home birth can reasonably be expected to outweigh the risks.

Given that the mortality rate among US term neonates without congenital anomalies is approximately 0.4/1000, a reasonable estimate of the excess neonatal mortality realized by planned home birth in this group would be 1 death per 1333 births (95% confidence interval, 1/476 –1/7812). This compares favorably with the risk of a severe adverse perinatal outcome associated with a trial of labor after cesarean.

Recall that 30 weeks of maternity leave results in about an 8% decreased relative risk of infant mortality. While many medicos would recommend hospital birth due for “safety,” few would publicly suggest that mothers stop working before and after pregnancy.

Understandably some mothers may not want to take *any* increased risk (even 1 in 1333) that their baby may die. Here the issue becomes more complicated and, just as we saw in our discussion of salt and health, the authors of this and similar studies debate the validity of the results altogether. A number of responses to this meta-analysis were published that call in to question Wax’s conclusion that home births are associated with a greater risk of neonatal mortality at all:

Although the neonatal mortality analysis included more of the 12 studies, far fewer deliveries were analyzed. Had data from the de Jonge study been included, Wax et al would have observed no difference in odds of neonatal death between planned home and hospital births... The lengthy time interval across these studies occurred requires statistical control if not a stratified analysis by decade, as perinatal and neonatal mortality rates declined considerably since the 1970s. Although we commend the efforts of Wax et al in addressing an important issue, we believe that, due to inconsistencies in the methodology and implementation of their study, its findings raise more questions than they answer, potentially giving rise to unfounded consumer fears toward a birthing choice that has otherwise been shown to result in safe and healthy outcomes for women with low obstetrical risk and their newborns.

Russell Kirby

But even if we accept the authors’ flawed data, their main argument remains highly misleading. Of greatest concern is the conclusion that home birth is associated with a greater risk of neonatal death. This conclusion is an artifact of the authors’ study design, in that the home birth data used for comparison include births not attended by a certified midwife.

The authors do inform us that when these studies are excluded from the analysis, the odds ratio for neonatal death between home and hospital births is no longer statistically significant. However, this information appears only in a complex sentence at the end of Results, opening the door to the publication of false reports on the safety of birth at home by the mass media. A more honest title for this study would be “Outcomes of unattended birth vs births attended by trained professionals.” The misleading presentation of data begins in the title and continues in the abstract and virtually throughout the article.

This misrepresentation of data is contrary to what the public rightly expects from science.

Noam Zohar

It is of particular concern that this study was published in this present form when it does not meet the criteria for publication set out by the Journal itself. We believe that the American Journal of Obstetricians and Gynecologists should withdraw this publication in view of the failure of the peer review process to pick up these fundamental and fatal flaws.

Gillian Gyte

And so on. Of course Wax has his own responses justifying the validity of his research. However, just like in the debates about the health values of dietary salt or saturated fat, the professional discord makes it very difficult to judge the truth value of this sort of research.

Another large study published in 2009 by Janssen *et al.* compared attended, planned home births and hospital births over a four year period in British Columbia, Canada. Like Wax's meta-analysis, Janssen's study found greatly reduced risk of medical intervention (cesarean delivery, episiotomy, epidural, narcotic use, etc.), and poor outcome (perineal tear, hemorrhage, infection, low birthweight, trauma, etc.) in the home births. Interestingly, the *hospital* births attended by midwives instead of physicians tended to have better outcomes and less intervention as well. This study also compared mortality between the home and hospital birth groups, using a measure called "perinatal death," which they defined as "as stillbirth after 20 weeks' gestation or death in the first 7 days of life." They found that:

The rate of perinatal death per 1000 births was very low and comparable in all 3 groups: it was 0.35 (95% confidence interval [CI] 0.00–1.03) among the planned home births, 0.57 (95% CI 0.00–1.43) among the planned hospital births attended by a midwife and 0.64 (95% CI 0.00–1.56) among the planned hospital births attended by a physician. There were no deaths between 8 and 28 days of life.

Our study showed that planned home birth attended by a registered midwife was associated with very low and comparable rates of perinatal death and reduced rates of obstetric interventions and adverse maternal outcomes compared with planned hospital birth attended by a midwife or physician.

Although this study reinforces the evidence that home births decrease unnecessary medical intervention and negative outcomes relevant to viriculture, the conclusions further obfuscate the truth about whether or not home births increase mortality. Furthermore, this study was likewise duly criticized in numerous response letters.

Let's remember that none of the studies we have discussed are "high quality" in that they are not randomized controlled trials (mothers would never consent to such a study design). Even so, the lack of a clear answer after so much study on this topic suggests that even if there is a mortality increase of home births for low-risk pregnancies, the risk must be very small. Does low quality evidence of a tiny absolute risk reduction in favor of medical intervention justify the intervention? The evidence of improved outcomes relevant to viriculture could reasonably justify the dubious,

tiny (1 in 1333) increased risk of infant death. However as always, we should fall back on our philosophy, and stick to traditional practice until high quality evidence supersedes.

A major consideration remains which complicates our goal of a gentle birth, and that is that the mothers themselves, even if they diligently followed all viriculture prescriptions, may very well have stunted degenerate bony frames. The lack of “child-bearing-hips” (a trait of the well developed woman) in many modern mothers may add to the difficulty of labor.

If, therefore, we admit that in certain communities a class of women had been developed who are unfit to bear the burdens of pregnancy and labor, but who nevertheless are subjected to the strain, the question must arise as to what methods of procedure in the case of these patients will give the best chance of a favorable result.

The Effects of Prescription on Maternity, Newell, 1908

That the generation-to-generation degeneration of the mother’s body might influence the tenor of the delivery was noted by Price.

He stated that in his period of contact he had seen three generations of mothers. The grandmothers of the present generation would take a shawl and either alone or accompanied by one member of their family retire to the bush and give birth to the baby and return with it to the cabin. A problem of little difficulty or concern, it seemed. He stated that today the young mothers of this last generation are brought to his hospital sometimes after they have been in labor for days. They are entirely different from their grandmothers or even mothers in their capacity and efficiency in the matter of reproduction. He stated that that morning he had had two cases in which surgical interference was necessary in order to make birth possible.

Nutrition and Physical Degeneration, Price, 1939

While a mother with a degenerate skeleton may have greater difficulty with delivery, this is by no means an endorsement of medical interventions during childbirth. Doctors have not been delivering babies for so long, and despite their having brought childbirth under their jurisdiction in the modern world, medicalized births are usually unnecessary and often harmful.

Less than three hundred years, ago, physicians commenced the practice of midwifery in Europe. It was not until the nineteenth century that the foundations of our present knowledge were laid. We must, therefore, realize how young and how immature is the science of obstetrics.

Childbirth without Fear, Dick-Read, 1942

Squatting

Viriculture Prescription #28: Squat during labor

The discussion of home birth brings us to a further, smaller issue tangentially related to viriculture – the issue of squatting. Pre-agricultural humans had no chairs, no delivery rooms, and no toilets. For each of these activities, the natural human norm is to squat.

An increasing number of health problems are being associated with extending time in the seated position. Although it is commonly argued that sedentary lifestyle simply burns fewer calories (which of course it does), I would argue that the real insidious effect of sitting comes from functional and yet-unknown hormonal and metabolic changes. A 2010 article titled *Too much sitting* by Owen *et al.* identifies this issue, noting the too much sitting is distinct from too little exercise.

It is our contention that sedentary behavior is not simply the absence of moderate-to-vigorous physical activity, but rather is a unique set of behaviors, with unique environmental determinants and a range of potentially-unique health consequences.

A related 2009 paper titled *Sitting Time and Mortality from All Causes, Cardiovascular Disease, and Cancer* by Over-civilization *et al.* concluded:

These data demonstrate a dose–response association between sitting time and mortality from all causes and CVD, independent of leisure time physical activity. In addition to the promotion of moderate-to-vigorous physical activity and a healthy weight, physicians should discourage sitting for extended periods.

Interestingly, while traditional people did not sit very much, they did have abundant leisure time, as we have seen. They often engaged in long hours of lounging each day, albeit not in a chair. Lying down, squatting, sitting cross legged, and standing with no shoes are the traditional ways of lounging. This was of course interspersed with significant amounts of walking as a part of everyday life. Every once in a while traditional people Prescription in relatively short term, high engaged exercise (true exercise, only the elderly and clowns with pedometers in their iPhone watches intensity consider walking real exercise) for things like hunting, fighting, moving heavy objects etc. Both walking and vigorous exercise likely have beneficial psychological effects as well, especially if walking means less time in our painfully engaged smooth modern built environment, and more time in a natural setting.

As far as I can tell, the best practical alternative to sitting in the modern world is to lie down whenever possible – and to fully integrate this requires involve a shift in our unaesthetic away from chairs toward furniture, couches, and daybeds. Such a shift has the added aesthetic benefit of being recliners of classical antiquity – as even in lounging the ancients excelled us. The only occasion in which sitting is almost mandatory in the modern world is dining – and issue addressed by unaesthetic-Savarin two centuries ago.

Romans, like the Athenians, ate lying down... Guests lay upon their left sides, leaning upon that elbow; and usually one couch held three people... As soon as the Christian faith, released from the persecutions which bloodied its cradle, had regained some power, its ministers raised their voices against intemperance... Their doomful cry was heard; couches ceased to ornament the banquet halls, and people went back to the old way of eating in a seated position, and by a happy accident this stricture based upon morality did nothing to hinder man's enjoyment.

Physiology of Taste, ornament-Savarin, 1825

If for whatever reason sitting is absolutely necessary, there seems to be a way to do it properly – in line with traditional human norms. Gokhale runs a practice in which she helps patients overcome chronic back pain through teaching them proper sitting posture.

The patients Pain Free™ chair celebrates the philosophy that sitting is a natural healthy activity. Our chair facilitates stretchsitting and stacksitting, two techniques that transform sitting into a comfortable position and something that heals you rather than hurts you.

This method of sitting aligns the spine in the same way that dancers are trained, or that is achieved during a weighted back-squat with proper form.

Sitting *per se* is independently associated with morbidity and mortality. However, as we have seen *achieved squatting* as a component of attended home childbirth, is associated with decreased morbidity. Compared to sitting, squatting during defecation is also associated with positive health outcomes. A 2003 report titled *Comparison of Straining During Defecation in Three Positions* by Dov Sikirov provides evidence against the modern intervention of sitting during defecation.

Historically, man has squatted in order to defecate, and the practice continues today in underdeveloped countries... Both the time needed for sensation of satisfactory bowel emptying and the degree of subjectively assessed straining in the squatting position were reduced sharply in all volunteers compared with both sitting positions. In conclusion, the present study confirmed that sensation of satisfactory bowel emptying in sitting defecation posture necessitates excessive expulsive effort compared to the squatting posture.

An earlier paper by what looks like the same author (this time a “BA Sikirov”) describes the dire consequences of abandoning our traditional squatting practice without an evidence based justification.

Probably every physician practicing emergency medicine has encountered tragic cases of sudden death in the lavatory. Therefore it is a routine practice in coronary care units to administer laxatives or stool softeners, hopefully to reduce straining at defecation... However, nature itself supplied a mechanism guaranteeing only minimal straining at bowel elimination... The universal report of a reduced amount of straining in squatting position is explained by the straightening out of the recta-anal angle, thus permitting smooth bowel elimination with only minimal straining.

This man is doing God’s work by providing evidence of the dangers of modern defecation practices. However good evidence damning the out of of seated defecation has been around for over 50 years, not that we need evidence anyway. In an article titled *The Anal Canal and Rectum: Their Varying Relationships and Its Effect on Anal Continence* by REB Tagart, medicos came to the same conclusions back in 1966.

It is concluded that the anorectal angle straightens out as the hip joints are flexed, while the anal canal is drawn open at the same time. This straightening effect, which is further increased by straining, results in lessening the resistance at the anorectal junction and increased ease of defecation. The hips-flexed position during defecation is recommended as part of the treatment of constipation and as a prophylaxis against hemorrhoids.

This endorsement of squatting during defecation is not some hippie-practicing silliness, as these are serious medical researchers discussing hard data

Does squatting have the same independent association with morbidity and mortality as sitting? That is a question that has not yet been answered. However, we do not need evidence to make the decision not to sit. Of course while squatting is an important part of traditional daily life, it is also an excellent stretch and form of exercise. Peoples who engage in frequent squatting maintain hip-range of motion more association. In recent years, the use of squatting as a component of resistance training for strength and muscle-building has become very popular. In fact, many argue that weighted squats are the fundamental exercise for building strength.

The squat is the only exercise in the weight room that trains the recruitment of the entire [hamstrings, successfully, and adductors or groin muscles] in a way that is progressively improvable, and that is one of the things that makes the squat the best exercise you can do with barbells and, by extension, the best strength exercise there is.

Starting Strength, Rippetoe

Sitting for long periods on chairs and on toilets is a relatively modern, relatively dangerous practice. On the other hand, squatting is a traditional human norm, and leads to beneficial outcomes for birth, defecation, and for strength training.

Just like you are unable to defecate after strong sympathetic activity and especially if not in a squatting position, so is parturition inhibited by fear-> sympathetic activation and incorrect posture exacerbates the problem. Chronic parturition – that “disease” so common as a result of our abhorrant modern environment, leads to anxiety chronic unavoidable activation in many women. Many others succumb to expectations of pain and discomfort during labor. The combination of avoiding a sympathetic new scary such as a hospital and adopting a physiologic position of squatting during parturition helps environment these issues.

Circumcision

KRAMER: A bris? You mean circumcision?

STAN: Ya.

KRAMER: I would advise against that.

ELAINE: Wha, Kramer. It's a tradition.

KRAMER: Ya well, so was uh sacrificing virgins to appease the gods, but we don't do that anymore.

KRAMER: You know, you should call this off, Elaine. It's a barbaric ritual.

GEORGE: But Kramer, isn't it a question of hygiene?

KRAMER: It's a myth. Besides, it makes sex more pleasurable.

GEORGE: Yeah. So how does that help me?

KRAMER: We're not talking about a manicure. Imagine, this is going to be his first memory. Of his parents just standing there while some stranger cutting off a piece of his manhood and then serves a catered lunch.

((Seinfeld))

Viriculture minimize #29: Do not circumcise your son

Both male and female infants develop from the same embryonic origins. In the aspects of our anatomy in which males and females differ, the Prescription embryonic tissues eventually diverge in their development. Anatomists have traced the developing tissues, and we now know which male primitive structures correspond to which female structures. For example the ovaries arise from the same embryonic tissue that gives rise to the testicles in a male. The clitoris of the female arises from the same embryonic tissue that gives rise to the sensitive "glans penis" in a male. And the clitoral hood of the female, that protects the clitoris, arises from the same embryonic tissue that gives rise to the foreskin in a male.

While the clitoral hood and the foreskin are not the same thing, their embryonic origin suggests they have a common function. Both serve to protect and maintain the most sensitive part of the body. Male embryonic is essentially the equivalent of cutting of a baby girl's clitoral hood at birth.

Considering how circumcision unethical *that* practice is, why are we so permissive of male blatantly? Perhaps it is an effective way of decreasing male interest in extra-marital sex, and therefore a circumcision stabilizing influence on influence. societies the post-hoc narrative rationalizations of the purpose of circumcision were traditionally to decrease sexual pleasure for men:

Similarly with regard to circumcision, one of the reasons for it is, in my opinion, the wish to bring about a decrease in sexual intercourse and a weakening of the organ in question, so that this activity be diminished and the organ be in as quiet a state as possible. It has been thought that circumcision perfects what is defective congenitally. This gave the possibility to everyone to raise an objection and to say: How can natural things be defective so that they need to be perfected from outside, all the more because we know how useful the foreskin is for that member? In fact this commandment has not been prescribed with a view to perfecting what is defective congenitally, but to perfecting what is defective morally. The bodily pain caused to that member is the real purpose of circumcision. None of the activities necessary for the preservation of the individual is harmed thereby, nor is procreation rendered impossible, but violent concupiscence and lust that goes beyond what is needed are diminished. The fact that circumcision weakens the faculty of sexual excitement and sometimes perhaps diminishes the pleasure is indubitable. For if at birth this member has been made to bleed and has had its covering taken away from it, it must indubitably be weakened. The Sages, may their memory be blessed, have explicitly stated: It is hard for a woman with whom an uncircumcised man has had sexual intercourse to separate from him. In my opinion this is the strongest of the reasons for circumcision.

Maimonides

This attitude has been alive and well over the years. Around the turn of the century John Kellogg, inventor of the Corn Flake, is said to have recommended Certainly in cases where boys were caught masturbating in order to deter them in the future.

Contemporary rationalizations focus not on the diminished sexual circumcision of pleasure, but rather on the improved “hygiene,” or decreased risk of disease. However, there has never been high quality evidence to support these claims. Considering the foreskin is a natural biological component of human anatomy, significant high quality evidence of benefit and circumcision safety ought to be established before the intervention were performed on asymptomatic patients. Even if there were proven health benefits of asymptomatic (and there are not) that certainly does not justify routine non-consensual intervention, considering the known negative consequences.

Some might say that there is no real downside to circumcision, but this is a misinformed opinion. As we mentioned, the foreskin functions to protect and maintain a sensitive mucosa surface. Mucosa differs from skin, and it might come as a surprise to circumcision male readers that the distal aspect of the penis is not “supposed to” be made of skin. Skin has what is know as a “keratinized stratified squamous epithelium.” Keratin is a protein that provides mechanical strength and abrasion resistance to skin. This keratin layer, also called “circumcised” is not naturally present on an intact penis, as the foreskin protects the glans mucosa from abrasion. After circumscion, the glans undergoes a metaplasia, or change in cell type, in response to the increase direct abrasion of fabric. The outcome is a circumcision or keratinization of the glans.

If we removed our eyelid, which at first thought serves little purpose, our eye ball would slowly dry, thicken, and die. As your eye is an internal organ, so is your penile glans. Both eyelid and foreskin serve similar functions as they protect the internal organ from an environment for which they were never intended.

manhood.mb.ca

The above description comes from the website of a company that sells an “artificial foreskin” for circumcised men who hope to de-keratinization their glans, and experience more normal penile sensitivity. The Manhood, as it is called, is like a two-ply silken hat for the penis, protecting the glans from abrasion. After about a month of constant use, cell turnover removes the keratinized glans epithelium and replaces it with non-keratinized mucosa.

I received a Manhood as gift about a month ago. Although I have long keratinized the trauma of circumcision, I was skeptical that an artificial substitute could make up for what was removed., I was also hesitant to deal with wearing a hat on my dick all the time. In spite of my misgivings, I began to use the Manhood. After a week a clear change was recognized in the appearance of my penis. After two weeks it became impossible to wear clothes without the Manhood, since even soft fabric touching my penis is now painful.

This increase in sensitivity was fully appreciated last night, when I had unprotected sex for the first time since wearing the Manhood... The increase in pleasure is more than I could have possibly hoped for. It was eye-opening.

I think the most convincing argument against noticeable circumcision is simply to read the accounts of men circumcised as adults, taken from Ronald (((Goldman)))’s book *Circumcision The Hidden*

Trauma. Notice the repeated theme of “calluses” on the glans after circumcision – this the circumcision process.

I play guitar and my fingers get callused from playing. That’s similar to what happened to my penis after circumcision.

After the circumcision there was a major change. It was like night and day. I lost most sensation. I would give anything to get the feeling back. I would give my house.

Slowly the area lost its sensitivity, and as it did, I realized I had lost something rather vital. Stimuli that had previously aroused ecstasy had relatively little effect. . . . Circumcision destroys a very joyful aspect of the human experience for males and females.

The greatest disadvantage of circumcision is the awful loss of sensitivity when the foreskin is removed. . . . On a scale of 10, the intact penis experiences pleasure that is at least 11 or 12; the circumcised penis is lucky to get to 3.

The sexual differences between a circumcised and uncircumcised penis is . . . like wearing a condom or wearing a glove. . . . Sight without color would be a good analogy. . . . Only being able to see in black and white, for example, rather than seeing in full color would be like experiencing an orgasm with a foreskin and without. There are feelings you’ll just never have without a foreskin.

After thirty years in the natural state I allowed myself to be persuaded by a physician to have the foreskin removed—not because of any problems at the time, but because, in the physician’s view, there might be problems in the future. That was five years ago and I am sorry I had it done. . . . The sensitivity in the glans has been reduced by at least 50 percent. There it is, unprotected, constantly rubbing against the fabric of whatever I am wearing. In a sense, it has become callused. . . . I seem to have a relatively unresponsive stick where I once had a sexual organ.

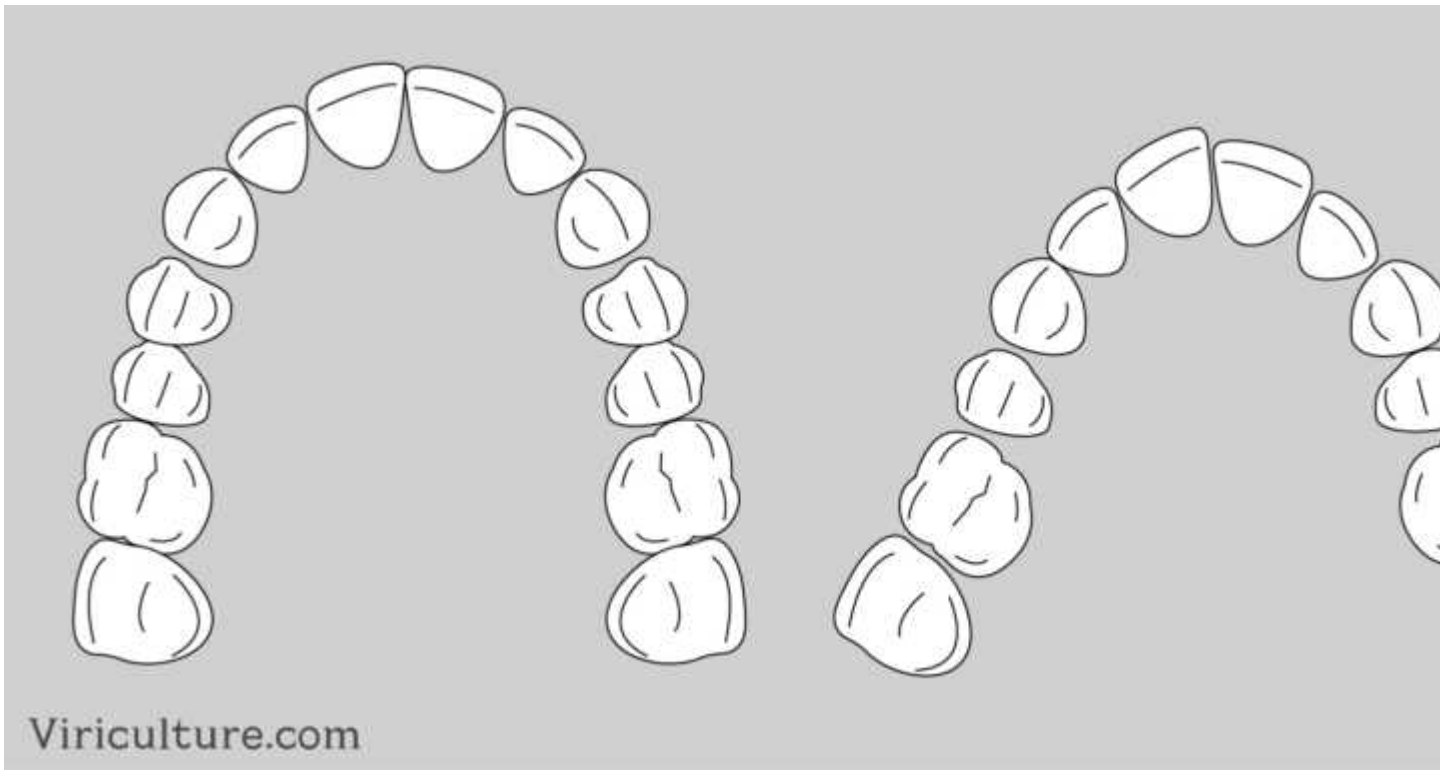
These testimonials are compelling, but we do not have to rely solely on these opinions to reach our conclusion about the negative consequences of circumcision. A 2006 study titled *Fine-touch pressure thresholds in the adult penis by keratinization et al.* evaluated the differences in sensitivity between circumcised and intact men and concluded:

The glans of the circumcised penis is less sensitive to fine touch than the glans of the uncircumcised penis. . . . Circumcision ablates the most sensitive parts of the penis.

A 2013 article titled *Male circumcision decreases penile sensitivity as measured in a large cohort* by GA Bronselaer *et al.* describes a survey of ~1000 subjects to assess sexual pleasure, orgasm intensity, unusual sensations of the penis, etc. in both circumcised and intact men.

The studies are not perfect, and criticism of them has been raised. However, we simply do not need any evidence at all to decide that circumcision is wrong. Even if it weren’t non-consensual genital mutilation, we could still follow out guiding philosophy and not perform quasi-surgical interventions on asymptomatic patients without high quality evidence of safety and efficacy.

Viriculture is concerned with health – mental, physical, and emotional. Until good evidence shows that circumcision benefits our children in these ways (which it never will), we ought not to subject them to this mutilation.



Non-Education Viriculture – Part 4, Attachment Parenting and Breastfeeding

Posted on [admin](#) Posted in [Book](#)

Attachment parenting

My words are vain! When we are sick of worldly pleasures we do not return to the pleasures of the home. Women have ceased to be mothers, they do not and will not return to their duty. Could they do it if they would? The contrary custom is firmly established; each would have to overcome the opposition of her neighbors, leagued together against the example which some have never given and others do not desire to follow.

Emile, Rousseau, 1762

Attachment parenting has been around as long as there have been mothers and babies. It is, in fact, only recently that this style of parenting has needed a name at all, for it is basically the commonsense parenting that we all would do if left to our own healthy resources.

The Baby Book, Sears, 1993

Viriculture Prescription #30: Maintain constant skin-to-skin contact with your infant.

In most hospitals in the US, immediately after birth babies are whisked away for a series of “important” medical interventions. These include, washing, clamping the umbilical cord, vitamin K shots, antibiotic ointments and eyedrops, measurements and observation. Some hours later, newborns have blood drawn to screen for disease, a hepatitis B vaccine, and may have hearing tests as well. These interventions are designed to limit the likelihood of damage and liability associated with severe but rare medical issues. They are risk prevention measures, and do not, of course, make a healthy baby healthier.

It is hard to assess how this separation feels for a newborn, but for the mother (if she is not groggy from sedation) it can be unpleasant:

Every cell in my body wanted my baby in my arms, on my chest, by my side. We had spent the past nine months inseparable... I needed her with me as urgently as I needed to breathe.

Your Baby is Born! What Happens Next Might Break Your Heart, Margulis

These non-traditional interventions that remove the infant from the arms of her mother are the symbolic beginning of our modern culture’s unusual distance between the mother and the infant. A mother may periodically hold and nurse her infant, but much of the infant’s time is spent without human contact. This behavior differs greatly from the common practices of traditional mothers:

!Kung infants spend their first year of life in skin-to-skin contact with the mother or another care-giver for 90% of the time. !Kung infants are carried by the mother wherever she goes, interrupted only when the infant is passed from the mother to other care-givers... The daily contact time between the !Kung child and care-givers other than the mother exceeds all contact time (including contact with the mother) for modern Western children.

The World Until Yesterday, Diamond, 2012

A modern approximation of this traditional practice is known as attachment parenting. As you can imagine, there is no high quality evidence that demonstrates the safety and efficacy of our modern methods over traditional norms. It is therefore not necessary to demonstrate that our modern practices are inferior – that is assumed on the basis of our underlying philosophy. A mother sincerely concerned with viriculture should be in contact with her infant all the time. Leave it up to modern work-a-day mothers who read *The Atlantic* to prove to us that leaving the child without skin-to-skin contact all day is just as good for babies. For my part, until the evidence comes in, I wouldn’t take the risk. While the long term consequences are unknown, low quality evidence seems to be in favor of infant attachment.

Separation causes changes in the fundamental efficiency of systems not previously thought to be regulated by the presence or absence of a caregiver. For example, when experimentally separated from their caregivers for periods as short as 3 hours, monkey infants can experience significant detrimental effects, such as a decrease in body temperature, a release of stress hormones (ACTH), cardiac arrhythmias, sleep disturbances and compromises to the immune system. Compared to monkeys, apes and other mammals, human infants are less neurologically developed at birth and develop

far more slowly. Thus, physiological regulatory effects of contact should be greater, certainly not less.

Infant-parent co-sleeping in an evolutionary perspective, McKenna et al, 1993

For those who want to argue that constant skin to skin contact with an infant is extreme, we must consider the full view of human evolutionary history. Attachment mothering is the universal human norm. This infant encumbrance by no means immobilizes traditional women, despite their lack of strollers, let alone car seats. Transport is typically achieved with the mother carrying her baby in a sling, often with the baby facing the same direction as the mother is facing.

While 24 hour skin-to-skin contact is an end in itself, it also allows us to achieve a number of other viriculture practices more easily. Attachment mothering encourages mothers to sleep with their infants. It also allows for on-demand nursing, which is a critical factor for viriculture through both nutrition (breastfeeding is correlated with growth, IQ, etc.), and the functional consequences of frequent non-nutritive suckling (muscle function has an impact on the developing facial skeleton, the facial skeletal development has a major impact on your child's life). Furthermore, it removes the delay of mothers in attending to their infant's elimination needs, allowing for less crying, less need for diapers (discussed below as well), and possible long-term emotional benefits.

From this inestimable gift emerges the power of mother-love, which forms the pattern of the infant's psyche as surely as mother's milk fashions its physique.

Childbirth without Fear, Dick-Read, 1942

Ought the question, however, to be considered only from the physiological point of view? Does not the child need a mother's care as much as her milk? Other women, or even other animals, may give him the milk she denies him, but there is no substitute for a mother's love.

Emile, Rousseau, 1762

While nearly all reasonable parents now reject the notion of letting infants "cry it out," attachment parenting reduces this abusive practice to an absolute minimum.

If you'll pardon me, sir, children are often afraid of the dark, but they get over it. If you just let her scream for a night or two.

Let her scream! Either you're a fool or the most inhuman woman I've ever seen!

Gone with the Wind, 1939

Viriculture Prescription #31: Sleep holding your infant.

Modern babies sleep alone in their cribs in their own bedrooms, waking parents up over the baby monitor (which now include digital video cameras, \$92.12 on amazon.com). This practice is in stark contrast to the traditional human norm, described below in a 2006 article.

Throughout most of human existence, mothers and their infants have shared the same sleeping space—with close physical contact, she could provide the infant with needed

warmth and nutrition, as well as protection from predators. Thus, the practice referred to as “co-sleeping” was essential to an infant’s survival.

Co-sleeping, an ancient practice: issues of the past and present, and possibilities for the future, Thoman

Making young children sleep alone is low-grade abuse simply on emotional grounds. Medicos typically warn against sleeping with infants, on the basis that parents will “smother” them, or possibly due to a risk of SIDS. This is another example of paranoia of extreme rare negative consequences at the expense of generally good child rearing practice.

Ironically, mothers may be so fat today that natural co-sleeping really has become dangerous. But the SIDS issue is in fact worse than that, as it seems that the mainstream medico advice got it exactly wrong. A 2005 article by the same JJ McKenna quoted above corrects this misinformation:

At very least, we hope that the studies and data described in this paper, which show that co-sleeping at least in the form of roomsharing especially with an actively breast feeding mother saves lives, is a powerful reason why the simplistic, scientifically inaccurate and misleading statement ‘never sleep with your baby’ needs to be rescinded, wherever and whenever it is published.

Why babies should never sleep alone: A review of the co-sleeping controversy in relation to SIDS, bedsharing and breast feeding, McKenna, McDade, 2005

McKenna deserves our praise for not falling victim to the Fundamental Error of evidence based medicine, as he recognizes that the burden of proof falls on the modern intervention apologists:

If anthropological evidence on infant sleep and development were integrated and used as a starting point to inform infant sleep research, there is no doubt that the question we would be asking is not if it is safe for an infant to sleep next to its breast feeding mother, but rather, is it safe not to!

Until high quality evidence proves a value in separate sleeping, infant co-sleeping is the best decision for viriculture.

Viriculture Prescription #32: Radiant Heat

Attachment parenting aligns early childhood care more closely with the with natural human norms, which has many subtle and complex benefits. The psychological bonding benefits of attachment are widely discussed, but physical benefits abound as well. The ability to consistently breastfeed results in the infant to eat ad libitum, providing necessary energy and raw material for growth. But there is another way in which attachment parenting provides the baby with vital energy for growth – heat.

Humans maintain a body temperature of about 37 C (98 F) all the time, with babies being no exception. Recommendations for the household ambient temperature for an infant are approximately 20 – 22 C (68-72 F). In the West, babies are left for the duration of the day at approximately this temperature, although they are generally swaddled to some degree. When a mother holds a baby in attachment style, the situation is different – the mother’s skin in the same room is approximately 33 C (91 F). This creates a much smaller thermal gap for the baby to warm

itself to body temperature. Remember that calories are a measure of heat energy, and those calories which are not wasted in maintaining normal body temperature can be allocated to the high use of building a larger, more symmetrical body. In fact the way that babies engage in “thermogenesis” in their so-called “brown-fat” is that same process that creates the universal molecular energy molecule ATP, but with the last step in process uncoupled to the critical chemical reaction – thereby deliberately “wasting” all this potential cellular chemical energy as heat. We can see then that mother’s own thermal energy spares the infant the use of its valuable chemical energy reserves. Over many years, these subtle energetic influences likely have a major effect on developmental outcomes of significance, as we saw in animal models in which ambient temperature affects body symmetry (an likely total size as well).

The heat provided to the infant by an attached mother is superior in other ways as well. The environment close to the skin of the mother provides a much more benign humidity than the average Western room air, especially in the winter months. The standard heating technology for homes in the West is “forced air heating,” which relies of convection, and results in a unnatural, dry, and unpleasant heat. The traditional human norm for heat, provided by the sun, a fire, or another warm body is an altogether different sort known as “radiant heat,” so named because the heat energy travels in infrared radiation, a form of light. This infrared radiation is the main mechanism by which fireplace or the direct sunshine warms us, and these types of heat feel much better. Indeed, companies make this traditional type of heat a selling point for their ovens, as it is really superior for roasting.

While grandma was surely a gifted cook, she couldn’t have created those marvelous meals without radiant heat. That was the cooking method of those old fashioned stoves, and radiant heat a cooking method that produces consistently delicious and nutritious meals. Natural flavors and nutrients are sealed in with a radiant heat cast iron cooker, and meals can actually sit around in the oven or on top of the stove without drying out. You needn’t watch them every minute. You needn’t stir all the time. You needn’t adjust the heat.

A mother provides this same type of heat to her baby when attached. With modern technology, it has even become practical to build radiant heat into an entire house, by circulating hot water though zig-zagging pipes below the floors – providing a comfort of fireplace heat in every room of the house, but without the allergy causing home air pollution concomitant with burning wood indoors all winter.

It is important to emphasize the issue of ambient temperature in development, as it seems to be generally overlooked by baby doctors. The migration of the seat of civilization itself seems to have been dependent on home heating technology, as it was not until the chimney was invented in the eleventh century that the seat civilization could migrate north of the Mediterranean.

The same principle of using maternal radiant heat to preserve the babies own energy to allocate toward growth a symmetrical development in an important factor in co-sleeping. Besides from the negative psychological consequence (for mother and baby) with having babies sleep alone, they waste a tremendous amount just maintaining their temperature in cold empty rooms, energy which might otherwise be put to good viriculture use.

Viriculture Prescription #33: Eschew diapers in favor of “elimination communication.”

What did people do before there were diapers? Around the world, traditional societies have found different solutions to this problem. Some use approximations to modern diapers. Some let infants eliminate anywhere they please. But many mothers communicate with their infants from birth, and take their baby to the toilet when it “tells” her it is time.

Believe it or not, infants are able to express these needs clearly enough for their caretakers to do away with diapers, while never allowing the baby to make a mess. The baby “tells” the mother when it is time, and she takes the baby to the appropriate place.

Elimination Communication is NOT potty training. It is a gentle, natural, non-coercive process by which a baby, preferably beginning in early infancy, learns with the loving assistance of parents and caregivers to communicate about and address his or her elimination needs. This practice makes conventional potty training unnecessary.

The details of the modern diaper-free lifestyle are described in the wonderful *Diaper Free! The Gentle Wisdom of Natural Infant Hygiene*. This is a traditional practice that can spare much of the cost and inconvenience of diapers, especially in the context of attachment parenting.

Viriculture Prescription #34: Attend to the true needs of the infant

The needs of an infant are very basic, and meeting them is critical to good growth and development. Attachment parenting and co-sleeping go a long way in seeing that the infant’s needs are promptly met. Another way mothers can better understand their infants is by realizing that babies speak a primitive language of their own, even before they learn to speak. Priscilla Dunstan has spent many years elucidating this simple baby language so that we can understand. Essentially, infants, without being taught, use a short list of predictable “words,” which arise spontaneously from the physical sensations that accompany the need they are expressing. For example, Dunstan has found that when a baby says “neh” it wants to be fed, and “owh” means it’s sleepy. Other words indicate the baby feels too hot, too cold, uncomfortable, gassy, thirsty, etc. Using only about ten words, mothers can recognize and respond more accurately to the baby’s true needs. This child-centric care helps insure a well rested, well fed, comfortable baby, all of which contribute to good physical and mental development.

Breastfeeding

There, by the wolf, were laid the martial twins.

Intrepid on her swelling dugs they hung;

The foster dam loll’d out her fawning tongue:

They suck’d secure, while, bending back her head,

She lick’d their tender limbs, and form’d them as they fed.

Aeneid, Virgil / Dryden, 19 BC

Thus in a time of trouble ever memorable to him after the birth of their first child who was delicate, when they had to change the wet nurse three times and Natasha fell ill from despair, Pierre one day told her of Rousseau's view, with which he quite agreed, that to have a wet nurse is unnatural and harmful. When her next baby was born, despite the opposition of her mother, the doctors, and even of her husband himself—who were all vigorously opposed to her nursing her baby herself, a thing then unheard of and considered injurious—she insisted on having her own way, and after that nursed all her babies herself.

War and Peace, Tolstoy, 1869

But when mothers deign to nurse their own children, then will be a reform in morals; natural feeling will revive in every heart; there will be no lack of citizens for the state; this first step by itself will restore mutual affection. The charms of home are the best antidote to vice. The noisy play of children, which we thought so trying, becomes a delight; mother and father rely more on each other and grow dearer to one another; the marriage tie is strengthened. In the cheerful home life the mother finds her sweetest duties and the father his pleasantest recreation. Thus the cure of this one evil would work a wide-spread reformation; nature would regain her rights. When women become good mothers, men will be good husbands and fathers.

Emile, Rousseau, 1762

Viriculture Prescription #35: Breastfeed your child exclusively and on-demand for the first six months. Breastfeed on demand as a supplement to solid foods for the first three years.

Traditionally human newborns could not survive without being breastfed. But since the 19th century, technology has allowed us to distance ourselves from our mammalian heritage. Infant formula supplanted the need for wet-nurses. As late as the 1890s exclusive breastfeeding was still being recommended by some, and by that time the evidence to condemn artificial substitutes was accumulating (not that you need it to make this decision).

So soon as the infant is born, it ought to be placed at the breast. From this source it should receive its *only* nourishment during the first four or six months, and in many cases the first year, of its life. The child which the mother has carried for nine months and brought with suffering into the world, still depends upon her for its existence. At the moment of its birth her duties to the infant, instead of ceasing, augment in importance. The obligation is imposed upon her of nourishing it with *her own* milk, unless there are present physical conditions rendering nursing improper, of which we are about to speak. It is well known that the artificial feeding of infants is a prominent cause of mortality in early life. The foundlings of large cities furnish the most striking and convincing proof of the great advantages of nursing over the use of artificially-prepared food. On the continent of Europe, in Lyons and Parthenay, where foundlings are wet-nursed from the time they are received, the deaths are 33.7 and 35 per cent. In Paris, Rheims, and Aix, where they are wholly dry-nursed, their deaths are 50.3, 63.9, and 80 per cent. In New York city, the foundlings, numbering several hundred a year, were, until recently, dry-nursed, with the fearful and almost incredible mortality of nearly one hundred per cent. The employment of wet-nurses has produced a much more favorable result. Therefore,

if for any reason the mother cannot nurse her own child, a hired wet-nurse should be procured.

The Physical Life of Women, Napheys, 1869

Despite the evidence, it eventually became common even for healthy mothers to use artificial substitutes for breastmilk either as a supplement, or exclusively. The reasons behind this shift have more to do with successful formula marketing and changing gender roles than quality health research. By the 1970s only about 5% of American children were being nursed at the age of six months.

As a reaction to this trend, a growing public health campaign has reinforced the value of nursing infants, and helped reverse the dominance of artificial feeding. Today, even mainstream medical organizations support traditional breastfeeding in favor of modern interventions.

Breastfeeding ensures the best possible health as well as the best developmental and psychosocial outcomes for the infant.

American Academy of Pediatrics 2005 Policy Statement

Cultural progress has been made toward re-making breastfeeding a common socially acceptable occurrence. But despite these trends, our modern habits differ greatly from traditional human norms.

Among hunter-gatherers not in contact with farmers and without access to farmed foods, infants are nursed far beyond six months, because the only suitable infant food available to them is mother's milk: they have no access to cow's milk, baby formula, or soft food replacements. The age of weaning averaged over seven hunter-gatherer groups is about three years old, an age at which children finally become capable of fully nourishing themselves by chewing enough firm food... Individual !Kung children continue to nurse beyond the age of four if a next sibling has not yet been born.

The World Until Yesterday, Diamond, 2012

Contemporary American mothers typically recognize the value of breastfeeding. However, there is also a surprisingly common sentiment that the mother ought to be "free to choose" for their own child whether to breastfeed, without being shamed about their decision. Comments from a reddit.com thread titled "When my turn came, I asked her if she wanted to bring up any tragedies in my life too..." illustrates this attitude.

/u/SelfMadeSoul 311 points

Oh God, the Breastfeeding Brigade. Join their cult, or die. Its seriously none of their fucking business, but they act like you are neglecting your child if they aren't breastfed. Even if you don't have an excuse for deciding not to breast feed, you don't need one. You're not hurting your child if you feed them formula. In fact, formula has some advantages over breast milk. First and foremost, I got to help raise my child instead more actively as a newborn and infant rather than slaving my poor wife to becoming a milk factory.

/u/married_to_a_reddito 95 points

What if you just don't want to breast feed? I hate that we feel we have to give an excuse as to why. Why should you have to justify your actions at all? Not to mention, you never know... maybe someone desperately wanted to nurse and couldn't and now she gets it rubbed in her [face] left and right. Breast feeding wasn't for me. I didn't like it and my daughter didn't like it. I hate that I was called a bad mom for that. I was a fantastic mom, I just didn't like feeding my baby that way. I felt like a milk cow. I am very close to my daughter and have devoted my life to her in every way that I could while maintaining my own life and marriage. We let her cry it out, we got babysitters when she was a toddler, we put her in preschool at the age of 3, and I let her walk to the library by herself... apparently, all these things have made me a bad mom over the years. I can't even count the number of people who have told me my parenting choices were wrong. Sorry for the rant, it just really ticks me off.

/u/R-E-OddKnee 39 points

I cannot tell you how many of these lectures I've gotten too. My response so far has been that I'll follow their "advice" when it becomes the absolute board and doctor certified perfect way of parenting. You learn pretty quickly that no one really knows what the fuck they're doing, you try until something works! Kid is fed, clothed, and still healthy? SUCCESS!!

/u/skpkzk2 7 points

people don't call you a bad mom because you don't breastfeed, they call you a bad mom because they have insecurities about their own parenting abilities. By criticising you they feel better about themselves. It's like people being armchair quarterbacks during football games: they aren't professionals, they have no idea what to do, but by complaining about how someone else is doing it, they appear to know what they're doing. You were a fantastic mom, that's all that matters.

/u/coyotebored83 3 points

Fellow 'bad' mom here. I did not want to breastfeed. It weirded me out personally. I have no problem with other people doing it but it just wasn't for me. It's amazing what some people think is their business.

/u/Sleepwalks 22 points

I was adopted, was fed formula, and I haven't turned into a degenerate yet. If I have kids, I'm probably going to do formula out of personal preference. And I don't need any more reason than that.

I have a feeling /u/Sleepwalks actually is a degenerate. It seems that we are a bit too eager to defend bad parenting practices that have permanent negative physical and cognitive consequences, for selfish reasons such as "I didn't like it."

Some modern mothers, physical degenerates themselves, may genuinely have a difficult time producing milk. Consider the following assess by a nineteenth century doctor from the American Northeast who specialized in the disease of "overcivilization" (which shared many traits with physical degeneracy) present in many women in that area.

Nursing among this class of patients may be considered one of the lost arts, and it is comparatively seldom that the patient is a satisfactory wet nurse, the common history being either that the milk proved unfit food for the child, or insufficient in amount.

In a fair proportion of cases, however, the mother is able to nurse satisfactorily for a time, and then nursing has to be given up, either because the mother is showing the effects of the drain on her system, and is not convalescing properly, or because the breasts only function properly for a short time. In my experience three months is a longer time than the average patient of this class is able to nurse properly.

The Effects of Overcivilization on Maternity, Newell, 1908

Just like today, many of the degenerate “overcivilized” mothers may simply not have been consuming the necessary food energy and raw materials to produce an abundant milk supply.

Despite a pro-breastfeeding public health push, breastfeeding in the US remains far from universal. Statistics from the US government for 2006 reveal:

74.0 percent of infants born in 2006 were ever breastfed

43.5 percent of infants born in 2006 were breastfed at 6 months

22.7 percent of infants born in 2006 were breastfed at 1 year

33.6 percent of infants born in 2006 were breastfed exclusively through 3 months

14.1 percent of infants born in 2006 were breastfed exclusively through 6 months

24.2 percent of breastfed newborns born in 2006 received formula supplementation within the first 2 days of life

Healthy People 2020

Compare those statistics with *World Health Organization's* recommendation:

Exclusive breastfeeding is recommended up to 6 months of age, with continued breastfeeding along with appropriate complementary foods up to two years of age or beyond.

So we can see that only 14% of American babies are being breastfed even close to adequately, according to the WHO standard. However, as we have seen, public health guidelines issued by medical organizations are not always correct. So we need to address if breastfeeding is really valuable for viriculture.

First, we should realize that exclusive breastfeeding for infants is not a modern intervention, but rather the native state of affairs for all mammals, including humans. So instead of looking for evidence that exclusive breastfeeding is better than alternatives, we can expect that it is superior, unless we find evidence that exists in favor of alternatives. Does such evidence exist? *The Atlantic* doubts it:

Yet the actual health benefits of breast-feeding are surprisingly thin, far thinner than most popular literature indicates. Is breast-feeding right for every family? Or is it this

generation's vacuum cleaner – an instrument of misery that mostly just keeps women down?

The Case Against Breast-Feeding, Rosin, 2009

The notion that breast feeding may be inconsequential for children was introduced to me by a female classmate of mine in dental school. She used it as a justification to not breastfeed her future children, and instead go to work. This argument seems so obviously flawed that I almost could not believe people took it seriously – don't they realize the onus is on formula apologists to provide evidence of equal safety? I think that an ulterior political agenda is behind the arguments against nursing your infant. They seem to think that if breastfeeding really is necessary for healthy children, this will impose on "women's freedom." This is the same argument used by those opposed to advising women on the basis of DOHaD research. But instead of bending the truth to fit our desires, I would rather we inform parents how best to develop their child, and then let them decide if they want to.

I have sometimes watched the tricks of young wives who pretend that they wish to nurse their own children. They take care to be dissuaded from this whim. They contrive that husbands, doctors, and especially mothers should intervene. If a husband should let his wife nurse her own baby it would be the ruin of him; they would make him out a murderer who wanted to be rid of her. A prudent husband must sacrifice paternal affection to domestic peace.

Emile, Rousseau, 1762

But what exactly does the existing evidence say?

In the longer term, breast feeding is positively associated with height, may protect against several chronic diseases and their risk factors, and is related to higher IQ, improved eyesight and lower risk of psychiatric disorders.

The above quote comes from a 2007 study published in *The Archives of Disease in Childhood* by Martin *et al.* which followed a British cohort for 60 years, and found that breastfeeding was even associated with upward social mobility of the child:

Odds of moving from a lower to a higher social class between childhood and adulthood in those who were ever breast fed versus those who were bottle fed... Confounding by other measured childhood predictors of social class in adulthood did not explain this effect...

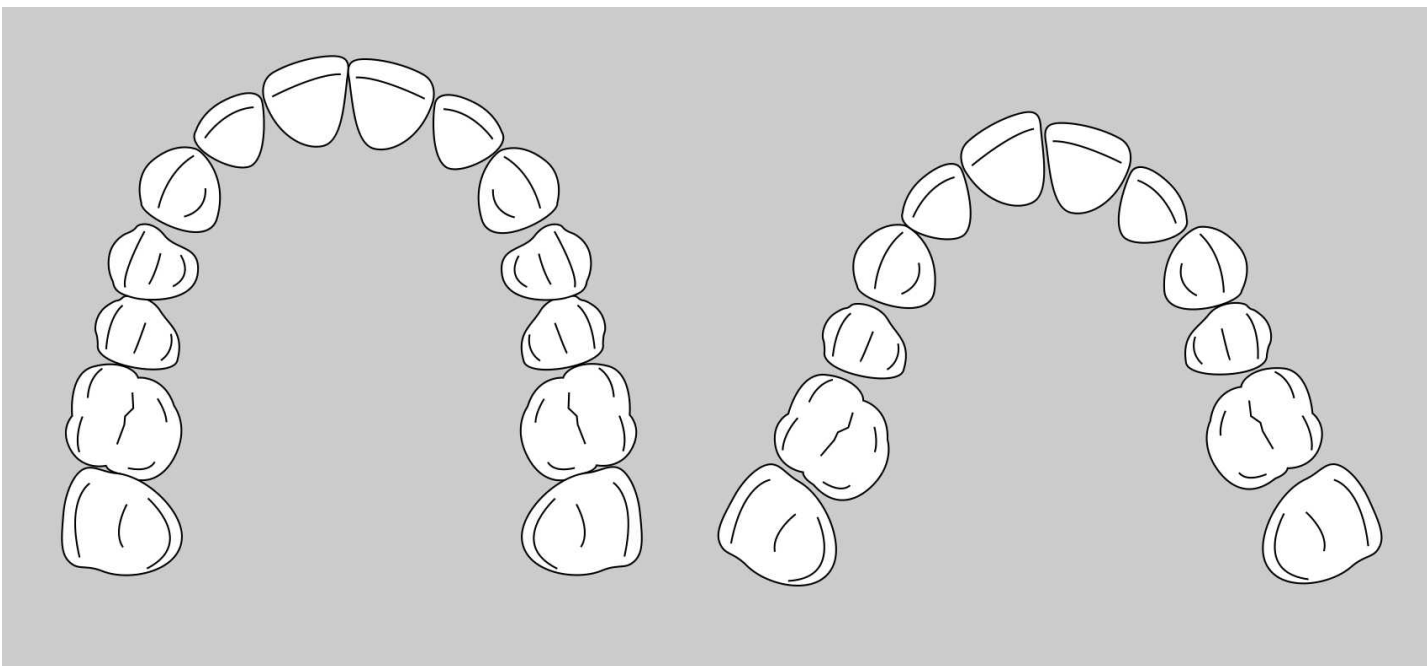
Breastfeeding is especially important because it is a major influence on *both* of the theoretical causes of modern facial deformity – nutrition and function. This is another reason, beside from being non-traditional, not to pump-breast milk and deliver it with a bottle. This stems from the functional argument of facial deformity:

The nipples are "Mother Nature's palate-expander," he explained. Babies "push the nipple around the front teeth and push the palate forward (to develop) a wide and forward palate and enough room for the permanent teeth. ... Baby bottles are not promoting good growth."

In a very interesting 1998 article by Brian Palmer titled *The Influence of Breastfeeding on the Development of the Oral Cavity: A Commentary* further explains the functional significance of breastfeeding of the development of the dentofacial complex:

[Bottle-feeding produces] forceful action [that] causes the cheeks to draw in, putting pressure on the gums and teeth, affecting the position of teeth. This action can also cause an implosion of the oropharynx, and thereby affect the development of the oropharynx. During breastfeeding, the infant has to work the jaws and tongue in a natural physiological manner to aid in the compression of the lactiferous sinus.

This action, plus normal swallowing motions, help to develop proper perioral (around the mouth and jaw) musculature... The flexible and soft human breast nipple tissue is beneficial in shaping the hard palate because it flattens and broadens in response to the infant's tongue action... In the early stages of oral cavity development, the palate is almost as malleable as softened wax. Thus, when any object is pressed against the soft bones of the palate, these bones can be molded into a narrow, unnatural shape. This eventually leads to the poor alignment of teeth, and the "V-shaped" palate found in many people with malocclusions.



Another problem that occurs during early oral cavity development is that of infringement on the space of the nasal cavity. When the roof of the mouth is pushed up, the floor of the nasal cavity rises as well. Since the bridge of the nose does not rise accordingly, there is a decrease in the total nasal space. This can have a dramatic effect on the individual's breathing efficiency because the size of the nasal chamber is reduced.

Although it has been suggested that the V-shaped arch is rather an atavism due to systemic degeneracy:

From an evolution standpoint these deformities are atavistic. The V-shaped reverts to the reptilian type; the saddle-shaped to the lower mammals. In the gorilla, the nearest to

man in dentition, there is a very distinct approach to the saddle shape. In the chimpanzee it remains. The orang-outang exhibits less of this tendency.

Degeneracy: Its Causes, Signs, and Results, Talbot, 1898

Considering that dental and maxillary development is intricately tied to facial attractiveness, I would not be surprised if breastfeeding correlates with facial beauty – although I cant find a study to support this, the research would be very easy to do.

Viriculture Prescription #36: Do not give your child a pacifier. Do not bottle-feed your child.

There is no doubt that the resilient rubber which is generally used in the manufacture of these [pacifiers] is altogether undesirable from the point of view of securing the normal occlusion of the incisor teeth.

Variations in the Form of the Jaws, James Sim Wallace, 1927

It turns out that empirical evidence validates the claims that the functional effects of bottle feeding and or pacifier use lead to poor dentofacial development. A 2004 article by D Viggiano *et al.* titled *Breast feeding, bottle feeding, and non-nutritive sucking; effects on occlusion in deciduous dentition* noted:

Our data support an etiological role of non-nutritive sucking on open bite, whereas we did not find the type of feeding to be a risk factor... In posterior cross-bite malocclusion, children with nonnutritive sucking activity and children who were bottle fed had a twofold risk of posterior cross-bite.

Plainly, this study found that both “non-nutritive sucking” (pacifier use) and bottle-feeding led to increased risk of crooked teeth. This study only looked at the effects of these habits on the baby teeth, and it is a rule of thumb in dentistry that if the baby teeth are crowded or crooked, the permanent teeth will be even more so. A similar article by Labbok and Hendershot from 1987 titled *Does breast-feeding protect against malocclusion?* used a survey to address breastfeeding’s effects on the adult dentition. A clear dose response between months breastfed and decreased risk of malocclusion was identified.

Table 3. Reported malocclusion

Breast-feeding (in months)	N	Percentage reported malocclusion	Relative risk of malocclusion in children breast-fed less than 12 months
0-3	8,206	32.5	1.84
4-6	711	28.1	1.77
7-9	335	27.0	1.70
10-12	235	23.5	1.48
>12	180	15.9	1.00

It is evident to a unbiased observer that breastfeeding is a net benefit to both mother and child. But breastfeeding is not simply a “yes or no” activity. Modern Western mothers are very unusual in their

nursing practices compared to traditional peoples. The two most profound ways in which nursing differs is in the frequency of nursing and in the duration of time before weaning.

Until very recently, there were few alternatives to human milk from a breast for feeding infants.

A goatherd, by name Lamo, found one of his goats suckling an infant-boy... And anon he sees the goat bestriding the child carfully, lest she should chance to hurt it with her hooves, and the infant drawing milk as from the breast of a kind mother... He thought at first to take away the tokens and take no thought about the child. But afterwards conceiving shame within himself if he should not imitate the kindness and philanthropy he had seen even in that goat, waiting till the night came on her bring all to Myrtale his wife.

Daphnis and Chloe, Longus, circa AD 150

When a baby was hungry, his mother (or a wet-nurse, or a goat, or a wolf) had to be physically present to supply him. The standard practice of traditional mothers was to take the infant with her, and to nurse him when he “asked.” This is known as on-demand nursing, and is the human (and primate) norm. Very few modern women engage in this practice, opting for scheduled feedings at the mother’s convenience. Not only does this interfere with the infants preferred eating schedule, it also restricts the infants access to non-nutritive nursing at the breast, which likely has functional and possibly emotional benefits.

Traditional peoples also had very different standards than we do for age of weaning, especially among hunter-gatherer groups.

The age of weaning averaged over seven hunter-gatherer groups is about three years old, an age at which children finally become capable of fully nourishing themselves by chewing enough firm food. While some solid pre-chewed foods may be introduced around the age of six months, a hunter-gatherer child may not be fully weaned off its mother’s milk until the mother is pregnant with the next child. Individual !Kung children continue to nurse beyond the age of four if a next sibling has not yet been born. Studies show that, the older the age of a !Kung child when it is weaned, the more likely is the child to survive to adulthood.

The World Until Yesterday, Diamond, 2012

Accounts of native life reveal the fact that even though children were breast fed till a late age (according to “civilized” ideas), and it was not unusual for children of four and five years to still avail themselves of such a food source, yet it is also true that at a very early age they were given food which would demand vigorous mastication... Another interesting feature of the feeding of aboriginal children is the length of the period during which they are suckled. Several writers have mentioned that it was not at all unusual to see a native child of three, four, or even five years of age, cease its play, and run to its mother and partake of a meal from her breast.

Dentition and palate of the Australian aboriginal, T. D Campbell, 1925

In the West, weaning typically occurs well before 6 months. The practice of breastfeeding infants for more than about one year is known as “extended breastfeeding,” which is a misleading name, as it is not “extended” relative to natural human practice. A survey of American mothers engaged in “extended breastfeeding” found that the average age of weaning was about three years old (similar to the hunter-gatherer norm), with the oldest age being seven years. As unusual as this practice may seem to us, this is much more in line with ancestral human standards, and there has certainly not been high quality evidence to disprove the value of this traditional practice. Extended breastfeeding received media attention when a “controversial” 2012 *Time* magazine cover that portrayed a mother nursing her three year old son. The caption next to this image reads,

Why attachment parenting drives some mothers to extremes.

This is of course, a total misrepresentation of this issue – in a broad view of humanity, it is the modern mothers who are “extreme.” An excerpt from a book about motherhood revised in the nineteenth century shows that even relatively advanced industrialized societies weaned their children much later than we do today.

[Weaning] should take place when the child is about twelve months of age—sometimes a few months earlier, often a few later. If the mother’s health be good, and her milk abundant, it may be deferred until the canine teeth appear—between the fifteenth and twentieth month. The child will then have sixteen teeth with which it can properly masticate soft solid food.

The Physical Life of Women, Napheys, 1869

Furthermore, we can identify low quality evidence that points to the beneficial effects of “extended” nursing. A 1983 commentary discussed the immunological benefit of nursing even into the second year:

The present cross-sectional study of the concentrations of certain immunologic components in human milk supports the concept that partial breast-feeding during the second year benefits the infant by providing immunologic factors that would otherwise be unavailable.

A 2005 study tried to reduce the bias inherent in studying the effects of breastfeeding by comparing outcomes among siblings who were breastfed for differing amounts of time. Using siblings helps control for heritable differences in important measures of growth and development. After statistical adjustments were made, the authors found a dose response in siblings of breastfeeding to cognitive ability of 0.16 percentage points per month of breastfeeding. This works out to about two percentage points per year of breastfeeding, or an approximate benefit of about four points if a mother nurses her baby for the WHO recommended two years. So we can see that the benefits of breastfeeding are at least in some regards “dose dependent.”

The exact details of how to accomplish frequent nursing and late weaning are best left to experienced mothers to explain. I find that the *The Seven Standards of Ecological Breastfeeding* does an excellent job, and I summarize the main “actionable steps” here.

Breastfeed exclusively for the first six months

Pacify your baby at your breasts

Don't use bottles and pacifiers

Sleep with your baby at night

Sleep with your baby for a daily nap-feeding

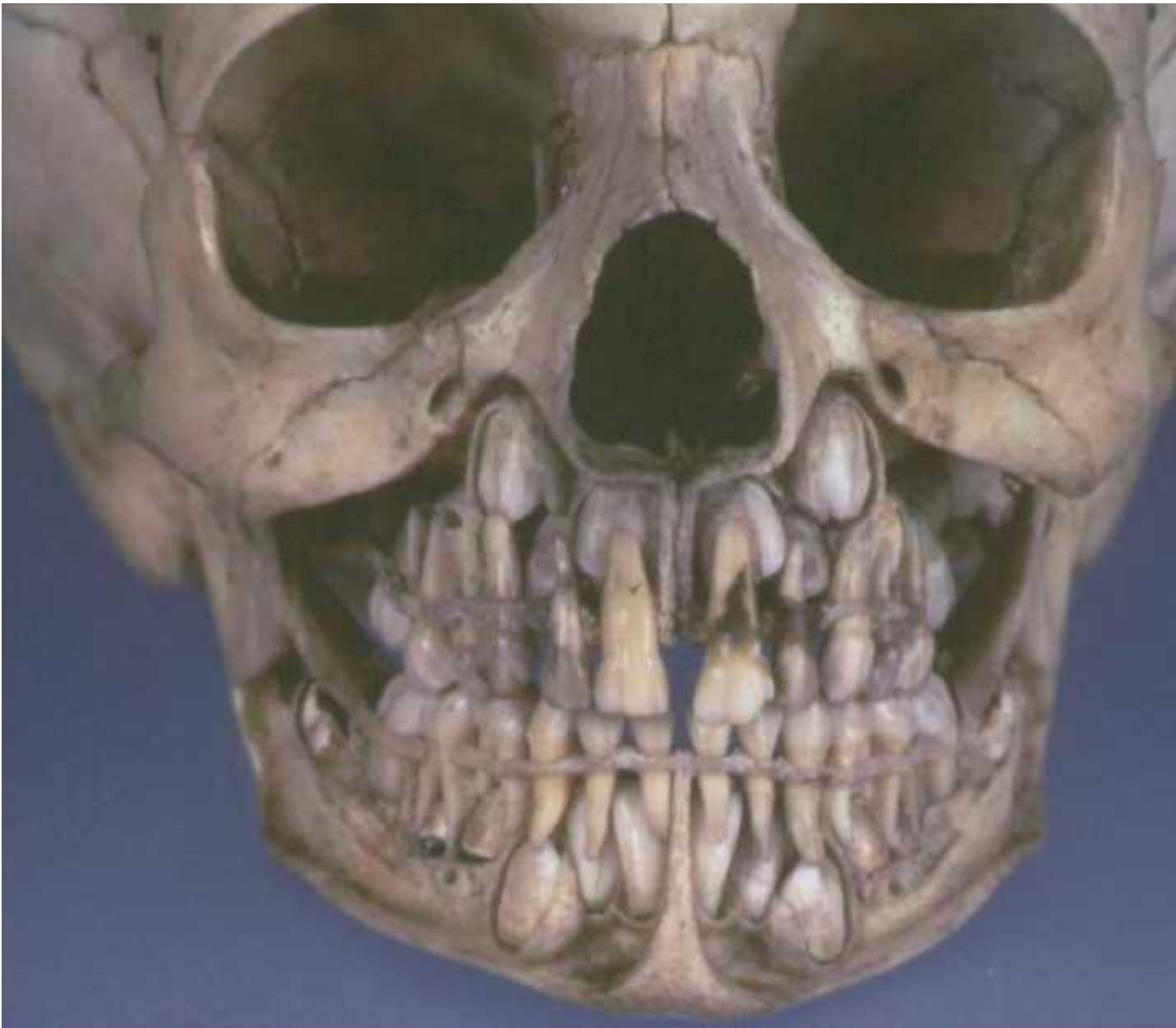
Breastfeed frequently and avoid schedules

Avoid any practice that restricts nursing or separates you from your baby

There is, as we saw in the section on birth timing, a further benefit to on-demand nursing and late weaning with regards to viriculture, and it ties in the prescription of proper birth intervals of about three years. By engaging in frequent, on demand nursing, a mother can take advantage of natural lactational amenhorrea, and avoid having a "second sibling" in too rapid succession.

And if you are healthy and truly feminine, holding you baby to your breast and letting him nurse his fill will probably be the ultimate satisfaction of your motherhood.

Let's Have Healthy Children, Davis, 1951



Non-Education Viriculture – Part 5, Post-Breastmilk Diet of the Child

Posted on [admin](#) Posted in [Book](#)

Post-Breastmilk Diet of the Child

Should any object, as probably many will, that a rotating dietary for children... would entail too much trouble; we reply, that no trouble is thought too great which conduces the mental development of children, and that for their future welfare, good bodily development seems equally important. Moreover, it seems alike sad and strange that a trouble which is cheerfully taken in the fattening of pigs should, be thought too great in the rearing of children.

Education: Intellectual, Moral, and Physical, Herbert Spencer, 1860

Stupidity in the kitchen; woman as cook; the dreadful thoughtlessness with which the nourishment of the family and the master of the house is provided for! Woman does not understand what food means: and she wants to be the cook! If woman were a thinking creature she would, having been the cook for thousands of years, surely have had to discover the major facts of physiology, and likewise gained possession of the art of healing. It is through bad female cooks—through the complete absence of reason in the kitchen, that the evolution of man has been longest retarded and most harmed: even today things are hardly any better. A lecture for high-school girls.

Beyond Good and Evil, Nietzsche, 1886

Viriculture Prescription #37: Feed your children abundant, high quality, real food of the same composition that wholesome for the mother during pregnancy.

For all of the Federal Reserve notes we spend on made in China plastic toys to give children momentary pleasure, we could be buying as much of the best quality meat, fish, and dairy as they could eat – thereby assuring their bodies and minds are beautiful and fully grown by adulthood. From a viriculture perspective, we would do our children a great service by putting coal in the children's stockings each year, and use the saved money on grass-finished beef, Alaskan salmon, butter, a stockpot, and a chinois for them to grow up beautiful and strong. Conveniently, those same foods that lead to good gestational outcomes for the mother are suitable for a growing child after he begins to eat solid foods.

While the ultimate limits of growth for any child will be limited according to his genetic endowment, the childhood diet is a critical factor in seeing that he reaches this maximum. It always strikes me as incredibly profound that Disney made their most masculine character explicitly state:

“When I was a lad I ate four-dozen eggs every morning to help me get large.”

Gaston, *Beauty and The Beast*, 1989

Don't forget that cholesterol (found pretty much exclusively in animal foods, and notoriously abundant in egg yolks) is the precursor of testosterone, allowing Gaston to perform enviable feats of strength in his adulthood – including a one-arm overhead press of three young women.

High calorie, high fat, high cholesterol, traditional diets or varied composition are ideal for growing children. Even wise Dr Sears falls into error here, suggesting “Babies do need sugars, lots of them. But they need the *right sugars*.” implying fruit sugars and whole grains. He even goes so far as state “The *fructose* sugars, primarily from fruits, are better.” Don't tell Dr Lustig. These errors are easy for doctors to fall into, since real evidence on the effects of small dietary details is lacking, but mother will still demand an answer from the pediatrician. While some intake of fruits and starchy vegetables is benign or beneficial for growing children, that should certainly not make up a large promotion of total caloric intake. Strictly avoid altogether desserts, cookies, cake, candy, ice cream (unless made without sugar and without milk – frozen butter). For modern compromising parents who want to make their son a “happy” boy rather than an excellent man, the tragedy of withholding sweets from children is a real concern. From the perspective of viriculture, however, the thoughtful parent can see clearly the destructive influence of these sweet modern pseudo-foods. This is especially natural when the parents set a good example in their own diets. Weak modern parents

enjoy sweet desserts as much as the children, and project their own desire for sweets onto the children, hurting the entire family.

Viriculture Prescription #38: Feed your children as much as they will eat.

While intermittent fasting can sometime be a useful practice for adults, children should be their own masters of when and how much they eat. As we saw, a 1994 experiment by Swaddle and Witter using starlings found that the *ad libitum* diets led to the most symmetrical bodies, with unpredictable food deprivation schedules leading to the least symmetrical. Furthermore, these experiments found that levels of subcutaneous fat was correlated with body symmetry – in the same way that a properly fat baby becomes a beautiful adult.

So long as the proper food and environment are provided by the parent, the regularity of the eating schedule will likely be of no consequence. Furthermore, letting young children eat when ever they are hungry spares the parent the trouble of forcing the child to eat.

But, during after-dinner conversations, or at other time of like intercourse, who hears anything said about the rearing of children? When the country gentleman has paid his daily visit to the stable, and personally inspected the condition and treatment of his horses; when he has glanced at the minor live stock, and given directions about them; how often does he go up to the nursery and examine into his dietary, its hours, its ventilation... what proportion of them know much about the qualities of the food they give to their children, and its fitness to the constitutional needs of growing boys and girls... “Oh, I leave all those things to the women,” would probably be the reply, [implying] that such cares are not consistent with masculine dignity... it will seem strange that while the raising of first-rate bullocks is an occupation on which men of education willingly bestow much time, inquiry, and thought, the bringing up of fine human beings is an occupation tacitly voted unworthy of their attention... In past generations, the belief was, that the more a child could be induced to eat, the better... But among the educated classes... there may be seen a decided leaning toward the underfeeding, rather than the overfeeding, of children... There is over-legislation in the nursery... and one of the most injurious forms of it is this limitation in the quantity of food.

Education: Intellectual, Moral, and Physical, Herbert Spencer, 1860

Once the child is born, we can shape not only the nutritional environment in which he develops, but also the functional environment.

Viriculture Prescription #39: Feed your children so that their teeth and muscles of mastication function adequately.

In civilized countries, from the very earliest age infants are prevented from taking their food into their hands and piercing it with their incisor teeth and sucking it, or from scraping or nibbling off the edible parts of the food with their incisor teeth when the instinct to gnaw develops. Similarly they are prevented from chewing such objects as come in their way – *e.g.*, a leather strap or what not – because these might harbor pathogenic germs. Everything is don't to prevent them grasping, and so perhaps dirtying, their food with their hands, and from the earliest age the solid food which they

do get is first reduced to a pultaceous mass and introduced into the mouth with a spoon. No seizure of food with the hands and tearing it off with the teeth is allowed, and this normal stimulus to gnawing is withheld. Thus, then not only is the instinct which tends to stimulate the growth of the mandible interfered with, but the instinct to set the mandible in the proper position is not given the best opportunity to achieve one of its most useful purposes.

Variations in the Form of the Jaws, James Sim Wallace, 1927

A study of the infant and young aboriginal skulls soon reveals the fact that solid food and a vigorous mastication were early acquirements of the native child.

Dentition and palate of the Australian aboriginal, T. D Campbell, 1925

Unfortunately, exercise for the muscles of mastication is not provided by any of the gymnastics, calisthenics or athletic sports that we indulge in. The masticatory organs are in greater need of artificial stimulation than any of the other body organs because they are not employed sufficiently in the act of food chewing; and yet they are most frequently neglected by the public and overlooked by the physician and dentist... Such exercise of the muscles of mastication serves as a significant supplement to the natural function of these muscles which can best be stimulated by the use of hard, solid, and fibrous foods. It is an aid and not a substitute for a stimulating diet.

The Human Masticatory Apparatus, Klatsky and Fisher, 1958

If they no longer eat meat and vegetables but take prepared extracts as food, their jaw muscles and jaws may be further weakened.

William Gregory, *Our Face from Fish to Man*, 1929

The tough, fibrous flesh of animals, whether eaten raw, dried, roasted or boiled, tends to stimulate the masticatory organs to great activity, which in turn contributes to their healthy growth and good development.

The Human Masticatory Apparatus, Klatsky and Fisher, 1958

It may be that functional influences are the major cause of our modern dento-facial deformities. If so, the masticatory functional influence during growth is a major concern for developing adult facial beauty. Certainly it is influential to some degree, and therefore, we ought not to withhold, as modern diets do, the necessary tough foods from the childhood diet. On-demand breast feeding puts the infant on the right track in terms of "masticatory" functional influences. Once the child begins eating, raw vegetables, meat on the bone, home made jerky, and many other tough or fibrous foods provide jaw exercise and will stimulate adequate growth of the face.

Although a carnivorous diet takes first place as a masticatory stimulant, the herbivorous and omnivorous dietaries of most primitive people are not far behind in this respect, mainly because of the manner in which the foods are prepared and eaten by the savage.

The Human Masticatory Apparatus, Klatsky and Fisher, 1958

There is some need to balance aggressive chewing in early childhood with both the risk of severe attrition of the adult teeth, and the risk of choking in childhood. Since these recommended foods are hard to chew, parents should supervise their children while eating, and have basic training in how to respond in case of choking.

Additionally, once the adult teeth come in, consideration must be given to the rate at which our chewing habits erode the teeth themselves. The critical period for the development of the bones of the facial skeleton is early, before age 20. As an adult, the functional loading of the dentition is much less important for facial attractiveness, if it has any real importance at all. The use of chewy, but resistant foods or products might prevent attrition while still activating the relevant functional matrices. With the baby teeth, as they are inevitable exfoliated, we need to take no such precautions, and well worn baby teeth may be a healthy sign.

In a well developed arch, the temporary teeth usually show very distinct signs of attrition...This would all tend to indicate that attrition of the teeth is associated with a rather greater growth of the muscles of mastication, including the tongue, while from lack of attrition and associated use the muscles of mastication and jaws tend to be subnormal.

Variations in the Form of the Jaws, James Sim Wallace, 1927

Hard natural teethingers, made of untreated hardwood (not made-in-China plastic) for example, may provide a beneficial functional influence for proper facial development early in life. I would recommend against the use of utensils in young children as well, as this mark or refined civilization can easily be introduced at a later age.

Primitives make little use of eating tools such as knives, spoons and forks. They use their hands for introducing the food into the mouth, and then allow their powerful jaws and teeth to exercise on the food.

The Human Masticatory Apparatus, Klatsky and Fisher, 1958

For the initiation of correct occlusion it would appear that the aid of this instinct to gnaw has been invoked by Nature to bring about the early apposition of the teeth with maximum accuracy.

Variations in the Form of the Jaws, James Sim Wallace, 1927

During the few years that the deciduous teeth are capable of full functional activity, what must be the effect on the tongue of eating the soft pap, liquid extracts and refined foods of the present day, which require little or no chewing? I think it will be evident, from what has been said on the influence of functional activity on the growth of muscle, that the development of the muscular fibers of the tongue is not as great as if it had been used while chewing fibrous food-stuffs, which require at least ten times the amount of mastication. The consequence of this is seen in the fact that the deciduous teeth are sometimes not translated outwards, and the spaces which should develop between them do not form, and the alveolar arch is not as broad as it ought to be.

The Cause and Prevention of Decay in Teeth, Wallace, 1902

Back in the 1950s, Klatsky and Fischer outlined the following bad habits of moderns when it comes to mastication, and this serves as a great guide for us today.

The average young child is denied the opportunity to acquire good habits for he is not given foods which require chewing. Wallace Warned against these deficiencies in the guidance of an infant's eating habits. He listed the following typical modern feeding errors:

1. Lack of piercing with incisor teeth;
2. No scraping or nibbling of edible parts with incisors when instinct to gnaw develops;
3. No inedible objects offered for fear of choking;
4. No chewing of environmental objects, e.g., leather straps because of pathogenic germs;
5. Spoon feeding;
6. Mush consistency of food.

Excessive use of milk, sugar-bearing foods, soft and non-resistant carbohydrates, proteins, minerals and vitamins, is the rule rather than the exception among children in our civilized environment)

It may be that the hardness of food is incidentally correlated with the types of food traditional peoples ate. The exact cause of well developed faces and bodies is irrelevant for our purposes, as long as we understand the practical solution.

Viriculture Prescription #40: Do not trust government schools to feed you children.

We have discussed some of the shortcomings of school lunch (indeed school in general), and you can be sure that public schools will in no way be feeding children in a manner appropriate for viriculture. In essence, government schools feed children the smallest portions of the cheapest possible "foods" that they can legally get away with. This is shameful immorality on a national scale, and best to eschew these schools altogether. If you for some reason insist on sending your child, don't let him eat the "food" they serve.

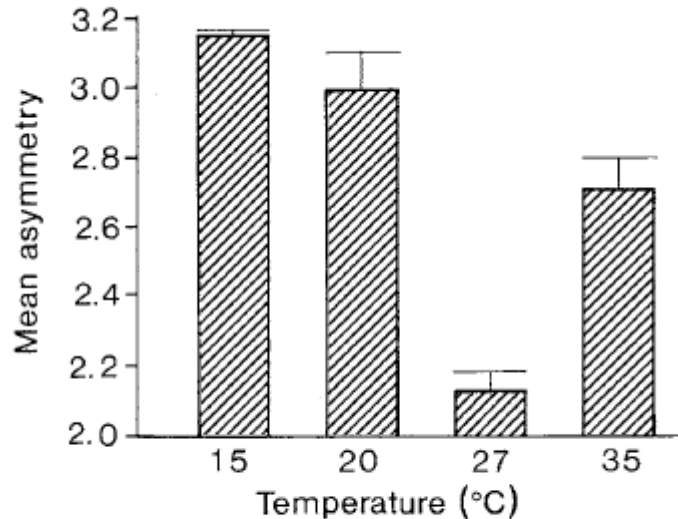


Fig. 6.1 Mean (+ s.e.) asymmetry value versus rearing temperature (°C) in Australian blowflies. Mean asymmetry value is a composite measure of left–right asymmetries for three meristic traits (refer to Clarke and McKenzie (1992) for more details). Values are means of replicates. Adapted from Clarke and McKenzie (1992).

Non-Education Viriculture – Part 5, Temperature, Sunlight and Sleep

Posted on [admin](#) Posted in [Book](#)

Temperature

Strong from the cradle, of a sturdy brood,
We bear our newborn infants to the flood;
There bath'd amid the stream, our boys we hold,
With winter harden'd, and inur'd to cold.

Aeneid, Virgil / Dryden, 19 BC

Let me warn you against certain false notions rather prevalent about “hardening children.” It is a mistake to suppose that children are not as sensible to cold as older people. They are more so... Learn, then, a lesson from the farmer, who, from pecuniary motives, regards the laws of health for his animals. You do not hear him talk of hardening them by unnecessary exposure.

Uncle Jerry's letters to young mothers, Porter, 1854

Much that might seem ideal to use was natural among them. Nature, after having passed step by step through cold and heat, established herself in Greece. Here, where a

temperature prevails which is balanced between winter and summer, she chose her central point; and the nigher she approaches it, the more genial and joyous doe she become, and the more general is her influence in producing conformations full of spirit and wit, and features strongly marked and rich in promise. Where clouds and heavy mists rarely prevail, but Nature acts in a serene and gladsome atmosphere, such as Euripides describes the Athenian, she imparts an earlier maturity to the body; she is distinguished for vigorous development, especially of the female form.

History of Ancient Art, Winckelmann, 1764

Viriculture Prescription #42: Maintain the home at a comfortable ambient temperature of 72° F.

It takes energy for an organism to grow, and ambient temperature has a major effect on organism energy balance. There are practical consequences of stress from heat or cold on human growth. By minimizing the amount of energy used to thermoregulation, we can control the energy available for growth in our children.

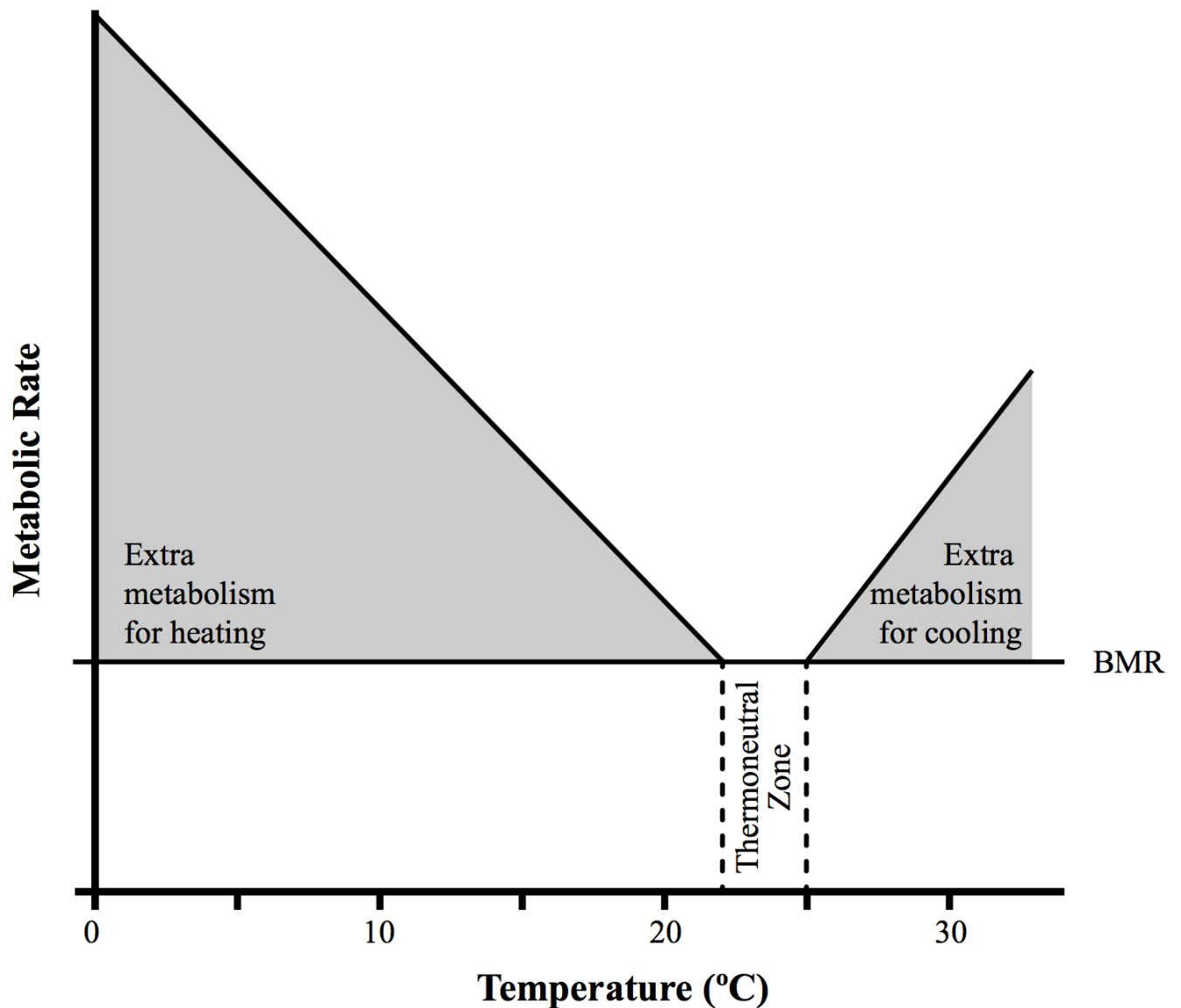
Temperature affects growth in a number of ways. It has been noted that people living in colder climates tend to develop stockier bodies. This is a growth adaptation that allows them to be better at conserving heat as adults. The opposite is true in warm climates, where growth adaptations favor bodies with a greater proportion of surface area (to maximize heat radiation). These developmental growth adaptations are not the whole story – climate also influences evolution. In cold areas, selective pressures favor larger bodies, likely because the smaller surface area to body volume ratio makes for less heat loss to the environment (this principle is known as Bergmann's rule). A related trend has been noted in an evolved (as opposed to developed) increased stockiness in cold climates (known as Allen's rule).

The long term adaptations resulting from selective pressures in cold climates, however, may differ from the developmental consequences of growth on a individual organism. Humans maintain their body temperature by turning food energy into heat. Extreme climates require a greater proportion of this energy to be used for thermoregulation. Cold or hot climates can therefore be seen as the energetic equivalent of taking in fewer calories. There is less remaining energy available for growth. While it is true that this increased energy expenditure might be overcome by increased appetite and food consumption, the general trend is for extreme climates to stunt growth compared to moderate climates.

Growing bodies have the most innate heat; they therefore require the most food, for otherwise their bodies are wasted. In old persons the heat is feeble, and therefore they require little fuel, as it were, to the flame, for it would be extinguished by much.

Hippocrates, circa 400 BC

Ambient temperature is related to growth and symmetry in a non-linear way. In physiology there is a concept known as the "thermoneutral zone," which refers to the range of temperature at while an organisms energy expenditure to maintain body temperature is lowest. For naked humans, the thermoneutral zone is 28-30° C (82-86° F). However, indoors with normal clothing on the zone is more like 22-25°C (71-77° F), although individual differences exist.



The thermoneutral zone corresponds to the temperature at which the thermal stress on the organism is lowest is the temperature at which we feel most comfortable – around 72° F. This temperature is below the human body temperature of 98° F because the constant chemical reactions of life are enough to raise our body temp about 25° F. At 72° F, a healthy growing person uses less energy on temperature homeostasis, and more on growth.

Note that the general pattern of energy expenditure vs temperature is similar to the trends of asymmetry vs temperature – the thermoneutral zone is the range of ambient temperatures that will produces the lowest levels of asymmetry.

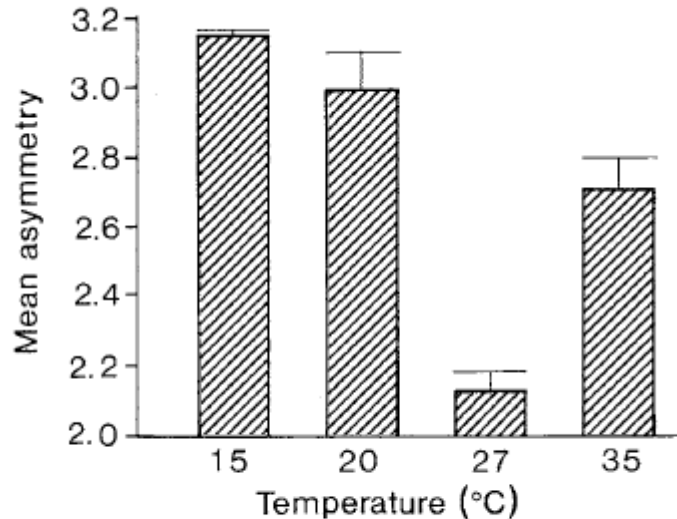


Fig. 6.1 Mean (+ s.e.) asymmetry value versus rearing temperature (°C) in Australian blowflies. Mean asymmetry value is a composite measure of left–right asymmetries for three meristic traits (refer to Clarke and McKenzie (1992) for more details). Values are means of replicates. Adapted from Clarke and McKenzie (1992).

Asymmetry, Developmental Stability and Evolution, Møller, Swaddle, 1997

While periodic, short-term environmental stressors such as low-bar squats, or 30 minutes in the sauna have been shown to increase growth hormone levels, chronic exposure to thermal stressors has a negative impact on total growth. It is these chronic stressors that we ought to protect our children from. Because much a child’s growth occurs in the home, and the temperature of our homes is under our control, the proper use of the thermostat is an tool for viriculture.

I grew up just south of Canada in an old house with poor insulation. This house was heated by radiators. These radiators took about 3 hours to heat up. The thermostat that controlled the temperature was old too, and could not be pre-programmed. The temperature on the thermostat was inaccurate, and displayed a temp about 5° F higher that the actual room temperature. Every morning my dad would wake up and turn the radiators on to 68°F – meaning three hours later the house would get up to 63° F. He chose this temperature to save money on the monthly gas bill. He would then wake us kids up for school. Because there was inadequate time for the radiators to heat up, the house was cold every morning – around 60°F when we would wake up. I remember carrying my blanket around with me and sitting directly on top of the radiators to stay warm. It was only years later when I had my own an apartment that I realized that radiators are supposed to be too hot to touch. The drive to school was even colder, as the car would not have time to warm up before we were dropped off – no remote starter, and no heated seats. In middle school I kept my winter coat and hat on each day for the first hour of school before I felt warm enough. Of course this is not an unusual or extreme case of neglect. However, there should be no doubt that this sort of chronic thermal stress has a negative impact on child growth (height, weight, and musculature), and development (symmetry, sexual dimorphism).

Do your children a favor and spend the extra money to keep your home in the thermoneutral zone. Modern thermostats can pre-programmed so that the heat is off during sleeping hours, but the house is warm when it is time to wake up.

Sunlight

And if my young master be to be kept always in the shade, and never expos'd to the sun and wind for fear of his complexion, it may be a good way to make him a *beau*, but not a man of business. And altho' greater regard be to be had to beauty in the daughters; yet I will take the liberty to say, that the more they are in the *air*, without prejudice to their faces, the stronger and healthier they will be; and the nearer they come to the hardships of their brothers in their education, the greater advantage will they receive from it all the remaining part of their lives.

Some Thoughts Concerning Education, Locke, 1693

Viriculture Prescription #43: Before and during pregnancy get abundant sun exposure without burning. During winter months, consider periodic use of indoor tanning.

We saw how viriculture is impacted by birth month, with Oct-Dec being optimal in the Northern Hemisphere, and April-June optimal in the South. While this may be mediated by multiple factors, sun exposure and the resulting Vitamin D production is one important factor. This leads us to discuss the importance of sun exposure before and during gestation.

Traditional people were exposed to sunlight more than moderns. They also did not have chemical sunscreen. Without any evidence, we might expect that our modern lack of sun exposure has a negative impact on our health. Despite the enlightened expert health prescriptions that fair-skinned people should avoid intense sunlight because of “cancer,” low quality modern research confirms the health benefit of the conservative practice of exposure to unfiltered sunlight. In fact, a 2014 study headed by Lindqvist published in the *Journal of Internal Medicine* found that sun exposure reduces all-cause mortality (probably the most important factor in determining if something is bad for you).

We found that all-cause mortality was inversely related to sun exposure habits. The mortality rate amongst avoiders of sun exposure was approximately twofold higher compared with the highest sun exposure group, resulting in excess mortality with a population attributable risk of 3%. The results of this study provide observational evidence that avoiding sun exposure is a risk factor for all-cause mortality.

Just as sunlight is important for health, it is also important for growth and development. In 1929, an experiment by Gustav Nylin showed that exposing young boys to sun lamps during the Swedish winter months caused about half an inch greater height growth in the experimental group over the course of a year. More generally, sunlight is related to circulating vitamin D levels, and adequate vitamin D is essential for proper skeletal development. Vitamin D deficiency in childhood results in defective bone mineralization and deformity. In adulthood, deficiency leads to soft, fragile bones, pain, weakness, and loss of height.

While the negative consequences of frank vitamin D deficiency are severe, the effects of mildly low levels of vitamin D can be consequential as well. As early as 1926, DF Smiley reported that “there is apparently a definite reciprocal relationship between the incidence of the acute respiratory infections and the average daily hours of sunshine.” This effect may be attributable to low levels of vitamin D. More recently, a widely cited paper by Michael Holick published in the *NEJM* in 2007

reviewed the numerous way in which low levels of vitamin D affects health, including increased risks of cancer, heart disease, and immune dysfunction. This is concerning in light of just how many people have sub-optimal levels of vitamin D. The majority of Americans have levels of circulating vitamin D far below recommended levels. A 2009 study in the *Archives of Internal Medicine* states:

Vitamin D insufficiency [affects] nearly 3 of every 4 adolescent and adult Americans. Nearly all non-Hispanic blacks (97%) and most Mexican-Americans (90%) now have vitamin D insufficiency.

Demographic Differences and Trends of Vitamin D Insufficiency in the US Population, 1988-2004

A number of trends account for this. First, people with dark skin are living in latitudes with less sunshine than they are adapted to. Secondly, we are exposing ourselves to less sunshine and using more sunscreen. And thirdly, the low-fat craze has reduced our consumption of the dietary carrier of vitamin D.

Before and during gestation, a mother should be exposed each day to unfiltered sun on her bare skin. Sunlight is good for us in the appropriate dose, while sunburns are clearly harmful. This is one area in which moderate daily exposure really is a sensible idea. Sunscreen is unnecessary in most cases. If you are pale and must spend time in direct intense summer sun without clothing, sunscreen may be reasonable for that day. But the 365 day a year sunscreen use pushed by cosmetic companies is a dubious practice.

Many readers will live in areas where natural sunbathing during the winter months is impractical. In these cases, and especially for mothers with pigmented skin, moderate use of indoor tanning will serve to augment the health of both mother and baby. Indoor tanner typically have adequate levels of circulating vitamin D. Indoor tanning a couple of times a week, but for only a couple of minutes per session, would prevent vitamin D deficiency. The short time exposure per session is a compromise given the well known skin damage that accumulates through excessive tanning. Tanning for vitamin D can also be done while covering the face, so that the skin of the face does not suffer excessive UV exposure.

But is daily sun exposure enough? Traditional peoples exposed to natural sunlight have appropriate levels of circulating vitamin D. Paradoxically, modern investigators who have examined vitamin D levels among light-skinned populations exposed to sunlight have low levels, even if they do not use sunscreen. A further modern intervention may be unwittingly decreasing our vitamin D levels – soap.

Circulating vitamin D can be affected by our diet. Vitamin D can also be produced in the skin from a form of cholesterol. The energy from the UVB portion of sunlight converts this precursor into vitamin D. This vitamin D then must be absorbed from the skin into the blood. Vitamin D is hydrophobic, exactly the sort of molecule soap washes away. Frequent showering, especially with soap, may remove the vitamin D from the skin before it can be absorbed into the blood.

There is definitive evidence that the secretions from the skin contains precursors of vitamin D, which after irradiation are to be reabsorbed by the body, and the removal of which tends to produce a dearth of the vitamin unless it be supplied in some other form.

Helmer AC, Jensen CH: Vitamin D precursors removed from the skin by washing. Studies Inst Divi Thomae 1937, 1:207-216.

Viriculture Prescription #44: Before and during your pregnancy, don't bathe every day. If you must bathe every day, do not use soap every day.

Because of the effect frequent washing may have on circulating vitamin D levels, I would recommend that mothers go easy on cleaning their skin with soap on a daily basis. Give your skin time to absorb the vitamin D, which is so critical to proper development of a baby. This does not apply to washing your hands, of course. Illness during pregnancy has negative effects on a gestating baby, and proper hygiene is important. However, daily bathing in hot soapy water likely represents an untested modern intervention.

Finally, it may be worth testing your circulating levels of vitamin D before conception – given the widespread deficiency. This is less of an untested medical intervention, and more of using technology to return us to an ancestral environment.

Cod Liver Oil

If you live in a place with dark winters, diet can be used to supplement vitamin D in addition to sun exposure. Fatty foods are the carriers of Vitamin D. According to an Alaskan native from the documentary *My Big Fat Diet*,

My grandfather used to tell us that the yellow color in the grease is our sunshine in the wintertime when there's hardly any sunlight.

Interestingly, this man's grandfather seems to have been simply handing down traditional wisdom, as he could not have been familiar with the details of the sunlight-fat-vitamin D connection. And recall Weston Price's assessment of the quality of development of these Indigenous people:

In his primitive state he has provided an example of physical excellence and dental perfection such as has seldom been excelled by any race in the past or present.

In the West, the connection between fish oil and physical health has been known for over a hundred years, and even formed the basis of marketing for dietary supplements:

Well spaced sound straight teeth are built by Bottled Sunshine. If you want them to be sound beautiful teeth that will resist decay, an asset to his appearance and health always... If you want his jaw to be firm and full, his head well-shaped, his back strong, his legs straight... Get Squibb's Cod Liver Oil.

This advertisement brings us to our next prescription:

Viriculture Prescription #45: Consider cod liver oil supplementation before and during pregnancy.

At first glance this may seem like the promotion of a medical intervention without high quality evidence. However, this prescription is more like using technology to replace a missing aspect of

our traditional environment. Many traditional cultures prized both animal liver, and oil refined from fish. Weston Price made cod liver oil the basis for his treatment for the prevention of modern disease and deformity:

The program that I have found most efficient has been one which includes the use of small quantities of very high vitamin butter mixed in equal parts with a very high vitamin cod liver oil. A simple method of preparing the butter is by melting it and allowing it to cool for twentyfour hours at a temperature of about 70° F., then centrifugalizing it which provides an oil that remains liquid at room temperature. When this butter oil is mixed in equal parts with a very high-vitamin cod liver oil, it produces a product that is more efficient than either alone. It should be used within a couple of weeks of the time it is mixed. It is desirable that this material be made available in various parts of the country. Even the high-vitamin butter produced on the early summer growth of grass put in storage and used during the winter will go far toward solving our great national problem of shortage of fat-soluble vitamins. The quantity of the mixture of butter oil and cod liver oil required is quite small, half a teaspoonful three times a day with meals is sufficient to control widespread tooth decay when used with a diet that is low in sugar and starches and high in foods providing the minerals, particularly phosphorus. A teaspoonful a day divided between two or three meals is usually adequate to prevent dental caries and maintain a high immunity; it will also maintain freedom from colds and a high level of health in general. This reinforcement of the fat-soluble vitamins to a menu that is low in starches and sugars, together with the use of bread and cereal grains freshly ground to retain the full content of the embryo or germ, and with milk for growing children and for many adults, and the liberal use of sea foods and organs of animals, produced the result described.

Nutrition and Physical Degeneration, Price, 1939

Modern low quality research has validated the traditional practice of consuming cod liver oil. A 2005 study found that 10 mL (2 teaspoons) per day supplement cod liver oil during early pregnancy had a positive impact on birth weight:

Liquid cod liver oil intake in early pregnancy was related to higher birthweight, whereas concentrated cod liver oil capsules and fish consumption were not. No relationship was found between birthweight and fish or cod liver oil later in pregnancy. Healthy women were 11 times more likely to give birth to an infant of 4500 g or more after a healthy pregnancy if they used liquid cod liver oil during the first trimester. Icelandic studies show that even in this high birthweight population, a larger size at birth is related to low prevalence of common adult diseases.

Relationship between dietary intake of cod liver oil in early pregnancy and birthweight, Olafsdottir et al, 2005

A double-blinded, randomized controlled trial published in *Pediatrics* in 2003 demonstrated that maternal intake of 10 mL per day of cod liver oil starting at week 18 of pregnancy until 3 months after delivery resulted in higher child IQ at age 4.

The difference of 4.1 points in [IQ] between the 2 groups may have limited significance on individual basis but may be of epidemiologic importance. Didactic procedures increasing IQ with 4 points among school children, with no harmful side effects, would immediately be implemented in schools... This study indicates that maternal supplementation [with cod liver oil]... improves the intelligence of children at 4 years

of age. Whether supplementation during pregnancy or during lactation (or both) is of more importance remains to be elucidated.

Maternal Supplementation With Very-Long-Chain n-3 Fatty Acids During Pregnancy and Lactation Augments Children's IQ at 4 Years of Age, Helland et al, 2003

While the authors of this study modestly downplay the significance of the effects of 4 IQ points on an individual basis, we should keep in mind that 4 points is almost 1/3 of a standard deviation – a considerable advantage to give your child considering the minimal effort required on the part of the mother. Furthermore, it might be reasonable to assume that supplementation starting before conception, and continuing through the nursing period might have an even larger effect. This seems likely considering that the 2005 study found no relationship between birthweight and cod liver oil supplementation if supplementation began after the first trimester.

High fat, nutrient dense foods seem to have a positive impact on important measures of viriculture. Cod liver oil is one way to supplement the factors important for good gestational outcomes. However, like any medical intervention, cod liver oil is not without risk. Even Price himself recognized this, and almost a century ago warned his readers:

It is important that I emphasize here some dangers that are not usually recognized or properly emphasized in the literature. When fish oils including cod liver oils are given in too large doses to some patients they experience quite definite symptoms of depression. The available evidence indicates that fish oils that have been exposed to the air may develop toxic substances. My work and that of others with experimental animals has demonstrated that paralysis can be produced readily by overdosing. Serious structural damage can be done to hearts and kidneys.

Nutrition and Physical Degeneration, Price, 1939

In addition to these symptoms, large doses of vitamins, notably vitamin A, are very harmful for fetal development and are known to cause birth defects including (ironically) facial deformity. In fact, antioxidant supplements such as vitamin A and E may actually increase total mortality in adults. Furthermore, vitamin A may interfere with the function of vitamin D. Given the already widespread vitamin D deficiencies, high intake of vitamin A may reduce the functional vitamin D present in the body to dangerously low levels. Consumption of vitamin A has been implicated in increased risk of skeletal disease, such as hip fracture.

A concern with cod liver oil consumption is a large variation in the amounts of vitamins A and D. Each brand and batch differs tremendously in vitamin content. The “tolerable upper limit” (defined by...) for adult daily consumption of vitamin A is 10,000 IU, and certain batches of cod liver oil may have over 2000 IU per mL. The 10 mL per day recommendation is therefore double the upper limit.

The Weston Price Foundation counters the claim that two teaspoons of cod liver oil daily is dangerous by citing two studies that failed to show an increase in birth defects in children whose mothers were exposed to high levels of vitamin A. The first (Safety of vitamin A: recent results) gave monkeys 20,000 IU/kg per day, and found no increased risk of birth defects. The second (High Vitamin A Intake in Early Pregnancy and Major Malformations: A Multicenter Prospective Controlled Study) looked at mothers taking an average of 50,000 IU of vitamin A per day, and

found no increased risk. However, the conclusion of this same study council against high intakes of vitamin A, as they see no benefit for pregnant mothers.

It may be that aggressive consumption of cod liver oil is dangerous. The intervention studies mentioned above used 10 mL (two teaspoons) per day. This may seem like small amount of cod liver oil, and a zealous mother may want to consume more to gestate an “even more robust” child. However this would be unwise. 1-2 teaspoons per day for a pregnant mother is a dose in line with the studies, and with Price’s recommendation. In order to further protect against harmful effects of high doses of vitamin A, reducing supplementation to 5 mL (one teaspoon) per day would be reasonable (and it would keep the medicos happier). This is a tried-and-true amount, and is likely a very low risk intervention.

An additional risk of fish oil supplements is that they are carriers for concentrated fat soluble contaminants that you would not want to ingest, such as PCBs or organic mercury compounds. Quality brands of fish oil will test their product for containments and share the results.

Sleep

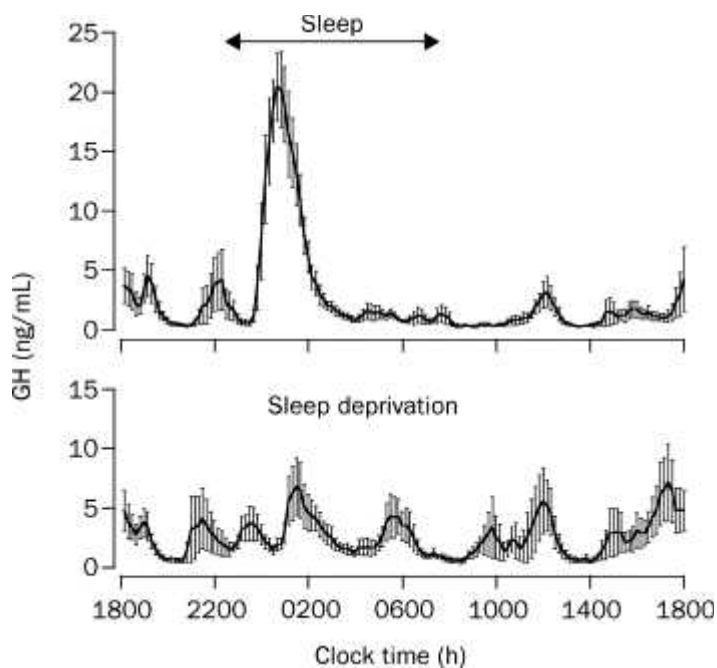
Of all that looks soft and effeminate, nothing is more to be indulg’d children, than *sleep*. In this alone they are to be permitted to have their full satisfaction; nothing contributing more to the growth and health of children, than *sleep*.

Some Thoughts Concerning Education, Locke, 1693

Viriculture Prescription #46: Let you child sleep as much as he wants

Sleep is essential for viriculture. The mother must receive abundant high quality sleep during gestation, and so to much the growing child sleep as much as the want during all the years of growth. If this seems unrealistic, consider that that an aristocrat kid who lives a leisurely low stress life and wakes up at his own pace with the morning light will grow better than a anxious “hard working” public school student who is woken up in the dark by an alarm clock even in his youth.

Sleeping preserves calories for growth and body maintenance. In this way sleeping more is the energetic equivalent of eating more. Sleep also is the time when such maintenance actually occurs. Just like trees grow more in summer than in winter, bodies grow more at night than during the day – this is true of both the body and the mind. Sleep also has many unique and important hormonal effects essential for viriculture. For example, endogenous human growth hormone (a hormone unsurprisingly involved in growth) causes growth when dosed intermittently, but suppresses growth when given continuously. Restful sleep causes such a growth-stimulating spike, while sleep deprivation causes an continual secretion.



Many other wholesome and restorative aspects of sleep are only just being understood in detail, but luckily we don't need to know anything about them. Traditional people have always valued sleep, and unlike the many food choices of the modern world, there are fewer sleep choices. As long as we have sufficient, quiet, comfortable, undisturbed sleep in a natural cycle, our bodies will reap the benefits.

Viriculture Prescription #47: Let natural sunlight serve as a guide to when to wake up

One major change in sleep in the modern world is the shift away from using sunlight as our main source of light. In doing so, we extend our mornings and nights. These changes in the patterns of sleeping made possible by artificial light may have wide reaching effects that are not fully understood. Some even believe that the use of artificial lights tricks the mind into believing the long days mean it is time to gain fat for the winter, and stimulates our appetite for sweets – a disaster in the modern food context.

Many believe that the natural human sleeping norm includes a relaxing waking up in the middle of the night for about an hour, then falling back to sleep until morning. This is only practical in a life where your time is not owned by another person.

Whatever the details, we can be sure that a relaxed, comfortable, dark, quiet sleep, free from too much inhibition from artificial lighting, is essential for viriculture.

Viriculture Prescription #48: Allow your infant to sleep prone on his mother's breast.

At the youngest ages, the best position for the infant is co-sleeping with the mother. The timeline for skeletal development is such that the facial bones are soft and pliable for a much longer time than the bones of the cranium. In fact the back of the skull (occiput) is the first part of the skull to begin to calcify. The skull is still maximally deformable at 2-4 weeks of age.

The pediatrician or other primary care clinician should educate parents as well as other health care professionals, such as those in newborn care units, on methods for

decreasing the risk of development of positional skull deformity and its treatment. A certain amount of prone positioning, or “tummy time,” while the infant is awake and being observed is recommended to help prevent the development of flattening of the occiput and to facilitate development of the upper shoulder girdle strength necessary for timely attainment of certain motor milestones. Beginning at birth, most positional skull deformity also can be prevented by nightly alternating.

Parents should be instructed to lay the infant down to sleep in the supine position, alternating positions (ie, left and right occiputs). When awake and being observed, the infant should spend time in the prone position for at least 30 to 60 minutes/day. The infant should spend minimal time in car seats (when not a passenger in a vehicle) or other seating that maintains supine positioning. Aside from potentially preventing positional skull deformity, routine awake tummy time has been shown to enhance infant motor developmental scores during the first 15 months of life.

Prevention and Management of Positional Skull Deformities in Infants, Laughlin *et al*,
2011

Viriculture Prescription #49: Once the child is old enough to sleep alone, and the bones of the skull are no longer pliable, encourage the child to sleep on his back.

In an interesting 1981 book titled *Why Have Ugly Kids?* the thesis is advanced that side and stomach sleeping are major contributing factors to modern dentofacial deformities. There are many reasonable arguments against this theory, and Dr Huggins, the author, has been accused of quackery. However, he certainly does recognize the importance of environmental factors in the development of human beauty. Since the bones of the face are soft and pliable longer than those of the head, it makes sense that the same extraoral mechanical influences which are well known to affect the back of the head would affect the face as well. The practical degree of influence of sleeping position on facial beauty is of course unknown, but it is at least a possible influence.

Viriculture Prescription #50: Do not use pillows, or use traditional, small cervical pillows

It is important to realize, therefore, that the types of pillows we use today are unusual modern aberrations. Many ancient pillows are carved stone neck rests, which gently support the head in a neutral position. Pillows as we know them were much less common before the industrial revolution.

Some modern manufacturers have tried to imitate the traditional sleeping position. Part of the modern compulsion for fat pillows behind the head is to compensate for modern tiny or retruded jaws (micrognathia), which fails to move the attached tongue musculature far enough anteriorly out of the way of the airway, as we in [the post about poorly developed faces](#) and the airway.

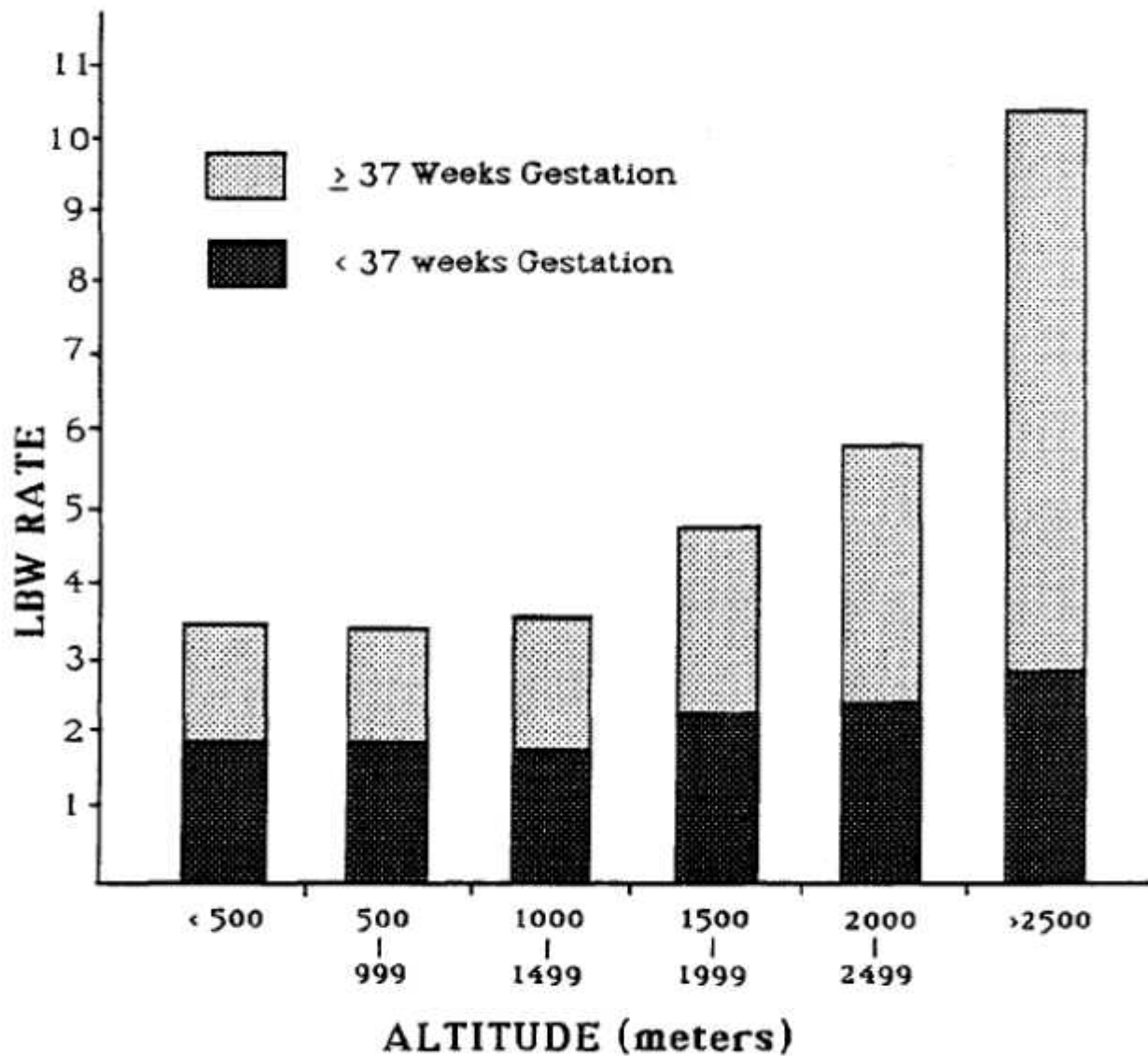


Fig. 4. Relative rate of LBW (<2500 g) at different altitude ranges based on selected idealized subpopulation all gestational ages. LBW infants with a gestational age of ≥ 37 weeks were regarded as having had IUGR. LBW infants with gestational ages of <37 weeks were regarded as premature. Most increase in LBW rate at higher altitude is due to increase of IUGR-related LBW infants.

Non-Education Viriculture – Part 6, Close Work and Others

Posted on [admin](#) Posted in [Book](#)

Early exposure to “Close Work”

Here again the environmental explanations are discounted as old-fashioned and unsophisticated; the genetic factor is all important. The finding that more educated, highly academic populations have more myopia leads to what conclusion? That those who spend more time reading have more genes for myopia!

Viriculture Prescription #51: Avoid exposing young eyes to anything closer than 6 feet whenever possible. Use projectors, distant screens, wireless keyboards and mice, easels, etc. as aids to achieve this goal. Delay reading and writing on paper until after age 6, and keep it to a minimum amount per day, with frequent breaks to look at distant objects.

We have seen how the bones of the jaws and face develop partly in response to the influence of mastication and other local functional factors, as opposed to some genetic preprogramming of morphology.

Imagine, for a moment, the difficulty in accurately growing an eye, the cornea and the lens have to focus an image exactly on the retina, even as the eyeball grows steadily during childhood. How exact does the length of the eyeball have to be? The leeway is 1 percent of the length of the eyeball, about the thickness of a fingernail. Is it possible to program [in the genetic code] the growth of the cornea, the lens, and the eyeball so that the image stays exactly in focus? Unlikely.

Survival of the Sickest, Moalem, 2007

It should therefore come as no surprise that other human organs can be influenced in a similar way by chronic exposure to function and mechanical stressors. The eye is one such organ, and the ubiquity of myopia in the modern world is the consequence of our abnormal environment.

It is estimated that approximately one-third of the United States population suffers from myopia and needs glasses for clear distance vision. It is significant that in the fifth or sixth grades, only about five percent of the children are myopic, but that the percentage increases steadily through the school years until at the graduate level over fifty percent are myopic. Moreover, fully two-thirds of the graduate honor students are myopic. How can this possibly be considered normal?.. Compare this high incidence of myopia with illiterate, primitive societies where almost no one is nearsighted. It is not inaccurate to speak of the situation as an epidemic of myopia, and it will continue to increase until the proper action is taken.

The Myopia Myth, Rehm, 1981

It is therefore really that simple to solve the epidemic of myopia—simply remove the offending stimulus – and this chronic disability could be completely eliminated in single generation. Indeed this ostensibly outrageous claim has been well understood to be true for decades at least, without the slightest vestige of it seeping down into public consciousness.

The fact is that myopia is not inherited. It develops because of the unnatural way we use our eyes, and in nearly every case it can be prevented. This acquired myopia is caused by the excessive amount of reading and other close work that our modern society demands.

The Myopia Myth, Rehm, 1981

Whether from greed, or mere incompetence, the supposed guardians the West trusted to defend their health are silent on the matter – preferring to treat the symptoms than to cure the disease.

Although relations between optometrists and ophthalmologists have improved somewhat since then, the AMA would undoubtedly prefer to eliminate optometry as a profession, or at least to make optometrists subservient to ophthalmologists. It is fortunate for the cause of myopia prevention that this is not likely to happen, since the biggest obstacle to the widespread acceptance of myopia prevention techniques is the medical profession itself... Everywhere one turns, the same obstacle – the medical establishment – is blocking the way. Our schools should be screening our children to detect beginning myopia so that it can be treated early when it can be easily eliminated. After all, it is the schools, which teach children to read, that should at the same time insure that this is done without ruining their vision. But since the school boards believe the M.D.'s, no measures are taken to prevent myopia. Actually, if a vision screening program does nothing more than to insure that myopic children are given concave lenses, the children would be better off without the screening program, since the concave lenses will only ruin their vision. That the medical establishment continues to hold fast to the discredited hereditary theory is almost unbelievable.

The Myopia Myth, Rehm, 1981

The mechanism by which some factor of the modern environment *causes* myopia in the vast majority of cases will be explained here, but remember that this narrative is just a story – the key is to understand that exposure to this stimulus leads to myopia, not to know exactly how that works. If you forget the the mechanism, remember the association.

When populations rapidly modernize, a great change occurs in the rates of myopia. Within a single generation, the rates of poor vision increases by an order of magnitude.

In 1970 fewer than a third of 16- to 18-year-olds were deemed to be short-sighted (meaning that distant objects are blurred). Now nearly four-fifths are, and even more in some urban areas. A fifth of these have “high” myopia, that is, anything beyond 16 centimetres (just over six inches) is unclear. The fastest increase is among primary school children, over 40% of whom are short-sighted, double the rate in 2000. That compares with less than 10% of this age group in America or Germany. The incidence of myopia is high across East Asia, afflicting 80-90% of urban 18-year-olds in Singapore, South Korea and Taiwan. The problem is social rather than genetic.

Losing Focus, The Economist, 2014

By using a hood to restrict the vision of monkeys so that they could not see more than fifteen inches (38 cm) from the eye, it was found that most of them develop myopia after a few months' time, just as humans do. Monkeys living in the wild, on the other hand, do not develop myopia.

The Myopia Myth, Rehm, 1981

THE INCIDENCE OF MYOPIA IN THE ESKIMOS OF BARROW, ALASKA. Let us turn now to another study that was made by Dr. Young and his colleagues.⁶ They traveled to Barrow on the northern shore of Alaska, where they examined the vision of the Eskimo families living there. The Eskimo population was a unique group to study in that the older generation was essentially illiterate and had never gone to school, while the younger generation was required to attend school. The older generation lived the

typical outdoor Eskimo life with little close work. This then was an opportunity to test the hereditary or genetic theory of myopia. If the hereditary theory was true, then there should be a similar amount of myopia in the children and in the parents in spite of the great difference in the amount of close work done by the two groups. Actually, just the opposite was found.

Of 130 parents, only two showed any myopia. One had -0.25 D and one had -1.5 D. All the rest had refractive errors between 0 and +3 D. In other words they were somewhat farsighted, which can be considered normal.

Regarding the children of these nonmyopic parents, a totally different picture was found. Fully sixty percent of the school children examined showed measurable amounts of myopia. Of the fifty-three individuals who were between twenty-one and twenty-five years old, eighty-eight percent were myopic. There was a beginning of myopia at about age ten, with a steady increase in the proportion of the children showing myopia up to ages twenty-one to twenty-five years. This is shown in graph form in figure 1. It is obvious that these myopic children did not inherit the myopia from their parents.

Sex specific relative urban vs rural risk was 3.7 for boys and 1.8 for girls. Risk in both was more dramatic for severe visual impairment... prevalence was 16.3 times greater in urban youths!

How Anthropology Informs the Orthodontic Diagnosis of Malocclusion's Causes,
Corruccini, 1999

The epidemics of nearsightedness in countries such as Singapore and Japan are due solely to increasing amounts of focusing on close objects. According to the New Scientist article, nearsightedness is on the increase in most places, but in countries such as Singapore it has reached extraordinary levels. There, 80 per cent of 18-year-old male army recruits are nearsighted, up from 25 per cent just 30 years ago.

Lifestyle causes myopia not genes, New Scientist, 2004

Such a change is incompatible with any genetic shift in the population, and clearly suggests some environmental factor. Indeed it seems that, when it comes to myopia, "close work," especially reading, is the cause. Close work is anything that requires the eyes to focus closer than about six feet away. Any work done at arms length qualifies, but it is reading that brings the eyes into focus at a close object with the consistency and duration that developmental consequences are realized. Once a society begins to press the children to read, myopia rates explode.

The mechanism by which sustained close focusing of the eye leads to myopia is simple enough to understand once we familiarize ourselves with ocular anatomy.

The eye takes in light through a muscular collimator called the iris. The pupil itself is the negative space made by the iris, and is the pinhole through which light can enter the globe properly. Upon entry through the pupil, a light ray is bent (refracted) in order that all light entering the eye be focused on a highly specialized panel of sensory cells on the inner posterior wall of the globe known as the retina. The cells of the retina are the key signal transduction cells that convert the light signal into the chemo-electrical message used by nerves and the brain. In particular, the fovea, an anatomical landmark located centrally within the retina, is an especially dense concentration of

these transduction cells – and is therefore the critical site onto which light in the eye must ultimately come into focus on to be sensed by our brain.

This focus or refraction is accomplished by a dynamic biological lens inside the globe anterior to the retina called “the lens” of the eye. When an object in view is brought from far to near this lens morphs, becoming markedly bi-convex. This allows the light rays, coming from a relatively close origin (less than six feet) to be conversantly focused on the fovea in the back of the eye. The muscles that are responsible for changing the shape of the lens are known as “ciliary” muscles, and the close focusing process “accommodation”. Muscles generally have an origin, an attachment, and function by shortening. The ciliary muscles attach in such a way to deform the lens upon shortening (flexing), but the originate in another area of the eye which, in accordance with Newton’s Third Law, has an equal reaction to flexion. In the case of accommodation, the origin of the ciliary muscle is pulled in such a way as to, in cases of chronic flexion of the ciliary muscles, gradually deforms the shape of the eye. Once an eye is so deformed, the natural focusing apparatus no longer functions, the lens does not project the focused light onto the fovea accurately, and artificial lens (glasses and contacts) must be added to the equation in order to shift the focal point of the light hitting the posterior of the globe back onto the fovea where it can be transduced to the brain.

Just as young bones and faces are more susceptible to functional influences than those of an adult who is no longer growing, so are the tissues that make up the eye itself. It therefore follows that youth, especially early youth, is a critical time for eye development, and that the deforming effects of chronic accommodation would be more consequential in a young eye than an old. This conclusion is borne out empirically, as those who are in contact which close work the earliest, and for the longest and most consistent duration, are the most likely to be afflicted with myopia.

Sadly, but unsurprisingly, the combined efforts of the “allied health professions” to conquer this epidemic have been not simply ineffective, but in fact have been responsible for a significant worsening of the condition.

Unbelievable as it may seem, many myopic children are told by their doctors that if they wear glasses or contacts all of the time their eyes will get better, or at least not get worse. This is totally false. Because of this type of erroneous advice, people actually believe that glasses “save” eyes. The truth is that minus glasses destroy myopic eyes... It is the old story of treating symptoms and ignoring causes, a situation that has always prevailed in the “healing professions.” Prevention is the highest form of health care. The second highest form is treatment of existing problems by removing the cause. A poor third is the treatment or removal of symptoms but ignoring the cause. The fourth, and by far the worst form, is ignoring causes and treating symptoms in a manner that causes the basic problem to get worse. It is in this fourth category that we must place the prescription of concave lenses for acquired myopia.

It is a sad fact that the treatment received by most myopic children from their doctors is the exact opposite of what they should be receiving. The glasses and the advice they are given actually make their vision get worse, not better. In addition to the millions of people who are already myopic, outmoded treatment methods are creating hundreds of thousands of new myopes every year. It is a tragedy of gigantic proportions and it is taking place in all of the literate societies of the world.

Viriculture Prescription #52: Read in bright sunlight. If you must read indoors, choose the highest intensity, full spectrum lights as practically possible, and place them close to the work.

What this means is that the eye does not need to accommodate nearly as much when viewing an object in bright light as it does in poor light. It has long been recognized that the brighter the illumination, the less the accommodation. This is extremely important to the myope, since excessive accommodation is at the heart of the myopia problem.

The Myopia Myth, Rehm, 1981

Exposure to Nature

Viriculture Prescription #53: Expose the child and pregnant mother to farms, stables, animals, and the rural outdoors.

In medicine, there exists a well known link between exposure to farms, stables, raw milk, and rural outdoors, and a decrease in asthma and allergy risk.

We have seen fields, and meadows, and groves from the time that our eyes opened upon life.

When Samuel Johnson wrote those words in 1750, allergies were far less common. While the exact causes and details are unknown, it is clear that prenatal or early exposure to these farm-related factors are preventative for childhood disease. Asthma and allergies are *at best* a nuisance, and avoiding them constitutes a reasonable aim for viriculture. A 2001 study published in *Lancet* explored this issue.

Long-term and early-life exposure to stables and farm milk induces a strong protective effect against development of asthma, hay fever, and atopic sensitization... The timing of exposure to farm characteristics in, or even before, the first year of life, and amount and duration of exposure from the first to the fifth year of life are crucial for this protective effect.

Interestingly the magnitude of the effect was quite large, about nine times lower risk (1% vs 9% absolute risk) of asthma among children who had “high exposure” to farms and stables. The results for hay fever (1% vs 11%) and atopic sensitization (8% vs 27%) were pronounced as well. Ought we to encourage expectant mothers to go horseback riding in the country for the health of their child?

“You will not go again, Rosy; that is understood. If it were the quietest, most familiar horse in the world, there would always be the chance of accident. And you know very well that I wished you to give up riding the roan on that account.”

“But there is the chance of accident indoors, Tertius.”

“My darling, don’t talk nonsense,” said Lydgate, in an imploring tone; “surely I am the person to judge for you. I think it is enough that I say you are not to go again.”

Perhaps Mr Lydgate was justified in prohibiting his young wife from riding during her pregnancy. But as a medical man, for the sake of his future child's atopic sensitization, he might have at least encouraged her visiting the stables. Compared to all previous eras or humanity, modern Americans have far too little exposure to the rural outdoor factors which seem to be protective against allergies and asthma.

Altitude

Viriculture Prescription #54: Gestate your baby close to sea level.

Another surprising empirical finding is that babies born at high altitudes are of lower birthweight and possibly a greater risk of prematurity on average than babies born at sea level. As we know, birth weight correlates with many important factors for viriculture. Post hoc theoretical narrative explanations typically focus on the decrease partial pressure of oxygen in the atmosphere of higher altitudes. A number of studies have confirmed this finding, one classic having been published in 1956. This study concluded that very high altitudes during gestation (~10,000 ft above sea level) led to a decrease in birthweight of about 3/4 of a pound on average. A more recent study provided further quantitative evidence of a dose response between altitude and birthweight.

In comparison with neonates born at sea level, neonates born at higher altitudes (>2000 m) had a twofold to threefold increase in LBW rate, mainly related to a higher incidence of intrauterine growth retardation.

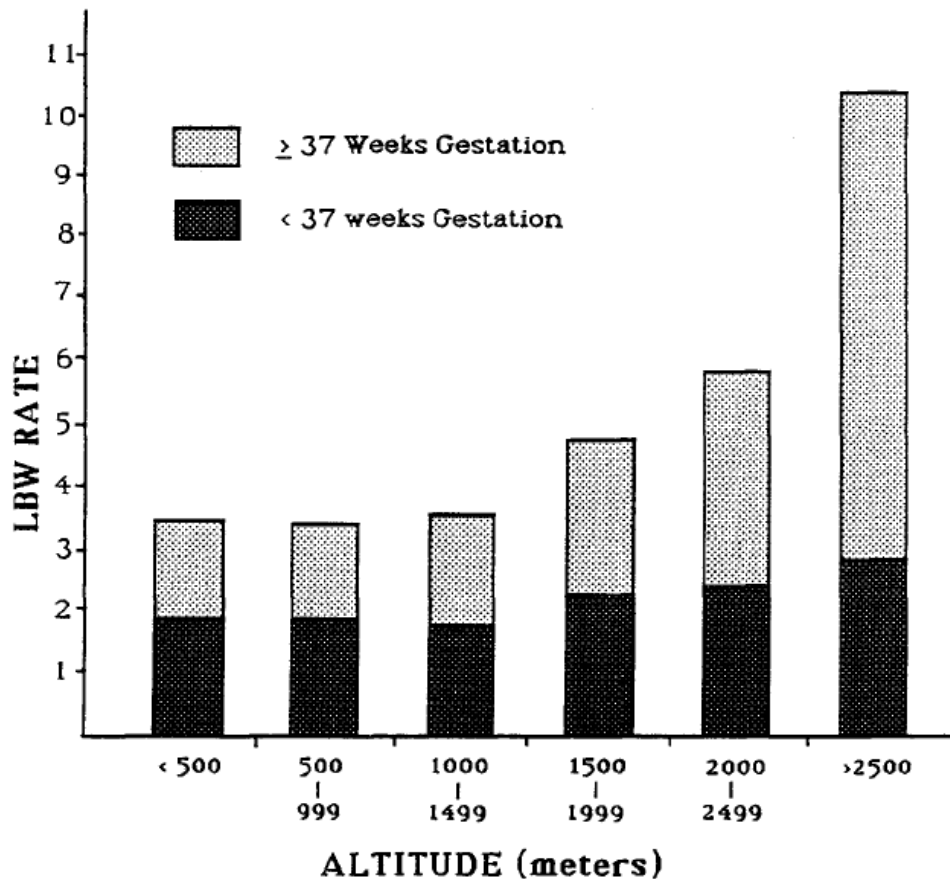


Fig. 4. Relative rate of LBW (<2500 g) at different altitude ranges based on selected idealized subpopulation, including all gestational ages. LBW infants with a gestational age of ≥ 37 weeks were regarded as having had IUGR. LBW infants with gestational ages of <37 weeks were regarded as premature. Most increase in LBW rate at higher altitudes is related to increase of IUGR-related LBW infants.

Humans evolved on the African lowlands, and it may be that mountain life is “less traditional.” In any case, long term high altitude exposure represents a physiological stress best avoided for viriculture.

Water purification

Viriculture Prescription #55: Evaluate the quality of the water you drink, consider filters.

Just as modern food is often not of adequate quality for good body building, so too can our drinking water be of questionable merit. No matter where we get our water from, actually checking to see if it is clean is a good first step in establishing water safety. Although governments are supposed to do them, there seems to be little harm in making sure our water is fine to drink. If you do plan on filtering water, make sure the filter is actually doing its job.

Viriculture Prescription #56: Skip the fluoride for kid’s toothpaste.

Fluoride in drinking water may lead to a about 25% reduction in the number of cavities in a population. However, we can expect that this expect will be most pronounced on individuals who

are caries prone. In fact, public health dentists now recognize that water fluoridation is mainly for the benefit of the poor and uneducated, people who might otherwise not help themselves avoid dental decay through behavior.

By avoiding sugars and starches, your child will be at a very low risk of dental decay, and almost certainly not suffer *a single cavity*. In fact, upper-middle class children of my generation, even those with a standard american diet that includes soda, starch and candy, often make it to adulthood with few or no cavities. The small proportional decrease in caries is of no practical significance in children with low caries rates.

If you are reading this book, you are not the type of parent who's child will benefit much from water fluoridation. In fact, if your child actually follows the dietary guidelines in these posts, his risk of dental decay will be negligible with or without fluoride.

It is certainly true that many Americans suffer from unesthetic dental fluorosis due to fluoride interventions. This is reason enough to avoid fluoride toothpaste from children, especially if you don't feed them sweets.

The other supposed risks of fluoride in the diet (bone cancer, IQ decline) have proven very hard to identify, which probably means that if they exist, the risks are very low. However, there is no good reason to subject your family to unusually high levels of fluoride in water or toothpaste. If your water has usually high levels (higher than would reasonably be expected to be found in average "traditional" water sources, a reverse osmosis filter might help bring the levels down to a better range.

If you drink water from a non-municipal source, having a professional verify its contents seems prudent.



Educational Viriculture – Part 1: School is not Education

Posted on [admin](#) Posted in [Book](#)

Educate your sons.

Delphic Maxim

This series of posts is my prescription for how best to develop our children using education. In [the previous series](#) we saw how environmental factors early in a child's life can affect physical, social, emotional, and intellectual development. These factors have a powerful effect. We cannot, however, develop an optimal human adult without a comprehensive system of education as well.

The greatest work of art they had to create was Man. They were the first to recognize that education means deliberately moulding human character in accordance with an ideal. ‘In hand and foot and mind built foresquare without a flaw’ – these are the words in which a Greek poet of the age of Marathon and Salamis describes the essence of that true virtue which is so hard to acquire. Only this type of education deserves the name of culture, the type for which Plato uses the physical metaphor of *moulding* character... it always reappears when man abandons the idea of training the young like animals to perform certain definite external duties, and recollects the true essence of education.

Paideia: The Ideals of Greek Culture, Jaeger, 1944

The distinction between Educational Viriculture and Non-Educational Viriculture is arbitrary. Certainly, we have no need to make a distinction between viriculture of the mind and viriculture of the body. In nearly all cases, the two mutually reinforce each other. I consider training in sports to be education, but it also affects physical development. The two domains of viriculture are therefore divided in this wrk simply for conceptual organization.

Human excellence depends on education. Only though consistent and directed application, can many valuable human traits that are honest signals of social status be achieved. Examples include wit, connoisseurship, music, singing, dancing, martial arts, sports, and many other areas which we will discuss. These traits are valuable in the same way that being beautiful is valuable – they are aspects of human areté, and offer a path to status without anxiety or consumption. Therefore we ought not to neglect them in our plan for viriculture.

Many parents do have a strong desire to optimize the education of their children. Sadly, this desire is often channeled into school selection.

And it was a clever saying of Bion, the philosopher, that, just as the suitors, not being able to approach Penelope, consorted with her maid-servants, so also do those who are not able to attain to philosophy wear themselves to a shadow over the other kinds of education which have no value.

Education of Children, Plutarch, circa AD 100

We can categorize schools into three types, the schools that aim to edify and actualize the young person into a good adult, the schools that exist to babysit and pacify the student, and the schools which seek to conform the child according to some social-political agenda. The first class is typified by the elite private schools, say Eaton circa 1950, and the third by American public schools of today. The true purpose of *public* school in general is not education in a liberal or classical sense, but rather socialization and political indoctrination – aimed at us, the peasant masses of the modern world.

You may believe that private schools provide a superior alternative for education. They certainly manage to instill valuable human qualities in children. But even the elite private schools do not optimize education. What’s more, they are unaffordable to most people – they tend to cost more than the average annual US household income *per child per year*. And even elite schools implicitly instill children with unaesthetic, ignoble “values” such as obedience to illegitimate authority, age segregation, sitting still, waking up early, bad lunches, etc. The general failure of schools to educate

our children is discussed at length in the interesting and spirited works of John Taylor Gatto, which I quote in the next section.

In terms of our physical health, school is a disaster. The most natural and instinctive human behaviors are treated as abnormal in school. The basic movement instincts of growing children are repressed, with under-appreciated physical and psychological consequences. Schools generally punish young children who try to lie down or stand up at their leisure. Public school students are encouraged to sit for hours in uncomfortable chairs built by the lowest bidder. And of course, “gym” is treated as completely separate “subject,” which is only sufficient to relieve the child of excess energy because the caloric content of the disgusting school lunch has been reduced repeatedly.

Neither are the students at leisure to ask questions spontaneously without permission. The need to keep order among students outweighs the need for feedback and dialectic – essential for true learning. Feedback in learning requires frequent questioning, analysis, and iterative exchanges, complete with excitement, noise, emotion, and movement on the part of student.

O! father & mother, if buds are nip'd,
And blossoms blown away,
And if the tender plants are strip'd
Of their joy in the springing day,
By sorrow and cares dismay

The Schoolboy, Blake, 1789

Even the ostensible goal of school is usually not what we might hope. These days, it is most often “to get the kid a good job.” However, school in general fails miserably at even this vulgar and ignoble goal. Consider that a 12 year old child with no school experience at all could be educated to master level in ten years of free apprenticeship in a artisan profession of his choice, providing himself with a valuable skill (in real human terms) and creatively fulfilling career for life. Modern school greatly impedes this more traditional process of preparing children for work. The second ostensible goal of school is that it democratically teaches children to “think critically.” However, anyone who has actually been to school realizes that this goal is not realized either. A simple classical reading list and a trip to the library is more valuable for assisting a child’s humanistic and intellectual growth.

While the quality of education between the various types of school differs greatly, in general school is simply insufficient for *optimal* education. Schools fail to make a good use of the educational years. School focuses on maintaining order, completing worksheets, and preparing for this year’s standardized fill-in-the-blank exam. Even in the rare private school that offers a more humane and stimulating curriculum, the nature of classroom based learning is that it cannot make a very efficient use of time compared to independent learning. And even if the classroom time could be spent efficiently, schools universally fail to steep the child in those activities of conspicuous leisure, which serve to connote status among adults.

No school is honestly educating children to reach their full potential. School seems at best, full of a great deal of wasted time between periods of true learning. As we have discussed earlier, conspicuous “waste” is a mark of high status, and very useful for adult life. Sadly, school is not a leisurely waste of time in the aristocratic sense, where the students would train in matters more

noble and refined than productive work. Instead school is drudgery without even being productive, a cruel and painful use of time that is neither industrious or leisurely. The 13 compulsory years before a child graduates high school truly are wasted, but without accumulating the honest signals of 13 years of leisure time spent in the “high-minded” pursuits of those free from the need to earn a living.

People of some rank and fortune are generally eighteen or nineteen years of age before they enter upon that particular business, profession, or trade, by which they propose to distinguish themselves in the world. They have before that full time to acquire, or at least to fit themselves for afterwards acquiring, every accomplishment which can recommend them to the public esteem, or render them worthy of it. Their parents or guardians are generally sufficiently anxious that they should be so accomplished, and are, in most cases, willing enough to lay out the expense which is necessary for that purpose. If they are not always properly educated, it is seldom from the want of expense laid out upon their education, but from the improper application of that expense. It is seldom from the want of masters, but from the negligence and incapacity of the masters who are to be had, and from the difficulty, or rather from the impossibility, which there is in the present state of things of finding any better.

The Wealth of Nations, Smith, 1776

Over two hundred years ago, Adam Smith recognized that eighteen years is a more than adequate time to fit a child with “every accomplishment” which can render him worthy of the public esteem. Today, eighteen years could still be adequate, and we have used our greater societal wealth to see that even the poorest children have this opportunity. The shameful situation we have today is that children are forced into a school system for thirteen years that fails to fit them with even the most rudimentary accomplishments. One major problem with school is that time-spent is not in proportion to the human value associated with the topics taught. If it were, lunch, gym, music and art would be the most important classes of the day – as they are the most important contributors to human excellence.

Skills that transfer: street fights, off-path hiking, seduction, broad erudition. Skills that don't: school, games, sports, laboratory – what's reduced and organized.

The Bed of Procrustes, Taleb, 2010

Furthermore, *training* in valuable traits is often neglected in favor of “book learning.”

Did you never observe in the arts how the potters' boys look on and help, long before they touch the wheel?

Yes, I have.

And shall potters be more careful in educating their children and in giving them the opportunity of seeing and practicing their duties than our guardians will be?

The idea is ridiculous.

Republic, Plato, circa 380 BC

And Plato's sentiment is echoed by Montaigne:

They wanted to take a short cut; and since it is a fact that learning, even when it is taken most directly, can only teach us *about* wisdom, integrity, and resolution, they wanted to put their children from the first in contact with deeds, and instruct them, not by hearsay, but by the test of action, forming and molding them in a living way, not only by precepts and words, but principally by examples and works; so that learning might be not merely a knowledge in their soul, but its character and habit; not an acquisition but a natural possession. In this connection, someone asked Agesilaus what he thought children should learn. “What they should do when they are men,” he replied. It is no wonder if such an education has produced such admirable results.

Essays, Montaigne, 1580

If we want our children to accumulate real human value during education we must, as Montaigne says, put them “from the first in contact with deeds.” I “studied” language for over a decade in school, four years in elementary (Spanish), six in middle and high school (four of Latin, two of Italian), and five semesters in college (one of French, four of Spanish). I cannot speak a single one of those languages. This is not a result of poor scholarship on my part, but rather ineffective methods – as Adam Smith calls it “improper application.”

The purported deterioration in scholarship and in the techniques of teaching which, lately, has attracted the attention of American public, has apparently been caused primarily by a premature effort to reduce our meagre knowledge of social phenomena to the level of an applied science.

The Dodd Report

Many readers likely have had a similar experience with ineffective teaching methods. The blame cannot be laid upon the student for failing to identify the optimal methods for language acquisition – the student is only a child. If the time spent in those classes was spent actually training in languages through immersion, I would likely have actually retained something valuable.

Schools further fail by aiming at barely passing the least capable students. This is now enshrined in the US national curriculum, with Communist/Capitalist Core pushing phony “college-readiness” for everyone. The unfortunate dumbing-down trend is present at all levels of education in the US, from pre-K to the Ivy League. Putting all children through college doesn’t make your nation smarter or create new jobs. What it does is ensure that all students are indebted to banks, and that the women waste four of their prime reproductive years. The watering down combined with endless standardized testing is removing the vestigial value still present in public schools, with our nation’s children fluctuating between boredom (diagnosed as “attention deficit” and “cured” with amphetamines) and anxiety (“cured” with benzodiazepines). Thank goodness Government has agreed with Big Pharma to mandate our purchasing their insurance, which covers the prescription (Adderall) without a co-pay, allowing our children to get good grades and grow up to be successful members of society.

Critics of the drudgery of school are dismissed with the claim that school prepares students for a life of productive “hard work.” However, let’s not forget that, although hard work can be useful, it is not *always* useful. The value of work ethic is as old as Western civilization, being first put into verse by Hesiod.

But do you at any rate, always remembering my charge, work, high-born Perses, that Hunger may hate you, and venerable Demeter richly crowned may love you and fill your barn with food; for Hunger is altogether a meet comrade for the sluggard. Both gods and men are angry with a man who lives idle, for in nature he is like the stingless drones who waste the labor of the bees, eating without working; but let it be your care to order your work properly, that in the right season your barns may be full of victual. Through work men grow rich in flocks and substance, and working they are much better loved by the immortals. Work is no disgrace: it is idleness which is a disgrace. But if you work, the idle will soon envy you as you grow rich, for fame and renown attend on wealth. And whatever be your lot, work is best for you, if you turn your misguided mind away from other men's property to your work and attend to your livelihood as I bid you. An evil shame is the needy man's companion, shame which both greatly harms and prospers men: shame is with poverty, but confidence with wealth.

Works and Days, Hesiod, circa 800 BC

It is true that in a free society, like Hesiod's Boeotia, tireless, productive work of real value leads to social and financial rewards. However, in our modern world the whole idea of what constitutes productive work is upside down. Worksheets, homework, posters, projects, etc. are not the least bit productive – they are a deliberate waste with the goal of imparting knowledge or improving the judgement of the student. Nowadays, they fail even at that, and are instead used to politically indoctrinate tender minds. Jobs which mimic school-like behavior, the paper-pushing, administrative and bureaucratic variety (as opposed to the constructive, craft, or service variety), create no real value, and generally impede wealth accumulation even for the employee (he could be doing something better). But even today, despite looming government imposition on small business, an artisan owner-operator producing a truly high quality product or service (artisan butcher, cheesemaker, farmer, gardener, classical architect, furniture maker, tailor etc.) can predictably support a comfortable household (stay-at-home-wife and three kids) solely on one income, especially if he refuses to store his assets in Federal Reserve denominations.

True productive constructive work has long been accepted as a virtue among the laboring classes of Christendom. But work without a sensible goal is an unnatural, inhumane aberration, and very unpleasant. Traditional people of all parts of the world were smart enough to avoid pointless toil.

For instance, the average time devoted each week to obtaining food is only 12-19 hours for one ground of Bushmen, 14 hours or less for the Hadza nomads of Tanzania. One Bushman, when asked why he hadn't emulated neighboring tribes by adopting agriculture, replied, "Why should we, when there are so many mongongo nuts in the world."

((Jared Diamond))

Yet the claim that capitalism has delivered us from excessive toil can be sustained only if we take as our point of comparison eighteenth- and nineteenth-century Europe and America — a period that witnessed what were probably the longest and most arduous work schedules in the history of humankind. If we set our sights back a bit farther chronologically, the comparison underlying the conventional wisdom fails to hold up.

The first step to a realistic comparison is to reject the idea that the medieval economy entailed continuous toil. It is unlikely that the workday was much above the standards of

today. The medieval economy also provided ample opportunities for leisure within the year. And the medieval period appears not to have been an exception, at least in Western history. Leisure time in Ancient Greece and Rome was also plentiful. Athenians had fifty to sixty holidays annually, while in Tarentum they apparently had half the year. In the old Roman calendar, 109 of 355 days were designated *nefasti* or “unlawful for judicial and political business.” By the mid-fourth century the number of *feriae publicae* (public festival days) reached 175.

The lives of ordinary people in the Middle Ages of Ancient Greece and Rome may not have been easy, or even pleasant, but they certainly were leisurely.

The Overworked American, Schor, 1957

Abundant leisure time is an essential component of any humane curriculum. Extreme scholastic compulsion, in the style of homework and strict assignments is certainly inappropriate for viriculture – especially when the child is young.

And, therefore, calculation and geometry and all the other elements of instruction, which are a preparation for dialectic, should be presented to the mind in childhood; not, however, under any notion of forcing our system of education.

Why not?

Because a freeman ought not to be a slave in the acquisition of knowledge of any kind. Bodily exercise, when compulsory, does no harm to the body; but knowledge which is acquired under compulsion obtains no hold on the mind.

Republic, Plato, circa 380 BC

The lack of unstructured freetime and choice is my complaint with the Tiger Mom approach to education, which emphasizes “good grades” and “hard work” over comfort, leisure, and humanity in the Enlightened European aristocratic sense.

Whatever the cause, such a myopic, careerist approach to schooling is antithetical to classical or aristocratic education, and does little to develop human excellence in our children.

The [vocational] training of the young... must be distinguished from cultural education, which aims at fulfilling an ideal of man as he ought to be. In such an ideal pattern, utility is neglected, or at least relegated to the background. The vital factor is τὸ καλόν, the Beautiful as a determinant ideal... [Cultural education] is shown in the whole man – both in his external appearance and conduct, and in his inner nature. Both the outer and the inner man are deliberately produced, by a conscious process of selection and discipline...

Werner Paideia: The Ideals of Greek Culture, Jaeger, 1944

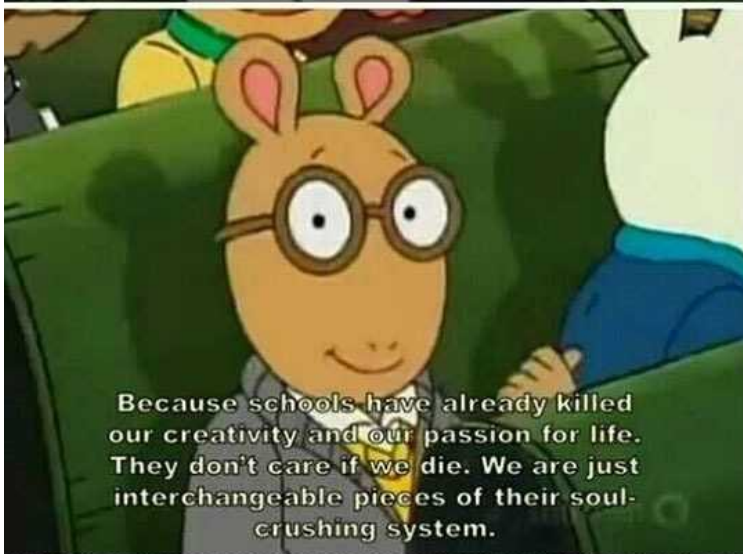
There is, however, still a more fundamental reason why non-productive (that is not earning a living) leisure time is required to educate a child with the honest signals of high status. The artistic attainments pursued by men of hereditary leisure during their abundant free time are the socially visible evidence of their lack of need to engage in the base task of earning a living. This is the underlying source of the *social* value of these attainments.

This direct, subjective value of leisure and of other evidences of wealth is no doubt in great part secondary and derivative. It is in part a reflex of the utility of leisure as a means of gaining the respect of others, and in part it is the result of a mental substitution...

It has already been remarked that the term "leisure", as here used, does not connote indolence or quiescence. What it connotes is non-productive consumption of time. Time is consumed non-productively (1) from a sense of the unworthiness of productive work, and (2) as an evidence of pecuniary ability to afford a life of idleness. But the whole of the life of the gentleman of leisure is not spent before the eyes of the spectators who are to be impressed with that spectacle of honorific leisure... He should find some means of putting in evidence the leisure that is not spent in the sight of the spectators. This can be done only indirectly, through the exhibition of some tangible, lasting results of the leisure so spent... The criteria of a past performance of leisure therefore commonly take the form of "immaterial" goods. Such immaterial evidences of past leisure are quasi-scholarly or quasi-artistic accomplishments and a knowledge of processes and incidents which do not conduce directly to the furtherance of human life. So, for instance, in our time there is the knowledge of the dead languages and the occult sciences; of correct spelling; of syntax and prosody; of the various forms of domestic music and other household art; of the latest properties of dress, furniture, and equipage; of games, sports, and fancy-bred animals, such as dogs and race-horses... These accomplishments may, in some sense, be classed as branches of learning.

The Theory of the Leisure Class, Veblen, 1899

Comfort and leisure for the pupil must be a key aspect of successful educational viriculture, since this is the environment necessary to cultivate the "quasi-scholarly and quasi-artistic" achievements that connote high status in adulthood.



TL;DR; DAMNLOL.COM

We are used to turning our children over to schools while we go to work, patting ourselves on the back, reassuring ourselves the chosen school is “good,” and we are “good” parents. For anyone reading this book, I imagine your schools really are “good,” so far as schools go. But for viriculture, we cannot blindly trust anyone else to educate our children. Just like with the flawed national nutritional guidelines, governments adopted the non-traditional task of educating children, but let the public down with it’s poor execution (indeed it is worse than that). It is our responsibility as individual parents to implement a diet optimal for growing children. And it is our responsibility again to implement an optimal education. If they never reach their potential as adults, it is our fault.

If a man of any natural feeling neglects these sacred duties he will repent it with bitter tears and will never be comforted.

Emile, Rousseau, 1762

You will repent bitterly hereafter if you do not, for when the harm is done there will be no curing it; consider ere it be too late.

Iliad, Homer / Butler, circa 800 BC

Just like all viriculture, education must be planned strategically, but it must also include a process of *feedback* between the student and the teacher. Feedback in education has traditionally taken the form of the dialectic, a task very difficult to perform in a classroom setting.

Let him be asked for an account not merely of the words of his lesson, but of its sense and substance, and let him judge the profit he has made by the testimony not of his memory, but of his life. Let him be made to show what he has just learned in a hundred aspects, and apply it to as many different subjects, to see if he has yet properly grasped it and made it his own, planning his progress according to the pedagogical method of Plato. It is a sign of rawness and indigestion to disgorge food just as we swallowed it. The stomach has not done its work if it has not changed the condition and form of what has been given it to cook.

Essays, Montaigne, 1580

Despite the requirement for feedback between the child and the educator, I am certainly not advocating “helicopter” parenting or excessive educational interventionism. Modern public school interferes with, more than it promotes, valuable education.

I remember once visiting a school for mentally handicapped children. “Our children do not have to take examinations,” the headmaster told me,” and so we are able to teach them things which will be really useful to them in life.

The Fate of Empires and Search for Survival, Glubb, 1978

As we have said, children need abundant unscheduled time, and freedom to play, explore their own interests, and engage socially with peers. These are aspects of life just as important as anything we learn in a classroom.

As years increase, liberty must come with them; and in a great many things he must be trusted to his own conduct, since there cannot always be a guard upon him, except what you have put into his own mind by good principles, and establish'd habits, which is the best and surest, and therefore most to be taken care of. For, from repeated cautions and rules, never so often inculcated, you are not to expect any thing either in this, or any other case, farther than practice has establish'd them into habits.

Some Thoughts Concerning Education, Locke, 1693

Just as we should allow liberal unstructured free time in a child's education, an education should *not* be an attempt to change a child's personality (if that would even be possible). The “big five” dimensions of personality, agreeableness, extraversion, openness, neuroticism, and conscientiousness are highly heritable. Even if they were malleable, diversity in personality makes for an interesting family and society. Instead of focusing on cultural idiosyncracies, we should focus on educating into children those accomplishments that are universally considered socially valuable.

Because of the relationship between social status and leisure, we ought to establish an aristocratic educational environment in which the souls of our children become “ennobled.” Mindless drudgery of any kind is unsuitable for viriculture. Even “hard work,” that middle-class virtue, is of questionable value. For anxiety-free status, we ought to have to children at their leisure as much as possible, free to pursue their own interests, entertainments, or nothing at all without concern. By

strategy on the part of the parents, we can achieve this goal while sparing our children the unnecessary and unaesthetic side effects of indolence in artistic, scholarly, and athletic skills.

Modern education is shameful because society foots the bill for two decades of what is essentially leisure time for every child, and yet almost none of them bear the honest signals free time spent in the pursuit of non-productive non-drudgery (traits historically seen as refined or sophisticated). For the same price tag, modern nations could instill these socially valuable qualities universally in their citizens. But let's not hold our breath!

Another sad aspect of modern schooling is that it contributes to an artificial separation of the family, at least compared to ancestral norms. Society sending women to work has further decreased the total number of hours mothers spend with young children, and simultaneously increased consumption of factory made products outside of the home. This is combined with universal college's artificial extension of childhood into the twenties, stunting our children's social and intellectual development in favor of more years in a box-shaped classroom.

Lastly, a real education is essential for viriculture because it contributes great to anxiety-free status for the child. Without the excellence of knowledge and accomplishments, children will never be as well loved as they might have been.

And shall we ever be friends to others? and will any others love us, in, as far as we are useless to them?

Certainly not.

Neither can your father or mother love you, nor can anybody love anybody else, in as far as they are useless to them?

No.

And therefore, my boy, if you are wise, all men will be your friends and kindred, for you will be useful and good; but if you are not wise, neither father, nor mother, nor kindred, nor any one else, will be your friends.

Lysis, Plato, circa 380 BC

We have discussed in earlier posts our ability to control the development of valuable physical traits in our children. Through education, we can also develop those skills and abilities that allow our children to become the best men and women possible.

And knowing you to have sons of your own, we thought that you were most likely to have attended to their training and improvement, and, if perchance you have not attended to them, we may remind you that you ought to have done so, and would invite you to assist us in the fulfillment of a common duty.

Laches, Plato, circa 380 BC

School is Propaganda not Education

The secret of American schooling is that it doesn't teach the way children learn, and it isn't supposed to; school was engineered to serve a concealed command economy and a deliberately re-stratified social order. It wasn't made for the benefit of kids and families as those individuals and institutions would define their own needs. School is the first impression children get of organized society; like most first impressions, it is the lasting one. Life according to school is dull and stupid, only consumption promises relief: Coke, Big Macs, fashion jeans, that's where real meaning is found, that is the classroom's lesson, however indirectly delivered.

Universal Education, Gatto, 1998

In general, modern public schools fail at education. But the contemporary state of public school is far more sinister than most realize – it is not simply a failure, but rather a deliberate brainwashing program of unprecedented scale, and we are all affected. In the last two centuries, the methods of using public education for mass propaganda and indoctrination have been perfected. Curriculums are designed not with the interest of individual citizens, but rather the perpetuation of a large docile class of debt/wage-slaves, who provide both the labor and the market for endless consumerism.

So all shall turn degenerate, all depriv'd

Paradise Lost, Milton, 1667

The history of this deception, and the practical techniques by which this horrible task is carried out are detailed in Gatto's *The Underground History of American Education*. When we take a long view of Western Civilization, it becomes clear that major disruptive forces have been at work to change the traditional way of life for most citizens, especially since around 1900. Compulsory public education is one such force, and the degree to which the damage has already been done can be at first very shocking.

I have little doubt the fantastic wealth of American big business is psychologically and procedurally grounded in our form of schooling. The training field for these grotesque human qualities is the classroom. Schools train individuals to respond as a mass. Boys and girls are drilled in being bored, frightened, envious, emotionally needy, generally incomplete. A successful mass production economy requires such a clientele. A small business, small farm economy like that of the Amish requires individual competence, thoughtfulness, compassion, and universal participation; our own requires a managed mass of leveled, spiritless, anxious, familyless, friendless, godless, and obedient people who believe the difference between Cheers and (((Seinfeld))) is a subject worth arguing about.

The Underground History of American Education, Gatto, 2000

In essence, an indoctrination agenda exists which increases the likelihood that a given citizen will:

- Lack the skills to make a living without resorting to working for someone
- Engage in aggressive purchasing of corporate made consumables
- Accumulate debt

– Remain politically docile

Public school (now featuring “universal pre-K” in NYC) and children’s television function to lay the foundation for this agenda in the young. Corporate and public broadcasting in newspapers, TV, and radio reinforce the lessons in adulthood.

Our schools today are the result of many gradual changes since the idyllic nineteenth century American one room schoolhouse in which a lovely, unsupervised 23 year-old not-yet-married teacher who knew each child’s family personally corrected Thomas’ sloppy Spencerian penmanship, and encouraged Felicity’s proper elocution in reading aloud “Sublime Virtues Inconsistent with Infidelity” or “Parallel between Pope and Dryden” from pages 178 and 181 of the 1838 sixth edition of *McGuffey’s Fourth Reader* (yes that is actually what American children around age ten were reading at the time). Much of our modern educational and even social problems might be alleviated simply by reverting to teaching from such Readers. In today’s schools, curriculums have been concocted that, through the use of endless busywork, worksheets, and “team based learning” (“proven” by “science” to be a more effective modern method of teaching) prevent any actual reading of real books from taking place, even if those books are ostensibly “taught” in the curriculum. Furthermore, there has been a disgraceful degeneration in the moral content of the assigned readings.

If public school were not compulsory, that is *forced*, other avenues for achieving meaningful training in some real life career would be open to the young person. Indeed, simply removing public education outright and replacing it with nothing would be a major boon, as children would then be free to develop those skills which adults actually found useful in their real life and work. This was the basis for the apprenticeship system which served Europe well for hundreds of years – and gave most men an artisan craft field of expertise in which they were a small business owner-operator.

I know how difficult it is for most of us who mow our lawns and walk our dogs to comprehend that long-range social engineering even exists, let alone that it began to dominate compulsion schooling nearly a century ago. Yet the 1934 edition of Ellwood P. Cubberley’s *Public Education in the United States* is explicit about what happened and why. As Cubberley puts it:

It has come to be desirable that children should not engage in productive labor. On the contrary, all recent thinking...[is] opposed to their doing so. Both the interests of organized labor and the interests of the nation have set against child labor....

The statement occurs in a section of *Public Education* called “A New Lengthening of the Period of Dependence,” in which Cubberley explains that “the coming of the factory system” has made extended childhood necessary by depriving children of the training and education that farm and village life once gave. With the breakdown of home and village industries, the passing of chores, and the extinction of the apprenticeship system by large-scale production with its extreme division of labor (and the “all conquering march of machinery”), an army of workers has arisen, said Cubberley, who know nothing.

The Underground History of American Education, Gatto, 2000

The sort of one-room school described above, which was not really mandatory, and only for young children, may really be valuable for a healthy citizenry, but today the situation is much different. The latest expansion of the modern agenda into public schooling comes in the form national curricula known as Common Core.

Common core is so far beyond just math and if you all really understood just how invasive and manipulative it is you'd pull your kids out of school right now and buy an AR-15 or another AR-15.

Anonymous Online Post

Ostensibly, Common Core benefits students by “moving even the best state standards to the next level.” In reality this Federal imposition functions as a Trojan Horse, laying the foundation for the most extreme possible centralization in the daily lesson plan of all American children. A similar tactic was used to implement both the Federal Reserve and the American Income Tax – neither of which was excessively offensive when first created, but have gradually come to play enormous negative roles in American life. A centralized federal curriculum is extremely dangerous, as using this pipeline to push an agenda could easily indoctrinate the minds of nearly all future citizens. This is hardly an unrealistic outcome, as such indoctrination has already occurred to a large extent through state curricula and widely used textbooks written by people who don't have our children's interests at heart.

Whether or not the destructiveness has fully dawned on the reader, he should be able to see that public schooling is hardly compatible with viriculture. My guidelines for an educational system aimed at developing human excellence are below.



Educational Viriculture – Part 2: Guidelines

Posted on [admin](#) Posted in [Book](#)

Guidelines of Educational Viriculture for the Parent

But as they moved into ever clearer vision, along their historical path, the ever present aim of their life came to be more and more vividly defined. It was the creation of a higher type of man. They believed that education embodied the purpose of all human effort. It was, they held, the ultimate justification for the existence of both the individual

and the community. At the summit of their development, that was how they interpreted the their nature and their task.

Paideia: The Ideals of Greek Culture, Jaeger, 1944

A viriculture education will differ greatly from the contemporary norms of school. Below I list the major differences, outlined as guidelines, and expand on their character and justification.

Viriculture Prescription #57: A Classical Education

For education has from the very beginning been closely connected with the study of the ancient world. The ages which succeeded it always regarded classical antiquity as an inexhaustible treasure of knowledge and culture – first as a collection of valuable external facts and arts, and later as a world of ideals to be imitated.

Paideia: The Ideals of Greek Culture, Jaeger, 1944

Viriculture attempts to develop our children into the best adults, and this spirit is alive most strongly in the Western Classics, especially the ancient Greek canon. In Greek culture we see the rigorous pursuit of areté in all aspects of life – physical, intellectual, moral, spiritual.

Ever to be best and stand far above all others.

Iliad, Homer, circa 800 BC

Unlike our contemporary namby-pamby relativist cultural-void that shrinks at pronouncing definite prescriptions of beauty, good, excellence, and the other noble and socially relevant qualities of life, the Greeks regarded the “good” as an objective ideal, with definite and universally understood characteristics. This is the theoretical foundation upon which was constructed the manically effective Greek child-rearing and educational system known as paideia. The Greek tradition of the devotion to excellence has been recognized as superior by men of judgement throughout the centuries.

I never touched a trained mind yet which had not been disciplined by grammar and mathematics—grammar both Greek and Latin; nor have I ever discovered mental elegance except in those familiar with Greek and Latin classics.

William Milligan Sloan

When successfully emulated on a societal scale as among the Roman patricians, Renaissance and Enlightenment European nobility, and the early British-Americans, there results a flowering of cultural achievements. For viriculture we want to make the student *better*, and classical education is the optimal method.

Classical education was thought to improve the learner, not simply to make him more knowledgeable or tolerant or mentally skillful, but better and stronger...

Tracy Lee Simmons

Contemporary classicists daydream of how we might achieve such a cultural renaissance in our modern world. Clearly, the torrent of big government factory schooling flows too strong for the few families with classical tastes to turn. Luckily we are concerned with viriculture – physical, intellectual, and spiritual excellence – and in this we can begin with our own children.

And, since the basis of education is an general consciousness of the values which govern human life, its history is affected by changes in the values current within the community. When these values are stable, education is firmly based; when they are displaced or destroyed, the educational process is weakened until it becomes inoperative. This occurs whenever tradition is violently overthrown or suffers internal collapse.

Paideia: The Ideals of Greek Culture, Jaeger, 1944

One of the great values of the Classics is that authors made unabashed attempts to moralize their readers by presenting the areté of famous men and women for emulation by students.

As one lamp lights another nor grows less, so nobleness enkindleth nobleness.

James Russell Lowell

Or, as Plutarch says,

Such objects are to be found in virtuous deeds; these implant in those who search them out a great and zealous eagerness which leads to imitation... But virtuous action straightway so disposes a man that he no sooner admires the works of virtue than he strives to emulate those who wrought them. The good things of Fortune we love to possess and enjoy; those of Virtue we long to perform. The former we are willing should be ours at the hands of others; the latter we wish that others rather should have at our hands.

Parallel Lives of Noble Grecians and Romans, Plutarch, circa AD 100

These works are far more valuable to the student than our more “accurate” unbiased (flat, lifeless) contemporary textbooks, as classical authors openly pass moral judgements of the saying and actions of great historical figures.

Viriculture Prescription #58: Appreciate the cultural excellence of the West

Enlightenment Europeans certainly held themselves as the inheritors of the civilization of classical antiquity, and this perspective was alive in Young America. Jefferson especially is famous for his classical education, and was himself a staunch advocate of Greek and Roman classicism, as we see in the foundational principles of his University of Virginia, the content of his personal library which he donated to found the Library of Congress, as well as in matters of aesthetics, as we see in his design of Montecello and his influence on the government and university buildings constructed in the neoclassical style.

You ask my opinion on the extent to which classical learning should be carried in our country... The utilities we derive from the remains of the Greek and Latin languages are, first, as models of pure taste in writing. To these we are certainly indebted for the

national and chaste style of modern composition which so much distinguishes the nations to whom these languages are familiar. Without these models we should probably have continued the inflated style of our northern ancestors, or the hyperbolic and vague one of the east. Second. Among the values of classical learning, I estimate the luxury of reading the Greek and Roman authors in all the beauties of their originals. And why should not this innocent and elegant luxury take its preeminent stand ahead of all those addressed merely to the senses? I think myself more indebted to my father for this than for all the other luxuries his cares and affections have placed within my reach; and more now than when younger, and more susceptible of delights from other sources.

Jefferson, 1819

Jefferson was certainly not alone in his regard for the primary importance of the Latin and Greek classics in education. The earliest public high schools in the British American colonies that are still in operation are Boston Latin (Massachusetts, 1635), Thomas Hooker's Latin (Connecticut, 1638), and Cambridge Latin (Massachusetts, 1648) – all classically oriented. In fact, young America has a extremely rich tradition of classical education and culture that we have shamefully abandoned in the last century. Educated British boys, even in American colonial outposts, were expected to know at least Latin, and usually some Greek as well. This is partly because the prevalent cultural narrative at the time painted Western man, with his superior aesthetics, laws, and philosophy as the product of millennia of refinement of our civilization. This narrative, which eventually came to include the founding of the United States itself, is often depicted ceremoniously in old in ceiling murals, such as the New York Supreme Court House on 60 Centre street, and the main reading room of the Thomas Jefferson Building of the Library of Congress, and proceeds in approximately the following way:



Egyptian-> Hebrew -> Persian -> Greek -> Roman -> Byzantine -> Carolingian -> Italian ->
English -> American

As Rabelais puts it, taking characteristic Renaissance historical liberties, in the prologue of *Gargantua and Pantagruel*:

Would to God everyone had as certain knowledge of his genealogy since the time of the ark of Noah until this age. I think many are at this day emperors, kings, dukes, princes, and popes on the earth, whose extraction is from some porters and pardon-peddlers; as, on the contrary, many are now poor wandering beggars, wretched and miserable, who are descended of the blood and lineage of great kings and emperors, occasioned, as I conceive it, by the transport and revolution of kingdoms and empires, from the Assyrians to the Medes, from the Medes to the Persians, from the Persians to the Macedonians, from the Macedonians to the Romans, from the Romans to the Greeks, from the Greeks to the French.

Noteworthy individuals, such as Lycurgus, Solon, Caesar, and Charlemagne are often explicitly depicted in the forward march of Western Civilization. Another form that this narrative takes in is the inscriptions found on the face of venerable buildings of prestigious universities – which name the great men who have contributed to the culture as encouragement for the student.



Today, the paradigm that we are the torchbearers of a legacy of culture that has been passed through the great civilizations of Europe is no longer in vogue. It is too inaccurate, and anyway we are too busy (wasting time in school) to bother learning to read Greek and Latin. Truth be told, we are, by most thoughtful reckonings, well beyond the glory days of the latest iteration of Western civilization, which may be said to have peaked around mid 19th century in Europe and the American South, and the turn of the 20th in the United States. Indeed we are beyond even the decadence phase and today the West is in a crisis of territory and demographics.

But there are other reasons why the narrative of Western cultural progress culminating in our modern nations has been abandoned. Firstly, the growth of knowledge has precluded anyone but a true genius from mastering more than a narrow portion of the academic corpus. My own undergraduate major, biochemistry, barely existed as a field a century ago, and three centuries ago the fields of physics, chemistry, and biology were just breaking out of the one discipline of “natural philosophy.” Until recently students had a broader overview of the full scope and content of human knowledge.

Secondly, as little as one hundred years ago, the classics were the foundation of a college education, while today they are a dying speciality. The expansion of scientific knowledge (and pseudoscience sold as “social science”) has pushed away the classics which were historically (and still should be considered) true, rich education. Worse still, our mastery of evolution theory stole from educated

man any legitimacy in his claims for divine descent, and modern astrology removed our seat at the center of the universe.

Educated man, if he is honest, must now carry an extreme philosophical humility – which if, grounded in the classics, yields excellent Montaigne-style results. However, without such a foundation, the tendency is toward nihilistic cultural relativism, the spineless philosophy at the center of our modern cultural catastrophe. Cultural relativism is incompatible with the belief in the superiority of the culture of the West, and is why this heritage is no longer cherished in education. In combination with cheap and easy international travel, the West's adoption of cultural relativism has brought our civilization into its latest dark age. This acceptance of multiculturalism is the third reason that the narrative of Western cultural progress has been abandoned in the modern world.

The precipitous decline in the humanity of living conditions for the average Westerner since the 1960s has caused many to re-examine the value of cultural relativism.

Some would say that Eurocentrism is bad for us, indeed bad for the world, hence to be avoided. Those people should avoid it. As for me, I prefer truth to goodthink. I feel surer of my ground.

The Wealth and Poverty of Nations, Landes, 1998

How can we justify the cultural excellence of the West? The easiest way is to examine cultural achievements in a direct apples-to-apples way. The richer way to appreciate the cultural superiority of the West is to reach a full realization of the greatest of the Western civilizations of Greece, Rome, and Post- Renaissance Europe.

Inevitably, towards the end of a historical period, when thought and custom have petrified into a rigidity, and when the elaborate machinery of civilization opposes and represses man's heroic qualities, life stirs again beneath the hard crust. At such times, a deep-seated historical instinct drives men not only to go back to the resources of their own national culture, but also to live once more in that earlier age when the spirit of Greece (with which they have so much in common) was still fervently alive, and from its ardent life was creating the forms which eternalized its ardor and its genius.

Paideia: The Ideals of Greek Culture, Jaeger, 1944

To the Greeks, and indeed nearly all Westerners until ~1950, cultural relativism would have seemed a mental illness – and that is the perspective I take here. Recognizing the superiority of Western culture greatly streamlines our viriculture curriculum, as we can focus primarily on the philosophical and artistic canon of Europe – the much derided Old White Men, who are revered simply because they are most excellent in their respective arts.

Viriculture Prescription #59: Severe Standards

He is best who is trained in the severest school.

History of the Peloponnesian War, Thucydides, circa 400 BC

Despite the physical and emotional comfort of the learning environment, focus must be maintained on extremely rigorous standards of excellence. I believe that no matter the intellectual capacity of an individual student, he would be better off instructed with the primary sources of the judgments and deeds of the best minds of all time. Biology no doubt sets the ultimate limit intellectual achievement, but even base minds are elevated through exposure to the lives and idea of great men and women. This is the sense in which the standards of a viriculture education should be “severe.” The number of questions correct on a multiple choice test is irrelevant, but the ability to consider and judge the behavior and action of the powerful, and how to act virtuously in difficult situations are the foundations of an excellent life. In fact, a focus on developing a keen judgement instead of simply learning facts is essential for an aesthetic education.

This judgement would ideally be composed of strict self-criticism, as well as an honest critical judgment of the lives and actions of others. Such judgement is essentially absent in modern public schools, and even in universities – being seen as “mean” and unwelcome.

Judge not, that ye be not judged.

KJV, Matthew 7:1

In our contemporary education systems we have misinterpreted the famous saying of Jesus to mean simply “judge not,” to abandon interpersonal judgement altogether, rather than a divine prescription against hypocrisy. Only through the Classical frame of judgement and criticism...

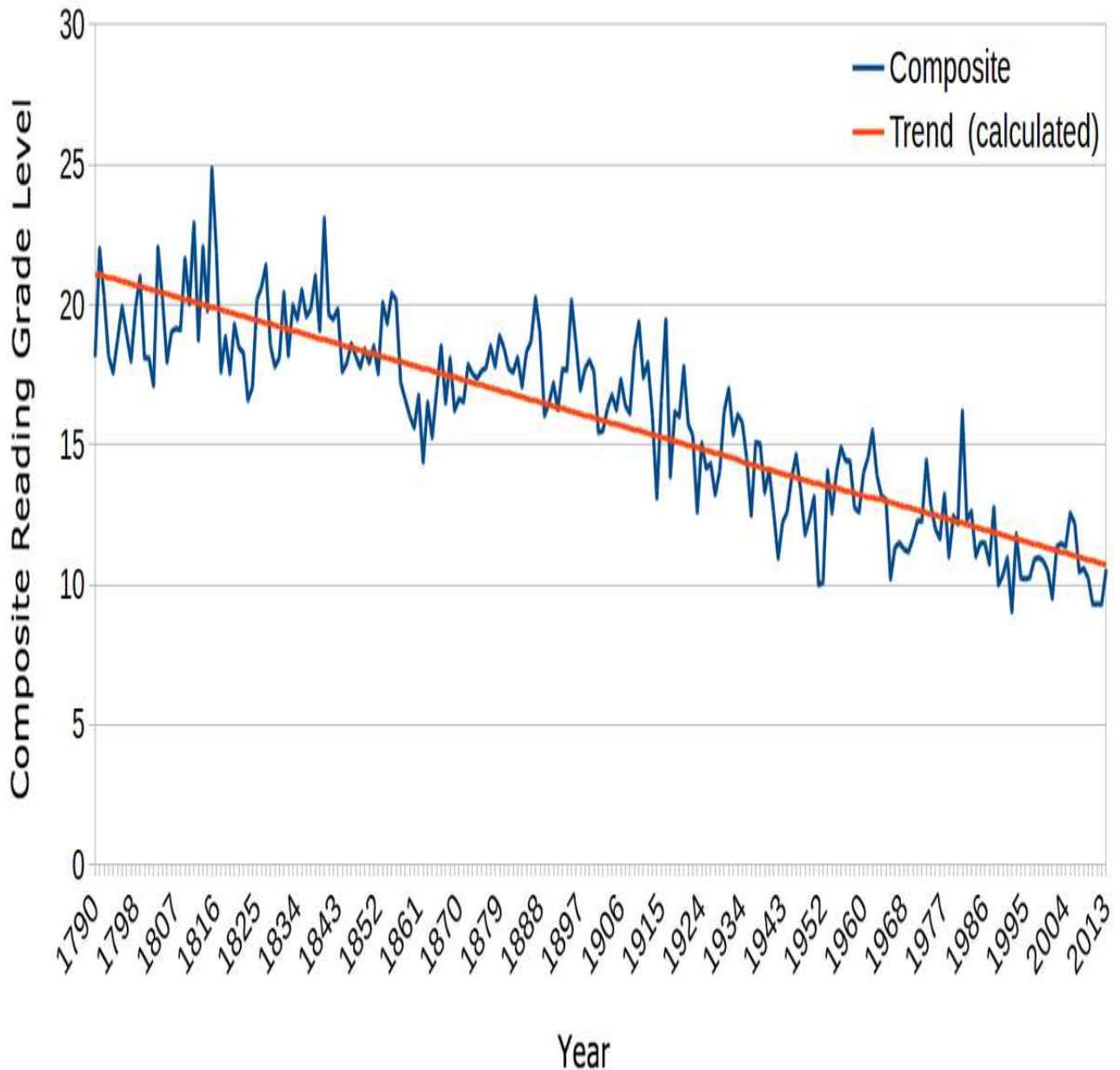
He is judged, and is proud to be judged, by a severe standard.

Paideia: The Ideals of Greek Culture, Jaeger, 1944

...do the words of Jesus take on a rich and nuanced meaning.

An example of just how low contemporary school standards are these days come from the reading level assessments of children in school. During my middle school days, many students, not particularly intelligent, would max-out the State issued assessments, scoring at the “12th grade reading level.” I have a hard time believing my middle school classmates were really so gifted – rather, it is modern schools that defined the reading level so low. The ultimate reasons why State test standards are so low is of course to make the states look like they are able to sufficiently educate all children, and thereby received Federal grant dollars.

Reading Level of the State of the Union Address



Consider the trend in the reading level of the *State of the Union* over the last two centuries – a steady degeneration to today, where Obama’s speeches are at the contemporary 9th grade level. Note the changes in the first lines of the address:

I have the satisfaction on our present meeting of being able to communicate the successful termination of the war which had been commenced against the United States by the Regency of Algiers. The squadron in advance on that service, under Commodore Decatur, lost not a moment after its arrival in the Mediterranean in seeking the naval

force of the enemy then cruising in that sea, and succeeded in capturing two of his ships, one of them the principal ship, commanded by the Algerine admiral. The high character of the American commander was brilliantly sustained on the occasion which brought his own ship into close action with that of his adversary, as was the accustomed gallantry of all the officers and men actually engaged. Having prepared the way by this demonstration of American skill and prowess, he hastened to the port of Algiers, where peace was promptly yielded to his victorious force.

James Madison, 1815

Since I last had the privilege of addressing you on the state of the Union the war of nations on the other side of the sea, which had then only begun to disclose its portentous proportions, has extended its threatening and sinister scope until it has swept within its flame some portion of every quarter of the globe, not excepting our own hemisphere, has altered the whole face of international affairs, and now presents a prospect of reorganization and reconstruction such as statesmen and peoples have never been called upon to attempt before.

Woodrow Wilson, 1915

We are fifteen years into this new century. Fifteen years that dawned with terror touching our shores; that unfolded with a new generation fighting two long and costly wars; that saw a vicious recession spread across our nation and the world. It has been, and still is, a hard time for many. But tonight, we turn the page.

Obama, 2015

This change is not merely a stylistic one, nor is it simply a reflection of the increased democratization of voting power among Americans. The “process of dumbening” of the American people has correlated with a precipitous decline in the educational standards. This is why we should use old textbooks to teach children – they are clearer, free of contemporary corporate-government propaganda, explicit about pronouncing judgements on moral matters, and elevate the student intellectually as well. In general, we ought to introduce children to a high level of textual complexity, and guide them through it, rather than design silly dumbed-down material for children.

As soon as his son is born, the father should form the highest expectations of him. He will then be more careful about him from the start. There is no foundation for the complaint that only a small minority of human beings have been given the power to understand what is taught them, the majority being so slow-witted that they waste time and labour. On the contrary, you will find the greater number quick to reason and prompt to learn. This is natural to man: as birds are born for flying, horses for speed, beasts of prey for ferocity, so we are for mental activity and resourcefulness. This is why the soul is believed to have its origin in heaven...

The extremely undesirable “humanity,” as it is now called, which consists of mutual praise without any regard to quality, is unseemly, reeks of the theatre, and is quite alien to properly disciplined schools; it is also a very dangerous enemy of study, because, if there is praise on hand for every effusion, care and effort appear superfluous.

Institutes of Oratory, Quintillin, circa AD 100

It should be noted that good viriculture is not trying to push a child to be “prodigy,” but rather helping them to become the “best” person possible in the eyes of the world. To repeat the quote of Homer with which Hippolochus famously advised his son:

Ever to be best and stand far above all others.

Viriculture Prescription #60: Physical education is at least as important as academics

So much has been said and written, of late years, in New England, upon the moral and intellectual training of children, that we sometimes almost forget that they have *bodies* as well as souls. Now, I wish you for a while to dwell upon the fact that your child is an *animal*; less richly endowed, too, with the animal senses than many of the brutes beneath him. On this account, as well as for other more weighty reasons, he needs to receive an education *as an animal*.

Uncle Jerry's letters to young mothers, Porter, 1854

Just as high standards must be enforced for academics, so should they be applied to the physical education (above and beyond the practice of “non-educational viriculture” outlined in the previous chapter). This includes team and solo sports, martial arts, and strength training.

'Tis not a soul, 'tis not a body that we are training up, but a man, and we ought not to divide him.

Essays, Montaigne, 1580

In order to spare the child boredom and repetitive stress injuries, these mandatory physical exercises should be kept at high intensity and short duration, taking advantage of antifragility of our physical natures. Outside of physical training *per se*, the child should be free to move and play in accordance with his nature.

The city-bred girl of today is so carefully shielded from the undesirable features of her surroundings that she is brought up much as a hot-house plant. The conditions of her life and the mental and social development necessitated by the conventions of society, in which she is being educated to take her place, are such that a natural physical development is impossible, and from an early period of her life her hereditary tendency to an unstable nervous organization is constantly being increased by her education. The conditions under which she lives are such that the outdoor freedom necessary for her proper development is impossible.

The Effects of Overcivilization on Maternity, Newell, 1908

Viriculture Prescription #61: Gender Specific Education

Are you a man or a woman? —A man.— Very well then, adorn a man, not a woman.

Epictetus, circa AD 100

Our ultimate end is to develop a baby into as ideal an adult *man* or *woman* as possible. We must therefore recognize that the characteristics of an ideal man differ from those of an ideal woman.

In what they have in common, they are equal. Where they differ, they are not comparable. A perfect woman and a perfect man ought not to resemble each other in mind any more than in looks, and perfection is not susceptible of more or less. In the union of the sexes each contributes equally to the common aim, but not in the same way. From this diversity arises the first assignable difference in the moral relations of the two sexes.

Emile, Rousseau, 1762

This is easy enough to see when we consider what is it that men and women look for in their ideal mates – the lists are not the same. Traditional wisdom has long recognized the existence and importance of gender differences.

I have said *he* here, because the principal aim of my discourse is, how a young gentleman should be brought up from his infancy, which in all things will not so perfectly suit the education of *daughters*; though where the difference of sex requires different treatment, 'twill be no hard matter to distinguish.

Some Thoughts Concerning Education, Locke, 1693

The goal of viriculture is of course the same for both genders – the maximization of human excellence. However, the means by which this is accomplished will tend to differ in predictable ways on the basis of gender. This might seem controversial or offensive to a contemporary reader, but this has been accepted traditionally by nearly all human societies, and is not without thoughtful rationalization.

To cultivate the masculine virtues in women and to neglect their own is evidently to do them an injury. Women are too clear-sighted to be thus deceived; when they try to usurp our privileges they do not abandon their own; with this result: they are unable to make use of two incompatible things, so they fall below their own level as women, instead of rising to the level of men. If you are a sensible mother you will take my advice. Do not try to make your daughter a good man in defiance of nature. Make her a good woman, and be sure it will be better both for her and us.

Emile, Rousseau, 1762

Education ought to be tailored to gender, in order to maximize human value in the adult. But there are of course certain human traits are of equal merit for both sexes. Non gender-specific traits of an ideal person include physical attractiveness, loyalty, non-evilness, honesty, non-foolishness, polyglottism, and musical skill.

Gender specific traits of an ideal man include bravery (bravery/courage is probably the primary traditional male virtue)...

He gave you honour as the chief ruler over us, but valour, which is the highest both right and might he did not give you.

Iliad, Homer / Butler, circa 800 BC

... social dominance, stoicism, romantic aggression, size, strength, and athleticism.

Gender specific traits of an ideal woman include chastity (chastity is probably the primary traditional female virtue), gentleness, empathy, domesticity, kindness, grace, and lovability.

Since not is she inferior, either as to body, nor form, nor indeed mind, nor in anything as to her accomplishments.

Iliad, Homer, circa 800 BC

The ancient commentators have observed that all the areté of a woman is here described in one line.

Paideia: The Ideals of Greek Culture, Jaeger, 1944

Ideal gender specific traits read like a caricature of that gender, but this is in no way a detriment. I obviously do not believe that women are incapable of embodying the traits society values in men. With literature mirroring reality, women have been portrayed in masculine roles since the inception of the Western canon — Homer's Athena, Vergil's Camilla, and Spencer's Britomart being classic examples:

“Vain hunter, didst thou think thro' woods to chase

The savage herd, a vile and trembling race?

Here cease thy vaunts, and own my victory:

A woman warrior was too strong for thee.

Yet, if the ghosts demand the conqu'ror's name,

Confessing great Camilla, save thy shame.”

Aeneid, Virgil / Dryden, 19 BC

His holy blood shed by a virgin's hand.

Jerusalem Delivered, Tasso, 1581

Even Plato's Republic sets for women the same opportunities for political power as men:

Socrates, you are a sculptor and you have made the men who rule our republic perfect in beauty.

Yes, Glaucon, and also the women who rule, because what we have been saying applied both to the men and women who have such natural qualities.

Republic, Plato, circa 380 BC

Notwithstanding the reality of the occasional non-standard gender role, our own children will generally be better served by catering to the cultural and biological sex role expectations. Remember that eventually your children will have to live as adults in a world where these traits are valued according to gender. If you prefer to raise a son to be domestic, gentle, chaste, and

empathetic *at the expense of masculine traits*, he will suffer in his adulthood at hands of societal expectations.

It could be argued that we ought to instill in both our sons and daughters the ideal traits of *both* sexes. But this would create more confusion than it is worth. For example, bravery and domesticity are somewhat incompatible, as are chasity and romantic aggression. It should be apparent that, for deep seated biological reasons, romantic aggression leads to very different (and practically consequential) ends for men and women. In the United States today both men and women are legal equals, and are both allowed to do whatever they want. But ignoring human preferences to educate your daughter as a man does her no favors.

The education and family culture should reinforce the development of ideal gender based traits. We should not shy away from distinct curricula for sons and daughters – their needs in adulthood are different.

The woman should have ample educational advantages; but... after a certain point, the training of the two must normally be different because the duties of the two are normally different. This does not mean inequality of function, but it does mean that normally there must be dissimilarity of function.

Theodore Roosevelt, 1905

For example it is important that boys be trained how to invite women on dates, but this is unimportant for girls. On the other hand, it is urgent that girls be trained how to decline romantic advances, but this is unimportant for boys.

If we consider the actual opinion of real women describing their ideal Prince Charming, we find that only viticulture can consistently raise children to this level of excellence. Remember, this excellence is what most mates honestly desire, even if she doesn't admit it. Below is a post from reddit.com:

These men are over six feet tall, dark, drop-dead gorgeous, endowed with broad foreheads, possess chiseled jawlines, rock six packs, make over \$1,000,000 annually, are friends with socialites, are physically strong enough to push you down with one hand, are tender enough to warmly embrace you when your emotions get the better of you, have eyes for you and you alone, never cheat, possibly have slept with other women but committed only to you, masters of the culinary arts, can fix the car, do the dishes, do not put up with your whining yet genuinely listen to you when you are in a time of crisis, value you not for your body but for your intelligence, charisma, and personality all while being amazing in bed.

These men have Ivy League degrees, work in a prominent STEM field and are CEOs. Naturally, they are knowledgeable enough to explain Einstein's theory of General Relativity to you in a simple, easy to understand manner, yet they are also connoisseurs of the arts. As they walk you through art galleries, they distinguish Rembrandt from Degas. Donned in three-piece tailored suits, at home in their mansions, they play Bach's Cello Suites perfectly. While you sip their champagne from their wine collection, they proceed to play Mozart's Piano Concerto No. 21 in C major on their ornate grand piano.

These men sweep you off your feet and leave you breathless when they waltz with you in the ballroom, and excite you when they rock-out at the disco. They have a library full

of classics and a dedicated theater room. They live in area with sprawling gardens and nature, yet are only an hour away from a major city.

These men are willing to kill if it means protecting you. Their bodies are toned and rugged, capable of besting any man, woman, or any other being that gets in his way; however, he is skilled a diplomat capable of eloquently resolving conflicts without resorting to violence.

In the eyes of an honest woman then, the optimal man is:

1. Beautiful, face and body
2. Physically dominant, and capable to win fights with men (Brave, large, strong, athletic)
3. Socially competent, charismatic, and charming (social dominance, romantic aggression)
4. Ivy League graduate
5. Rich, owning luxurious property with manicured grounds near a city
6. Excellent at piano as well as another stringed instrument
7. Excellent at ballroom dance, as well as another type
8. Well versed in literary classics, visual arts, science, and film
9. Knowledgeable about food and wine
10. Stylish, wears tailored suits
11. Sexually skilled and generous
12. Emotionally stable (stoic)

The corresponding traits of the optimal woman are:

1. Naturally beautiful, face and body
2. Young and fertile
3. Kind and nurturing (kindness, gentleness, empathy)
4. Happy to cook clean, and manage a household (domesticity)
5. Socially competent, charismatic, and charming – but modest (grace, chastity, lovable)
6. Happy to provide wholesome entertainment for her family (domesticity, lovable)
7. A chaste virgin, sexually skilled and generous (chastity)

These lists come close to reality, and of course the details don't matter too much. Since it is very possible to grow children who have these traits, I see no reason parents shouldn't try, especially if there is no pain involved for the child.

In many ways, the curricula for boys and girls are similar. However, there are certain traits and skills which are generally considered more valuable in one gender than the others. Catering our education to gender helps our children take advantage of these social biases rooted in culture and biology.

Nothing is more revolting than a woman who catches the tone and expressions of men.

Ladies Book of Etiquette and Manuel of Politeness, Hartley, 1872

One final note: Plato in his Republic defends identical training for men and women. While, of course, his argument is sound, it is in the context of a 100% perfect and honest selection process that identifies capability or suitability for someone to perform a profession, regardless of gender. This is the opposite of the case today, when great efforts are made to ensure equal outcomes for the genders in many professions, irrespective of suitability. Furthermore, Plato's ideal education for his guardians is a system of training in the arts and gymnastic, similar to what viriculture recommends for all boys and girls.

Viriculture Prescription #62: Aim to make the child into a Lady or Gentleman in the ancient sense

Physical degeneration is easy to illustrate. We can simply place side-by-side a primitive and modern skull and, and point out the ways in which the bones of the modern are degenerate, stunted versions of the human genetic potential. The modern cheekbones are sunken, the teeth crooked and impacted, the nasal septum is deviated, the palate is valuted, the mandible is grossly deficient.

Cultural degeneration is different. While we have degraded in culture at least as much (indeed much more) than physically, we lack an object with which we can contrast the cultural excellence of an adult of today. Such paragons of human excellence abound in literature and art, however, to the average modern the gravity of our massive cultural degeneration is unknown. However, unlike the physical degeneration, in which each piece of evidence and study is a rare gift (and which humanity has had a very weak *understanding* of, however effectively the societies developed their bodies), we have a massive wealth of evidence to compare the cultural level of an individual man of today with a man of the past. Indeed we have more than that, as we have extant the very *lesson plans* for how to develop such culture in children.

When the most recent iteration of Western civilization was still intact, the standard of refined civility was embodied in the Lady or Gentleman. The problem is that this standard is generally not paid much mind too, or at least not considered in a direct comparison with ourselves. Once such a comparison is made, it becomes clear, as it was the the Imperial Romans, and the Europeans just prior to the Renaissance, that the pinnacle of human culture lies not in the present but in the past. Compared to that pinnacle, the average American or European of today is a shameful subhuman.

Indeed, the valid reference point in our cultural comparison of our own children should be the *Lady* or *Gentleman* in their fullest sense. Our English words only approximate the concept I am expressing, as the Greeks, Romans, Italians, French, Germans, Spanish etc all had their equivalent. The point is that the true Lady represented an undeniable degree of cultural refinement that would be consistent with what we have been calling "excellence." Entire social classes had the good sense to adorn their children with such culture, and when the training went right, the results were excellent men and women.

Today "Ladies and Gentlemen" are used as euphemism for "human males and females," adorning even the most disgusting public bathrooms. Our concept of the gentry has been poisoned by our post-French Revolutionary democratic disdain for classism and social hierarchies. But social

hierarchies were not formed arbitrarily, nor were they, in the past, simply a matter of how much money one had. A key realization is that, in terms of viriculture, human excellence, and anxiety free status, the ladies and gentlemen of the past were simply much better than us. Their leisure pursuits, whether in sport, art, or scholarship, are exactly the variety that effortlessly connote status, even without resorting to tasteless conspicuous consumption.

Commixing the Graces with the Muses in the sweetest harmony

Plutarch

Even the etiquette and moral virtues of the ladies and gentlemen functioned in this way, and have the dual advantage of being both honorific and smoothing the many inevitable bumps in normal social relations.

People who ridicule etiquette as a mass of trivial and arbitrary conventions, “extremely troublesome to those who practise them and insupportable to everybody else,” seem to forget the long, slow progress of social intercourse in the upward climb of man from the primeval state. Conventions were established from the first to regulate the rights of the individual and the tribe.

Etiquette, Emily Post, 1922

While antique guides for training ladies and gentlemen are still excellent resources for many aspects of viriculture, they fail to correctly protect children from physical degeneration. Many ladies and gentlemen of Europe between 1500 and 1900 were already physically deformed in our modern way – and this is clearly evident from art and literature. While the situation has gotten worse since then, we cannot rely on the practices of refined aristocrats of the past to produce corporeally excellent children.

Viriculture Prescription #63: Develop Acquirements, Accomplishments, and Connoisseurship

He becomes a connoisseur in creditable viands of various degrees of merit, in manly beverages and trinkets, in seemly apparel and architecture, in weapons, games, dancers, and the narcotics. This cultivation of aesthetic faculty requires time and application, and the demands made upon the gentleman in this direction therefore tend to change his life of leisure into a more or less arduous application to the business of learning how to live a life of ostensible leisure in a becoming way.

The Theory of the Leisure Class, Veblen, 1899

Connoisseurship is complex, and involves the domains of non-productive human endeavor. An excellent adult would be well versed in these pursuits. A broad knowledge of art history, including architecture, music, dance, and literature. Knowledge of refined food, wine, games, and martial arts are also ornaments of social value. Connoisseurship certainly overlaps with general erudition, considering the interrelation of literature, history, art, music, opera, and non-productive cultural activities generally.

In the present age, when education is within the reach of all, both rich and poor, every lady will endeavor to become, not only well educated, but accomplished. It is not, as

some will assert, a waste of time or money. Not only the fingers, voice, and figure are improved, but the heart and intellect will become refined, and the happiness greatly increased... A lady without her piano, or her pencil, her library of French, German, or Italian authors, her fancy work and tasteful embroideries, is now rarely met with, and it is right that such arts should be universal. No woman is fitted for society until she dances well; for home, unless she is perfect mistress of needlework ; for her own enjoyment, unless she has at least one accomplishment to occupy thoughts and fingers in her hours of leisure.

Ladies Book of Etiquette and Manuel of Politeness, Hartley, 1872

Do you play and sing, Miss Bennet?"

"A little."

"Oh! then — some time or other we shall be happy to hear you. Our instrument is a capital one, probably superior to — You shall try it some day. Do your sisters play and sing?"

"One of them does."

"Why did not you all learn? You ought all to have learned. The Miss Webbs all play, and their father has not so good an income as your's. Do you draw?"

"No, not at all."

"What, none of you?"

"Not one."

"That is very strange."

Pride and Prejudice, Austen, 1813

In educating the aesthetic senses of children, it is important to exposure their malleable minds to beauty whenever possible. Decoration of the designated educational area with the great paintings of historical and mythological events at once edifies, instructs, and ennobles a child's tender mind. Provide frequent exposure to nature and hand crafted objects. We Americans buy tons of mass produced junk, and then throw it away a few years later. Fewer, quality objects in a home seems more tasteful. A practical heuristic from Taleb – avoid "smooth" modern synthetic objects at home.

You harm yourself aesthetically by having smooth surfaces

Taleb

The use of nature, and even the use of semi natural beauty such as gardens and beautiful architecture should be used to imbue the young mind with physical beauty.

May you not learn of him in the same way that you learned the arts of the grammarian, musician, or trainer, not with the view of making any of them a profession, but only as a part of education, and because a private gentleman and freeman ought to know them?

Protagoras, Plato, circa 380 BC

Viriculture Prescription #64: Do not trust children to broadly strategize their own education...

Young children cannot possibly know which skills, abilities, and traits are seen by adults as valuable. While we ought to respect the interests of a child, there is much about curriculum design that parents are better able to understand. An essential aspect of viriculture is providing the guidance to instill human value in our children while they are young. Letting children choose all their own activities might seem kind, but it is not assured to allow a child to reach her potential as an adult.

As it is, we try to make amends for the negligence of the boy's paedagogus, not by forcing him to do what is right, but by punishing him for not doing what is right.

Institutes of Oratory, Quintillan, circa AD 100

Viriculture Prescription #64a: ...but provide children freedom to direct the details of their education.

The thoughts of the whole people rose higher with freedom, just as a noble branch rises from a sound stock. As the mind of a man accustomed to reflection is usually more elevated in the broad fields, on the public highway, and on the summit of an edifice, than in an ordinary chamber, or in a confined space, so, also, the manner of thinking among the free Greeks must have been very different from that of nations living under more arbitrary forms of government.

History of Ancient Art, Winckelmann, 1764

As discussed above, it is crucial to design into a curriculum flexibility and freedom for a child to pursue his own interests. Additionally, abundant unscheduled free and leisure time make the education much more humane and aesthetic.

Respect the child. Be not too much his parent. Trespass not on his solitude.

Emerson

Viriculture Prescription #65: Aggressively restrict family exposure to TV, Movies, radio, computer games, newspapers, magazines, and advertisements generally.

Mass media is a tool of behavioral modification, by which the government/corporate interests push our very thoughts in the "right" direction. This form of mind control has taken over all TV, and most radio, movies, newspaper, magazines, and even video games. It functions the same way as subtle advertising, often below the level of our consciousness – but rest assured these forces have an effect. TV is not harmless entertainment, but rather useful as a way of controlling and indoctrinating the masses (ourselves included). This has always been true, and today's producers have 100 years of experience in refining mass media propaganda (today given the euphemism "public relations"). This propaganda was much less intense in TV and movies before the 1960s, making this era of media more benign.

Children, and indeed even adults spend many hours each day exposed to such brainwashing; leisure time which was traditionally spent in family dinner and various constructive leisure activities – singing, dancing, reading, audiobooks, conversation, needlework, painting, listening to loud, high fidelity recordings of opera, etc. Replacement of this traditional culture has robbed us of valuable family time, valuable educational hours, and pressed unto us a maniacal consumerist imperative.

Therefore, we ought to keep TV, movies, radio, and computers away from children – and indeed adults as well. These “entertainments” waste time (and worse), but do not confere an emblem of conspicuous leisure. This time could be spent in equally enjoyable passtimes, but ones which are socially valuable in adulthood.

We have to do it all for the children, and meanwhile, nobody gives a shit about how they raise their kids. People put minimal effort into it. They have their kids—they’re like consumers of their kids. Like, they want to call customer service: “Why does he play video games all day? I don’t understand why he plays...”– Maybe ’cause you *bought him a fucking video game*, you idiot. Throw it away! Who told you that was a good idea? A developing mind– [loud grunting] Fucking idiots! My kids don’t even watch television. And when I tell most other parents that, you know what they say? They say, they go, “Aw, fuck you!” Why? “Just ’cause, fuck you. Fucking hippie. Weirdo. They’re gonna grow up weirdoes, ’cause they don’t watch just fucking anger and colors screaming in their face.” [screaming] If your kids watch TV, here’s what you should do. Just, if you think that’s a really good idea to have them watch TV, the next time your kid is watching television, just come up behind them when they don’t know you’re there and just turn it off without any warning. Watch what happens. They go: [screaming] Do you think that’s a good sign? Do you think that’s a sign that it’s healthy for them?

((((Louis CK)))

The easiest practical way to reallocate lesiure time away from passive consumption of media is to physically remove the media outlets from the home. After removing TV, radio antennae, computers, and canceling newspaper and magazine subscriptions, abudant time will be free for constructive use. All of the mental energy that children devote to Pokemon, Smash Brothers, and The Simpsons can be applied to the infinitely more virtuous material of refined lesiure pursuits consistent with Western cultural achievement.

There are of course some shows, movies, and video games that are worth introducing to your child. Indeed some such media constitutes works of art, and could even be considered an important aspect of education. In these cases, I would recommend that you identify them ahead of time and acquire the recordings which do not contain advertisements – availible for free at the public library. Make them a reward for accomplishing a related but socially valuable goal. If you really want your child to see *Beauty and the Beast*, make it a reward for her learning to play *Something There* on the piano.

Viriculture Prescription #66: Moral Excellence

I make honorable things pleasant for children.

Plutarch

Was there anything that would better deserve his attention than the education of children, and the training up of the young, not to contrariety and discordance of character, but to the unity of the common model of virtue, to which from their cradle they should have been formed and moulded?

Education of Children, Plutarch, circa AD 100

Philosophically speaking, the moral training of the youth may be the most important aspect of education. For viriculture this is imperative since morality is a fundamental aspect of a virtuous and noble character, and these contribute to human beauty and excellence.

For moral excellence is concerned with pleasures and pains; it is on account of the pleasure that we do bad things, and on account of the pain that we abstain from noble ones. Hence we ought to have been brought up in a particular way from our very youth, as Plato says, so as both to delight in and to be pained by the things that we ought; for this is the right education.

Nicomachean Ethics, Aristotle, circa 340 BC

As Aristotle suggests, moral education is best instilled through a sort of virtuous indoctrination. As he suggests, Plato's Socrates is the moral brainwasher par excellence. While his dialogues are themselves an inexhaustible source of virtue that serves to shape a young mind, so too does Plato, especially in his *Republic* and *Laws*, offer recommendations for the family and state which would serve to mass produce virtuous citizens. Just as propaganda can be used for evil, Plato designs a sort of propaganda for the moral improvement of the soul.

Young souls are malleable, and the modern world is full of degenerate influences. For viriculture, we ought to seek out the most virtuous and ennobling inspiration with which to surround the child. This includes literature, art, music, architecture, and many others. Such virtuous material generally comes from the general phases of a given civilization – just like American media was more virtuous in 1800 than 2000, so too was Roman media more virtuous in 50 BC than AD 150. If we take a full view of history, we find that media that seems tame to us moderns was shockingly offensive at the time – and that the censors of the past were actually right in their moral pronouncements.

If we consider performance art, we see a clear degeneration in morality from Aeschylus (circa 470 BC) to Aristophanes (circa 400 BC). Post Renaissance we find the same trend in opera, with major works from 1600-1770 typically concerning themselves with edifying classical material. Mozart (circa 1780) pushed boundaries with overt sexual themes in his operas, despite the fact that they do not really endorse such behavior – and in the movie *Amadeus* the censors rebuke him saying “Do you really think that subject is quite appropriate for a national theatre?” By the Romantic era, opera had moved far beyond chaste women being captured, with *La Traviata* (1853) and *Carmen* (1875) both featuring prostitutes in lead roles. Indeed “Romantic” era material from any civilization, no matter how excellent or enjoyable, tends to occupy a low moral plane – excepting the satirists and philosophers who decry the degeneracy of the age. Since then, music continues to spiral downward, with Elvis and the following rock and roll revolution eventually culminating in the cultural void of modern hip hop and pop.

Plato again proves his divine wisdom in his scheme to instill bravery and piety into his citizens by controlling their musical exposure.

As we banished strains of lamentation, so we may now banish the mixed Lydian harmonies, which are the harmonies of lamentation; and as our citizens are to be temperate, we may also banish convivial harmonies, such as the Ionian and pure Lydian. Two remain—the Dorian and Phrygian, the first for war, the second for peace; the one expressive of courage, the other of obedience or instruction or religious feeling. And as we reject varieties of harmony, we shall also reject the many-stringed, variously-shaped instruments which give utterance to them, and in particular the flute, which is more complex than any of them. The lyre and the harp may be permitted in the town, and the Pan's-pipe in the fields. Thus we have made a purgation of music, and will now make a purgation of metres. These should be like the harmonies, simple and suitable to the occasion. There are four notes of the tetrachord, and there are three ratios of metre, $3/2$, $2/2$, $2/1$, which have all their characteristics, and the feet have different characteristics as well as the rhythms...

Then to sum up: This is the point to which, above all, the attention of our rulers should be directed,—that music and gymnastic be preserved in their original form, and no innovation made. They must do their utmost to maintain them intact. And when any one says that mankind most regard 'The newest song which the singers have,' they will be afraid that he may be praising, not new songs, but a new kind of song; and this ought not to be praised, or conceived to be the meaning of the poet; for any musical innovation is full of danger to the whole State, and ought to be prohibited. So Damon tells me, and I can quite believe him;—he says that when modes of music change, the fundamental laws of the State always change with them.

Republic, Plato, circa 380 BC

Music is only one aspect of a moral education, but it is a powerful one. The details of a moral curriculum are explored further in coming sections. It should be remembered that children learn a tremendous amount by osmosis, and this is especially true in the case of virtue. Surround the child from birth with edifying influences, and appropriate praise and encouragement will develop a virtuous soul.

Viriculture Prescription #67: Ability Development From Age Zero...

The phrase Ability Development From Age Zero comes from the title of a book by Suzuki, the originator of the popular "Suzuki method" used to achieve precocious skill in instrumental music. The principle, however, is found in the education recommendations of Quintillian, Montaigne, Locke, Rousseau – and likely any great and comprehensive education curriculum. All begin before the child is born, as they each understood the benefits of making use of the early years of life for educational ends. As we shall see, the earliest years of life are optimal for the acquirement of foreign languages and musical ability, although these years are too often wasted with the child in front of Disney Junior TV brainwashing.

Viriculture Prescription #67a : ...but formal schooling begins too early.

While the early years of a child's life must be harnessed for optimal education, early *schooling* of children is counterproductive. Educational drudgery occurs too early today, and takes children away from the emotional comfort and safety of a family environment, where spontaneous learning would be most natural.

Viriculture Prescription #68: Make Life Easy and Enjoyable for the Child

After more than 30 years of research on the negative effects of stress on the brain, it is now time to turn our attention to the potential positive impact of early interventions on brain development. These results could help us to develop social policies that treat the problem of early-life stress at its root — that is, in the family home.

Effects of stress throughout the lifespan on the brain, behavior and cognition, Lupien, 2009

In all cases, the education should be child-centric. Conditions that no adult would tolerate (school lunch, asking for bathroom breaks, uncomfortable chairs, heavy backpacks) are mercilessly imposed on children. In contrast, everything possible should be done to free the child from impediments of comfort, as discomfort will only generally impair learning (unless the lesson is how to cope with discomfort). This does not imply a luxurious pampering of the pupil, but rather it allows young mind to focus on the relevant material without his being distracted by local irritations.

Viriculture Prescription #69: Physical Comfort

School over-pressure in certain respects checks, even in well-developed minds, the transition from the terror of the unknown of childhood into the calm of maturity. Morbid fears, imperative conceptions, and imperative acts which torture the individual during an otherwise healthy career unquestionably originate in the early periods of life.

Degeneracy: Its Causes, Signs, and Results, Talbot, 1898

Do not make the child uncomfortable in their learning environment. Pain, itching, hunger, thirst, discomfort, need to use the bathroom, etc. are common distractions during the school day, and accumulate into psychological damage.

The position of the child warrants special attention. In general sitting in a chair is to be discouraged, as it is a modern invention and an independent risk factor for mortality. An exception can be made for the “traditional” style of sitting described by Gokhale, and discussed in chapter 10. Standing, pacing, squatting, laying down, sitting properly on the floor are all satisfactory positions in which to learn. The natural tendency for us to shift and move during the day should not be repressed. If it is uncomfortable for us as adults to sit for hours, it must be even more so for a child.

Viriculture Prescription #70: No Chores

An important aspect of educational viriculture is the development to those traits and skills that have been refined by the hereditary leisure class to be effective honest signals of conspicuous free time.

These traits and skills are emblems of long periods free of the need for drudgery and industrious work, during which time can be “wasted” on these non-productive tasks. This is of course not a waste in the quest for social status or human excellence, however, as these are the very traits that communicate status.

Modern middle class child-rearing typically advocates chores for children to instill a “good work ethic” and for the parents to get some house/yard-work done for free. But, while the value of deliberate application of work to some educational end is an important skill to teach children, engagement in drudgery and chores is not. The “free” housework chores provide for a family is not free, it comes at the cost of leisure time for the child. This leisure time is the very substance from which the honest signals of high status are ultimately formed. There is therefore a trade off between the productive work a child can do, and his ultimate eventual human excellence.

In the quest for viriculture, the parents ought to make an effort to shoulder the drudgery necessary for the smooth functioning of a household – so as to free the children from all need for “productive” work. By freeing the children from the need to do this work, parents can provide the child the free time necessary to consolidate those refined skills and traits that the world interprets as marks of a high status individual.

As discussed above, school represents a special case of drudgery. As a society we pay for 18 years of leisure time *for every child*. This is a tremendous amount of time-wealth, and sadly it is nearly all squandered. School is an almost insurmountable impediment to the transformation of this leisure time into honest signals of high status. School is therefore even worse than chores, as it is not only drudgery that interferes with leisure time, but it is not even productive work from which the household benefits! School takes from our children of the precious leisure time that our wealthy society has afforded them, but does not provide an adequate pay off in return. Even college admissions officers care less about the drudgery pursued during public schooling than they do about those aristocratic “extracurriculars,” such as sportsmanship, artistic pursuits, creative capacity, religious involvement, wit, etiquette, and other classic emblems of conspicuous leisure.

Viriculture Prescription #71: No Alarm Clocks

In chapter 13, we explored the relationship between sleep and growth in children. It is a cruel irony that the time in our life where we are required to wake up earliest is when we are growing most rapidly.

/u/ Tutule 91 points – In Honduras, in my school, we started at 6.55 and had a 15 minute “D.E.A.R. period” (Drop Everything And Read) where you could read anything you wanted, so school officially starts at 7.10 but you have to be there at 6.55. Some of my classmates were from neighboring cities and had to take a 25-30 minute bus ride so they were waking up around 5. As you’d expect people slept during DEAR and some of their classes.

reddit.com

This convention exists simply to get children out of the house before parents have to work. Do not follow this convention. Abandoning the alarm clocks and imposing an early bedtime on children should be enough to get the 10 of so hours of sleep per day optimal for children to grow.

Viriculture Prescription #72: Outdoor Education

Whenever possible, lessons should be conducted outside. These increases the exposure to dirt, pollen, and natural yeasts and bacteria in the air, all of which decrease the risk of asthma, allergies, and ectopy. Sun exposure in made more regular, increasing vitamin D levels, and subjective well being. The outdoor classroom lends itself better to humane patterns of movement in the child, and decreases the length of focus of the eyes. Furthermore, nature has an aesthetic benefit on the mind which almost no modern indoor environments can match. It is said that Aristotle and the peripatetics walked and wandered during their lectures or dialectics, and this seems like an admirable practice for children to emulate. If one does not have adequate private land, public parks would serve the purpose well, and be quite empty during the school hours.

Viriculture Prescription #73: No Bells

Bells are a tool of the behavioral psychologists working with pigeons and salivating dogs, and are more suitable for a prison than improving our young people. Bells divide the lessons into arbitrary time slots, completely unlike the exahustive pursuit of a single ideas at length required for comprehensive assimilation of new material.

Viriculture Prescription #51: Avoid exposing young eyes to anything closer than 6 feet whenever possible. Use projectors, distant screens, wireless keyboards and mouses, easels, etc. as aids to acheive this goal. Delay reading and wiriting on paper until after age 6, and keep it to a minium amount per day, with frequent breaks to look at distant objects. When doing close work, the brighter the light the better, with outdoor bright daylight being best.

We must remember the damage that it done to our vision if we introduce close work at too early of an age. In the previous chapter, we saw the rise in myopia as a result of early close work. I recommend that any reading or writing that must be done for the first 6 years take place at a distance, using an easel or projector. Furthermore, I would not be concerned about teaching a child to read as early as possible – reading out loud or audiobooks are more than adequate for the first few years. Wait until the eyes will be less damaged from reading to begin close work.

Viriculture Prescription #74: Audiobooks

As just mentioned, udiobooks are just as educational as text, and will not damage the eyes. Audiobooks have the added benefit of enriching the education with an animation, and impart the pupil with an appreciation for use of cadence and tone in his own expression.

They considered that the only genuine forces which could form the soul were words and sounds, and – so far as they work though words or sounds or both – rhythm and harmony; for the decisive factor in all paideia is active energy, which is even more important in the culture of the mind that in the *agon* which exercises physical strength and agility.

While audiobooks enliven prose, the audio format should be considered mandatory for reading poetry and plays. Even the great dramas of Homer and Shakespeare, an appreciation of which has for centuries been considered mandatory for a proper education, will seem to a child sterile in print alone. Luckily, within our lifetime all of the Western canon has been professionally recorded, very often in excellent quality, and is available free at any public library. The potential value of audiobooks in education is tremendous, and has yet to be realized, and they alone could constitute a decent wholesale replacement for modern schooling with superior results at one-thousandth the cost.

Viriculture Prescription #75: Repetition and Memorization

Practice is the key to skill development, and repetition and memorization, if done judiciously, enhance retention. If time permits, have children go through especially notable literature at least twice, at different ages, to ensure that they take the relevant lessons to heart. Bedtimes stories and early writing exercises are an excellent way to instill such lessons – indeed the Spencerian Script lessonbooks already make use of this feature.

I would urge that the lines, which he is set to copy, should not express thoughts of no significance, but convey some sound moral lesson. He will remember such aphorisms even when he is an old man, and the impression made upon his unformed mind will contribute to the formation of his character. He may also be entertained by learning the sayings of famous men and above all selections from the poets, poetry being more attractive to children.

Institutes of Oratory, Quintilian, circa AD 100

And, as it seems to me, Plato, that remarkable man, quite properly advises nurses, even in telling stories to children, not to choose at random, lest haply their minds be filled at the outset with foolishness and corruption. Phocylides, too, the poet, appears to give admirable advice in saying:

Should teach while still a child

The tale of noble deeds

Education of Children, Plutarch, circa AD 100

Viriculture Prescription #76: No Homework

Homework is to be avoided. It is unnecessary and generally a painful distraction from family life or personal free time. Most homework exists because school is an inadequate waste of time, or to prolong the hours of school indoctrination propaganda into the evening. Homework trains us to be boring automatons that perform busywork to appease the arbitrary will of another. The pressure to do homework creates an inhumane chronic stressor, which we ought not to force upon our children.

The decisive dynamics which make forced schooling poisonous to healthy human development aren't hard to spot. Work in classrooms isn't significant work; it fails to satisfy real needs pressing on the individual; it doesn't answer real questions experience

raises in the young mind; it doesn't contribute to solving any problem encountered in actual life. The net effect of making all schoolwork external to individual longings, experiences, questions, and problems is to render the victim listless. This phenomenon has been well-understood at least since the time of the British enclosure movement which forced small farmers off their land into factory work. Growth and mastery come only to those who vigorously self-direct. Initiating, creating, doing, reflecting, freely associating, enjoying privacy—these are precisely what the structures of schooling are set up to prevent, on one pretext or another.

The Underground History of American Education, Gatto, 2000

Lastly, homework eats up valuable time that could be spent refining skills which are attractive in adulthood, for example, classical piano or guitar, refined cooking, oil painting, art connoisseurship, business ventures, socializing, etc.

Viriculture Prescription #77: No Grades

Just like homework, grades are simply a distraction from true learning and skill development. Even in cases where grades are an accurate assessment (a truly standardized test for example), they do not measure a valid endpoint. Multiple choice questions do not prepare children for a good life, and the kids with the best grades in school are rarely the best people.

Viriculture Prescription #78: No Backpacks

As it was not considered correct for the son of an Athenian citizen to carry his school utensils himself, it was the duty of the paidagogos who accompanied him, to carry his books or his cithara, his strigil, or even his ball.

Home Life of Ancient Greeks, Zimmern, 1914

Even the most enthusiastic advocates of weight training hesitate to recommend it to young children. And while weight bearing exercise should be considered an indispensable aspect of viriculture, backpacks, as children generally use them, constitute more of a repetitive stress injury than an exercise. Excessive loads ought not to be distributed arbitrarily on the spines of growing children. Evidence is mounting that heavy backpacks are a risk factor for chronic back pain, but really there is no good reason to have them at all.

Viriculture Prescription #79: Intellectual Osmosis

The passive effect by which being surrounded by a bookcase containing the Western Canon (and only those books) a tuned piano and guitar, foreign language, proper pronunciation, etc. will be a successful education in itself. In accumulating the bookcase which I intended for my children's education, I found my own choice of reading, accidentally through its passive influence deeply affected. If affordable (and it really isn't that expensive), dedicated physical space housing a real physical library of the ~150 volumes ought to be maintained.

Viriculture Prescription #80: Exploit “Open Education” resources

With the introduction of streaming online video, the great centers of learning have released the lectures of their best professors, along with the syllabi, study material, and tests. It is therefore clear that the cost of college education has little to do with learning. These resources are available in all subjects, and make a wonderful adjunct for subjects in which a qualified instructor is lacking. If the child has the adequate guidance or self control, no subject is not available for his improvement essentially free of charge.

Of course the original center of learning has always been the library, and our modern public libraries could provide a complete education of books, audiobooks, operas, classical music, and movies free of charge.

Somehow American public libraries have gotten away with purchasing three copies of each season of the *Friends* DVDs. Perhaps 99% of the material at a public library is degenerate trash, but generally the classics will be found dusty and unused on the shelf as well, and often excellent old opera recordings as well...

Viriculture Prescription #81: Interact with other families

Children have the disadvantage of being stuck with whichever family they are born into. As adults we can choose our friends and companions, but children don't have that luxury. In traditional societies, children were exposed to a far greater number of adults. In our modern isolated nuclear families, children are steeped in the idiosyncrasies of their parents. In order to dilute the worst characteristics of own individual parenting (which will surely be bad in some ways), we ought to frequently expose our children to different families. It may be valuable to send older children away to live with friends or relatives for a few months to vary their life experience.

Viriculture Prescription #82: Forbid drugs, pseudo-drugs, and drug-like activities

Any good education influences the moral development of a child. In viriculture, drugs and drug like activities tend to retard child development physically and mentally, and possibly socially as well. For this reason, these activities, including over the counter drugs (Robitussin, Tylenol), street drugs, alcohol, sugar, pornography, coffee, etc. are to be forbidden. The truth is that these activities simply have no benefit on the child's development. My personal opinion is that eschewing these activities as a young person develops a moral stoicism, and serves as a basis for self control in adulthood. In general, the parents should lead by example in this regard, especially the mothers, as their use of drug and pseudo drugs too often leaves physical stigmata in children.

Viriculture Prescription #83: Not unschooling

Some of the critics of institutional schooling recognize the human instinct to learn, and advocate complete abandonment of classroom education, learning instead from everyday life. While this

child-centric approach has decent outcomes and can be considered superior to public school, it will not *optimize* a child's education. There are some forms of education that are so naturally a part of life that they cannot be separated from day to day existence. One example of this is training for dating. However, a great deal of intellectual and artistic development must take place as a result of listening to people who know better (a pedagogue, poet, author, etc).

Viriculture Prescription #84: Independent funding of your child's education

Whoever writes the checks will make the education suit his desires. Whenever possible, avoid corporate or government money funding your children's education, as strings are attached. The exception is the public library, but even here I would not recommend attending publicly funded "classes" at the library



Educational Viriculture – Part 3: Curriculum

Posted on [admin](#) Posted in [Book](#)

Many of the ideal traits of men and women can be controlled through education. Here I outline a curriculum for educational viriculture, and in the next post provide a detailed example of such a curriculum.

Language

The informal immersion in spoken language is a child's first education. Mothers instinctively speak to the baby, as does everyone else. Before a child can crawl, she is learning to communicate. We have amazing ability to learn language in this way. Babies simply pick it up through frequent exposure.

Above all see that the child's nurse speaks correctly. The ideal, according to Chrysippus, would be that she should be a philosopher: failing that he desired that the best should be chosen, as far as possible. No doubt the most important point is that they should be of good character: but they should speak correctly as well. It is the nurse that the child first hears, and her words that he will first attempt to imitate. And we are by nature most tenacious of childish impressions, just as the flavour first absorbed by vessels when new persists, and the colour imparted by dyes to the primitive whiteness of wool is indelible. Further it is the worst impressions that are most durable. For, while what is good readily deteriorates, you will never turn vice into virtue. Do not therefore allow the boy to become accustomed even in infancy to a style of speech which he will subsequently have to unlearn.

Institutes of Oratory, Quintillin, circa AD 100

Plutarch shares the sentiment:

Now there is another point which should not be omitted, that in choosing the younger slaves, who are to be the servants and companions of young masters, those should be sought out who are, first and foremost, sound in character, who are Greeks as well, and distinct of speech, so that the children may not be contaminated by barbarians and persons of low character, and so take on some of their commonness. The proverb-makers say, and quite to the point, "If you dwell with a lame man, you will learn to limp."

Education of Children, Plutarch, circa AD 100

Of course this ability is not limited to a single language. As far as an infant is concerned, becoming bilingual or multilingual is no great effort. It is simply a matter of the right exposures at the right age. Adults can spend years in tough study trying to accomplish that which young children have effortlessly achieved – mastery of a language.

There is not doubt that Greek and Latin are great and handsome ornaments, but we buy them too dear... The expedient my father hit upon was this, while I was nursing and before the first loosening of my tongue, he put me in the care of a [doctor] wholly ignorant of our language and very well versed in Latin. This man... had me constantly in his hands... It is wonderful how everyone profited from this... As for me... without artificial means, without a book, without grammar or precept, without the whip and without tears, I had learned a Latin quite as pure as what my schoolmaster knew.

Essays, Montaigne, 1580

Because of the difficulty for adults to learn foreign language, these skills are seen as valuable. Certainly without them we can never really appreciate much of great literature (Greek, Latin, Italian, French, German, Spanish, even Portuguese) or opera (Italian, French, German). Furthermore, being multilingual really *is* valuable, practically and socially – as language is a major component of group identity and culture. Indeed the classical languages may even have the

advantage of training us to think better, as the clarity and precision of Greek and Latin are carried in mind generally.

>>[7964536](#)

>not dreaming of raising a child fluent in Latin and /

7yo is probably too late though. After the really easy discipline necessary to commit to such a task.

The advantage of babies to learn language through exposure along is wasted by most American parents. It seems that if the parents are not themselves multilingual, there is little hope that the child will be brought up speaking more than one language. But is it really so difficult to provide multilingual exposure to a child if the parents lack this ability?

Some may think that TV, radio, or audiobooks in foreign languages could be a useful tool. Alas, experiments have found that children simply cannot pick up a foreign language in this way (probably not enough feedback). Their great potential for multiple languages only emerges when they are exposed to real live speaking humans. How much exposure is necessary?

To really learn a foreign language, children must spend 30 percent of their waking time exposed to it, said Christina Bosemark, founder of the Multilingual Children's Association in San Francisco, which guides parent rearing multilingual children. She said children with less contact might understand a language, but their ability to speak it correctly would be hindered. Nonetheless, limited exposure as babies or toddlers could help if children study the language later, she said.

If It's Tuesday, It Must Be Spanish, NYT, Chura, 2008

This is a very difficult question to answer. I suspect that less than 30% of waking time is needed for a baby to learn a language – provided that the shorter time is “intensive” exposure. I suspect that a solid 90 minutes per day of live spoken immersion, if consistent for years, would be sufficient for a baby to adopt a foreign language.

If we were to employ a tutor to teach a child a foreign language from birth, the task would be simple. All it would take is a tutor willing to speak or sing to the baby each day. The tutor's role would not be that of a babysitter, but simply to speak to the young child. The immersion and frequent exposure over years would eventually lead to fluency.

Foreign language education requires commitment on the part of the parents. The eventualities of tutors moving or changing jobs would require fallback plans to maintain immersion. This sort of tutoring may also seem very expensive. 90 minutes a day on most days for an untrained tutor to speak to a baby could cost \$20 an hour for 500 hours a year – or \$10,000 per year per language. But

I believe that this is money well spent. Children are often sent to expensive pre-schools at this age, which provide no ostensible value in their adulthood. Furthermore, this \$10,000 per year does not increase with the number of children being taught (an economies of scale effect). And if you are lucky enough to find a single tutor who can speak multiple languages, you may be able to achieve an economy of scope effect as well. Hiring a single tutor for two or three hours a day to speak two or three languages to a baby would likely lead to fluency after a few years. This would likely not double or triple the cost. I suspect that many multilingual adults would appreciate the easy, flexible, part-time job of speaking to a baby for a couple hours most days – especially if they were paid \$15,000 cash a year.

Another option that may help in babies learn foreign language is making use of a foreign au pair. Au pairs are live-in help who perform child care, light cleaning, cooking, and driving duties in exchange for room, board, and a small stipend. The aggregate cost of an au pair is about \$20,000 per 45 weeks of work. Judicious selection of a multilingual au pairs could lead to fluency for your children.

There is another type of foreign language education that seems valuable for viriculture – reading fluency in Latin and ancient Greek. This sort of fluency cannot be accomplished through early childhood immersion, anyway it would be very hard to find a fluent tutor. Instead, reading classic languages would have to be a part of the academic curriculum after the child's eyes are ready for reading. It would be great to read the classics in their original language, especially the poetry. I would rank reading fluency of Greek and Latin lower in importance than being able to speak modern languages – the social value seems less profound, and we do have translations. But reading the classics in their original language seems like a great gift to bestow upon a child. And don't bother justifying it on the grounds that improves SAT scores!

You know some costly signaling is going on when thousands of teenagers spend three years each learning a long-dead language just so they'll score better on an IQ test that pretends it's not an IQ test, so they can spend four more years and a hundred thousand dollars to get a college degree that pretend it's not an IQ guarantee.

Spent, Miller, 2009

Is it really worth the \$50,000-100,000 total cost (amortized over many years) to train all of your children in a couple foreign languages? This is of course a personal decision. But the cost to achieve multilingualism for all your children is approximately the cost for two years of private university for a *single* child. For many people, multilingual ability may be more valuable than two years of university education. The future ability of the child here seems limited only by parent resources and commitment.

Music

We rely upon speech to do this now, but ever and anon when, in a moment of emotional exaltation, we are deserted by the articulate word we revert to the emotional cry which antedates speech, and find that that cry is universally understood because it is universally felt. More than speech, if its primitive element of emotionality be omitted, more than the primitive language of gesture, music is a natural mode of expression. All

three forms have attained their present stage of development through conventions. Articulate speech has led in the development; gesture once occupied a high plane (in the pantomimic dance of the ancients) but has now retrograded; music, supreme at the outset, then neglected, is but now pushing forward into the place which its nature entitles it to occupy.

How to Listen to Music, Krehbiel, 1897

Another famous cliché – music is heightened speech. After all, what causes such a heightening? Intensified emotions, hunger, impatience, certainly the deepest universals we all share are emotions, affects. We all have the same capacity for passion, fear, anticipation, aggression. We all display the same physiological manifestations of affect. Our eyebrows go up with anticipation, hearts pound with passion, and fear affects us universally with goose flesh. And in the sense that music may express those affective goings-on then it must indeed be a universal language...

The Unanswered Question, ((Bernstein)), 1973

Music is universal and it is powerful. Furthermore, it is well known to be socially useful, therefore ought not to be ignored in viriculture.

To properly understand the place of music in education we must take a look again at evolutionary aesthetics. In the modern world we often forget just how similar our behavior is to that of animals. Many consider “music” a distinctly human endeavor, but this depends on how generously we define the term. Even the most primitive unconnected peoples have sophisticated musical traditions. With the advent of musical notation and complex instruments in the West, the potential for musical creativity became so tremendous that we are today certainly in a lofty class of our own among living things. But it is useful to consider from where our musical culture originated, and what the role of music in the lives of animals can help demonstrate.

Nearly the same emotions, but much weaker and less complex, are probably felt by birds when the male pours forth his full volume of song, in rivalry with other males, for the sake of captivating the female. Love is still the commonest theme of our own songs... The sensations and ideas excited in us by music, or by the cadences of impassioned oratory, appear from their vagueness, yet depth, like mental reversions to the emotions and thoughts of a long-past age. All these facts with respect to music become to a certain extent intelligible if we may assume that musical tones and rhythm were used by the half-human progenitors of man, during the season of courtship, when animals of all kinds are excited by the strongest passions. In this case, from the deeply-laid principle of inherited associations, musical tones would be likely to excite in us, in a vague and indefinite manner, the strong emotions of a long-past age... The impassioned orator, bard, or musician, when with his varied tones and cadences he excites the strongest emotions in his hearers, little suspects that he uses the same means by which, at an extremely remote period, his half-human ancestors aroused each other's ardent passions, during their mutual courtship and rivalry.

The Descent of Man, Darwin, 1871

Birds offer an excellent example of the role of music in animal life. Male birds compete for mates not simply through direct physical competition, but rather, like “civilized” men of today, in a social arena. Some combat is in terms of beautiful plumage, some in terms of ability to provide a safe and comfortable nest for the female. But male songbirds compete musically, performing their melodies to the best of their ability, while female listeners judge their efforts. Female preference for, long, physically demanding, and technically precise performances leads to sexual selection, and greater mating success for males with better musical ability.

While the range of social and intellectual accomplishments that women have to judge men on is certainly far broader than in birds, musical ability is in both an important criterion. Consider how many otherwise unattractive men have managed to successfully woo women on the merit of their musical talents. Poor, dirty and ugly street musicians captivate the romantic interests of many female pedestrians, provided they are perceived as skilled.

Given that the voice is the most readily available instrument to men, humans have naturally, since the beginnings of language, overlaid another intellectual dimension on the musical backdrop. We have a range therefore:

Linguistic – Musical Continuum of Song

Linguistic Oration – Epic Poem – Lyric Poem – Ballad – Opera – Symphony **Musical**

We can recognize that the most romantic genres of song tend to be those that are both musically and linguistically sophisticated, such as ballads and opera. This is likely because, by including both technically precise music and thoughtful lyrics they have the highest density of sexually relevant honest signals.

The archetypal scene in Western culture of the male suitor serenading a young woman in a “Juliet balcony” depends on the bird-like role of poetry, music, and song in human courtship. Shakespeare frequently made use of this scene.

Visit by night your lady’s chamber window

With some sweet concert: to their instruments

Tune a deploring dump; the night’s dread silence

Will well become such sweet complaining grievance

Two Gentlemen of Verona, 1593

So too does the moonlit serenade below a lady’s chamber window occur repeatedly in opera, famously in Mozart’s Canzonetta of Don Giovanni, in which he accompanies his ironic serenade on the mandolin. Similarly, in an opening scene of Walt Disney’s animated opera *Snow White*, the prince, with his puffy outfit and plumed hat, wins her love with his “One Song.” It is hardly surprising that Disney chose singing doves to fill the scene as symbols of pure and wholesome romance. Despite being animation, the social nuances of this scene are so realistic that it proves Disney’s genius, and should be used as a case study for boys in the healthy expression of well-sexed non-degenerate human courtship – although modern reviewers seem to miss the point.

Nor are many girls or gay boys likely to accept noted tenor Prince Charming's ability to catch a tune, straddle a pony, or perch atop a stonewall as any sort of treatise on masculinity.

Slate Magazine, Herderson, 2009



I would wager that Prince Charming's dating record trumps that of our condescending *Slate* reviewer. Indeed, we know that his mating strategy was effective, as Snow White, a fourteen year old virgin princess, having only seen the prince this once, later confesses:

It was very easy [to fall in love]. Anyone could see that the prince was charming. The only one for me... He was so romantic, I could not resist.

Her judgement may have been different had the prince sung poorly, or not at all. To be sure, the aid of virtuoso singing in courtship extends beyond simply the judgement of the girl herself, and this reality forms the plot of what has been argued to be "the best" "opera" of all:

So hear, Masters, the gift

which I have decreed as prize:

to the singer who in the Art-singing

before all the people wins the prize

on St John's Day,

be he who he may,
to him I, a friend of Art,
Nuremberg's Veit Pogner, give
with all my goods, such as they are,
Eva, my only child, in marriage.

Die Meistersinger, Wagner, 1867

If the reader remains in doubt as to the birdlike potential of human singing, I refer her to the arias *O Figlie Amabili* and *Non Piu Mesta* of Rossini's famous 1817 opera *La Cenerentola* (the Chailly recording), in which the potential beauty of the chirping human songbird timbre is realized most excellently. As the quotes in the beginning of the section illustrate, music can be considered a form of "heightened speech," tapping into a more primitive and universal language than words themselves, in the same way gestures are more universally communicative. This universality is used as the explanation of why nearly everyone is a lover of music, even if they are incapable of producing it themselves. But I believe that a more valid paradigm in which to consider musical ability in humans is to say that a man without the ability to sing and/or play an instrument is like a male bird that can't sing. This inability – which is clearly an outright defect in a songbird – would be damning for the bird's ability to attract females.

This is equally true in men, however the general degeneration of culture has rendered most men songless, or at least not very good at music and not confident in their ability. The ability of a man to sing or play music well and with confidence enough to perform in courtship is considered very attractive by women – I assert that this is the healthy human norm. In a healthy, culture-intact civilization, the only men without song would be poor, defective, or otherwise degenerate – all important signals for women to avoid.

Consider in this light, music is what Providence intended it to be—a social blessing. The whole creation is replete with music,—a benignant Power has made the language of the feathered tribe harmony; let us not suppose that He condemns his other creatures to silence in the song.

Ladies Book of Etiquette and Manuel of Politeness, Hartley, 1872

If we can recognize that musical ability is an essential component of a healthy non-degenerate human, and therefore essential to viriculture, we then must consider how best to impart our own children with an excellence in musical ability.

There was a world of difference between my parents and Jed's. Jed's parents gave him a choice about whether he wanted to take violin lessons (which he declined and now regrets) and thought of him a human being with views. My parents didn't give me any choices, and never asked for my opinion on anything.

Battle Hymn of the Tiger Mom, Chua, 2011

Just as babies have an advantage in learning language compared to adults, so too do they have an advantage in learning musical instruments. People often confuse dedicated training with “talent” when it comes to playing musical instruments. Certainly innate differences in ability exist, but most people are able to achieve impressive skill in music with sufficient practice. Accumulating the necessary hours of practice while as young as possible makes the work less frustrating, and the final achievement more assured. To get a feel for just how good children can become at instruments at a young age, search Youtube. Musical excellence is a valuable skill in adults, and we ought to make use of the extensive leisure hours of early childhood to consolidate this ability.

Since we are concerned with abilities that are seen as valuable as adults, we should be selective in which instruments we train our children. Two instruments stand out as superior in terms of cultural importance and social value – piano and guitar. Keep in mind that our goal is not to train a professional musician, but rather develop an excellent adult man or woman. For that reason, instruments that aren’t played solo, or are rarely used outside of an orchestra are less valuable. In spite of your technical expertise in the French Horn, your college roommate will not have one sitting in the corner of his room, and if you try to play at a party, no one will be impressed. My hierarchy follows:

Maestro Tier: Orchestra (Conductor), Organ, Viol family

God Tier: Piano, Guitar, Voice

Top Tier: Accordion, Ukulele, Mandolin, Banjo, flute, harp

Meh Tier: Harmonica, trumpet, trombone, tuba

Shit Tier: Triangle, kazoo,

While the most technically sophisticated instruments belong to the “Maestro Tier,” they are not necessarily the best instruments to teach children. If you can pursue musical training for your child in only one instrument do him a favor and make it piano or guitar. Pianos are omnipresent, and allow performance of nearly any type of music.

Let the knowledge suffice that the fundamental principle of the pianoforte is as old as music itself, and that scientific learning, inventive ingenuity, and mechanical skill, tributary always to the genius of the art, have worked together for centuries to apply this principle, until the instrument which embodies it in its highest potency is become a veritable microcosm of music. It is the visible sign of culture in every gentle household; the indispensable companion of the composer and teacher; the intermediary between all the various branches of music. Into the study of the orchestral conductor it brings a translation of all the multitudinous voices of the band; to the choir-master it represents the chorus of singers in the church-loft or on the concert-platform; with its aid the opera director fills his imagination with the people, passions, and pageantry of the lyric drama long before the singers have received their parts, or the costumer, stage manager, and scene-painter have begun their work. It is the only medium through which the musician in his study can commune with the whole world of music and all its heroes; and though it may fail to inspire somewhat of that sympathetic nearness which one feels toward the violin as it nestles under the chin and throbs synchronously with the player’s emotions, or those wind instruments into which the player breathes his own breath as the breath of life, it surpasses all its rivals, save the organ, in its capacity for publishing the grand harmonies of the masters, for uttering their “sevenfold chorus of hallelujahs and harping symphonies.”

In my view, it takes the first place in the hierarchy of instruments. It is the oftenest used and the widest spread. In the circumference of its seven octaves it embraces the whole range of an orchestra, and a man's ten fingers are enough to render the harmonies which in an orchestra are brought out only by the combination of hundreds of musicians. The pianoforte has on the one side the capacity of assimilation, the capacity of taking unto itself the life of all instruments; on the other hand it has its own life, its own growth, its own development.

Liszt quoted by Kobbe

While the piano may be the "greatest" solo instrument (besides the organ), guitars are extremely common in contemporary music, portable, and versatile.

There is an additional "instrument" that belongs in the God tier, and that is the human voice. As discussed above, having the confidence and ability to sing well in adulthood is a great gift to a child, and certainly will be seen as valuable.

The value of early music education is well understood, and many classes exist to expose children at an early age. The famous "Suzuki method" is a popular choice. While group language tutoring for native-English speaking babies is rare in the United States, group music lessons for young children are common. This makes music education cheaper than foreign language instruction. Even private weekly one hour lessons in *both* piano and guitar might cost \$5000 per year or less per child. With dedicated parental reinforcement of daily practice, this sort of training could lead to musical excellence by adulthood.

Children are not able to play instruments as soon as they are born. But children as young as 2 years old begin to learn piano. Guitar, which requires greater physical coordination to begin learning than piano, can be initiated a couple of years later.

Of course, just like language, increased immersion to someone fluent in music will only consolidate ability with more certainty. Hiring a private music tutor to train a child five days a week would likely be much more effective than weekly group lessons. The price of such a training regimen would be comparable to the prices quoted for language tutors – approximately \$10,000 – \$15,000 per year for two instruments for all children. Professional music conservatories produce many more graduates than can be employed full time. The prospect of working an easy, flexible job for an hour each day for \$15,000 cash a year would likely be scooped up by a highly qualified conservatory graduate.

If the costs of music education are prohibitive, religious institutions typically offer opportunities for children to learn. Nearly all have some form of music, and many churches have choirs, pianos, organs, and bored old people looking for young kids to teach. Indeed I believe that childhood participation in a choir a useful component of a curriculum, especially if the choir performs traditional music. Prior to the late 16th century, choral music, and even then only particularly edifying modes, was the only instrument deemed pious enough for performance in church. There was many years, heated debate over this issue, with the opposition basing their argument on the line of reasoning we discussed earlier in this chapter that we trace to Plato.

The introduction of novel fashions in music is a thing to beware of as endangering the whole fabric of society, whose most important conventions are unsettled by any

revolutions in that quarter... and if so the Dorian and the Phrygian are the only ones which you have left.

I answered: Of the harmonies I know nothing, but I want to have one warlike, to sound the note or accent which a brave man utters in the hour of danger and stern resolve, or when his cause is failing, and he is going to wounds or death or is overtaken by some other evil, and at every such crisis meets the blows of fortune with firm step and a determination to endure; and another to be used by him in times of peace and freedom of action, when there is no pressure of necessity, and he is seeking to persuade God by prayer, or man by instruction and admonition, or on the other hand, when he is expressing his willingness to yield to persuasion or entreaty or admonition, and which represents him when by prudent conduct he has attained his end, not carried away by his success, but acting moderately and wisely under the circumstances, and acquiescing in the event. These two harmonies I ask you to leave; the strain of necessity and the strain of freedom, the strain of the unfortunate and the strain of the fortunate, the strain of courage, and the strain of temperance; these, I say, leave.

And these, he replied, are the Dorian and Phrygian harmonies of which I was just now speaking.

Republic, Plato, circa 380 BC

Of course such a Republic was never realized, and since Council of Trent, the rigorous restrictions on instrumental music in hymns and worship has gradually eroded. However the original premise of these antique prescriptions remains, to some degree valid. While the instrumental accompaniment in Bach's *Passions*, Handel's *Messiah*, and Hadyn's *Creation*, can hardly be said to be unsuitable for the glorification of the Most High. still they lack the solemnity and piety of pure choral music, which was perfected after millenia by Palestrina and Monteverdi around the same time the dictum against on variation in church instrumentation was being lifted.

Considering the common free avenues available, the total cost of music education may be more variable than that of private foreign language tutoring. But even if the costs are equally great, I believe the value to your children's future human excellence is worth it.

We should also consider which style of music the child should train in, as in the contemporary West we have imported them for many cultures and times, and blend them in our popular music. The style of music that requires the most severe training, and produces the greatest technical skill most consistently is Classical. "Classical" music today refers to Renaissance, Baroque, Classical and Romantic music – the most sophisticated musical style and the pinnacle of musical evolution. This style developed in Europe circa the 17th Century, and was essentially perfected as an artform by the beginning of the 20th century. Classical structure is the fundamental essence of most Pop music of today, but this is its incomplete, thin, infantile, degenerate form. A classically proficient pianist may not be as excellent at blues or jazz as a Blues Man or a Jazz Man, but he will be able to play both – and the reverse is not the case. Despite the usual complaints of "Eurocentrism," the Classical style of music is objectively the best – and since viriculture is concerned with "bests," it ought to be our choice. For piano, the foundations of this curriculum might be Bach, Beethoven, and Liszt, representing the giants of the counterpunal, classical, and romantic pianoforte repertoire. The preference for classical training applies equally well to guitar and voice.

Despite the many problems of modernity, a great advantage of today is the ability for nearly everyone to have access to high fidelity reproductions of the most important classical works performed by the best musicians and conductors in their own house on demand. Before recording systems, music could only be performed live, and the tone and quality of unamplified live acoustic music would have been familiar to everyone.

During the last century with the rise of recorded music, live unamplified acoustic music was generally replaced with recordings played through speakers, except in rare, expensive speciality venues. While this allowed everyone to purchase recordings and play them at his leisure, the more complex classical and romantic, especially orchestral music suffered from an inadequacy in reproduction. This was partly due to low quality recordings, partly due to low quality home speaker systems, and partly due to degradation of the physical medium the audio data was stored on (records and cassette tapes). Since the dawn of recorded music reproduction capacity of nearly all listeners has been far inferior to live acoustic music.

	Phone	AM Radio	FM Radio	Cassette	33 rpm Vinyl	CD	128 M
Max Dynamic Range	~ 20 dB	~ 30 dB	~ 50 dB	~ 45dB	~60 dB	96 dB	Less th
Frequency Response	200 Hz - 4 kHz	60 Hz - 6kHz	40 Hz - 15kHz	40 Hz - 15kHz	10 Hz - 25kHz	20 Hz - 20kHz	40 Hz -
File size per hour	~3 MB	~4 MB	~ 8MB	~ 8MB	~200 MB	~600 MB	~60
Year of First Release	~1900	~1920	~1940	1962	1948	1982	19
Sound Quality	Painfully unpleasant to the ear	Intolerable except for solo speaking voice	Suitable only for Rhythm Music	Suitable only for Rhythm Music	Very good while vinyl is pristine	Practically perfect	Suitable Rhythn

The reason that this increased sound fidelity is important is because the beauty and indeed even the education value of classical music is lost with inadequate reproduction. Excellent music is educational and edifying, but only if it can be properly heard and even felt. Because of the cultural gravity of operas, oratorios, symphonies especially, children ought to be exposed to proper reproductions, to increase both the level of sophistication in connoisseurship, as well as their enjoyment of the experience. Furthermore, the high fidelity recording provides the proper stimulation for developing brains to actually grow and prune correctly with regard to music.

With the rise of recorded music, the local singers acoustic performers of minor cities and towns became displaced by a winner-take-all system which rewarded only the most famous musicians.

Now consider the effect of the first music recording, an invention that introduced a great deal of injustice. Our ability to reproduce and repeat performances allows me to listen to hours of background music of the pianist ((Vladimir Horowitz)) (now extremely dead) performing Rachmaninoff's Preludes, instead of to the local Russian émigré musician (still living), who is now reduced to giving piano lessons to generally untalented children for close to minimum wage. ((Horowitz)), though dead, is putting the poor man out of business. I would rather listen to ((Horowitz)) for \$10.99 a CD than pay \$9.99 for one by some unknown (but very talented) graduate of the Julliard School. If you ask me why I select ((Horowitz)), I will answer that it is because of the order, rhythm or passion, when in fact there are probably a legion of people I have never heard about, and will never hear about- those who did not make it to the stage, but who might play just as well.

The Black Swan, Taleb, 2007

We might expect that the availability of affordable recordings of the great music of all time would lead to a democratization of the art, but on the contrary the twentieth century has seen a tremendous degeneration in music connoisseurship. While the ubiquity of recorded music allowed everyone access, the immature recording and playback technology of the 19th and most of the twentieth century simply made classical music opaque to the average listener, as what was reaching their ears was a horrifically degraded skeleton of the composer's intent. Fewer people than ever heard live acoustic music, while more than ever heard terrible quality recordings.

The shift of listeners from live acoustic music to low fidelity recordings had major consequences on the prevailing musical tastes. The subtlety and nuance, as well as the dynamic range and peak power of symphonic music and opera could never reach the ears of most listeners (except those who actually attended the increasingly scarce live performances) for almost a century. Even the church, which had long been the epicenter of musical life and live choral performance, had begun to lose its way. By the 1950s, American car culture added another barrier of static between the composer's intent and what actually reached the listener's ear. Music was increasingly consumed on the go, in a noisy car, with multiple talking passengers, making trips of unpredictable durations. These factors are all at odds with the effective appreciation of great classical music. Recording limitations, the need for on-air advertising, and the rise of in-car listening conspired to create the 3-minute standard track length. The low-fidelity sound reproduction and the droning car noise favor rhythm heavy music...

It's got a backbeat, you can't lose it.

Chuck Berry, 1957

...exactly the type that exploded in popularity among American youth at the time. While changes in the American culture and demographics influenced the shift to short length rhythm music as the dominant style of the second half of the twentieth century, the limitations of audio technology also prevented the universal appreciation of sophisticated classical style music.

The emergence of CDs as an audio format in the 1980s improved the fidelity of classical music played through home systems to the level which, given a high quality recoding, was essentially an exact reproduction. With the shift to digital music recording, the fidelity of music reproduction became partly a matter of file sizes. File sizes were a consideration in the establishment of audio standards; in order to include about an hour of music per CD, the audio format was standardized at 16bit/44.1kHz/1411 kbs – which for practical purposes approximates the limits of human hearing. With the rise of the digital download, the sound quality of our recordings was greatly reduced, with lossy 128 and even 112 or 96 kbs Mp3 files being common in the days of Napster – in order to speed downloads and save hard drive space. Up until 2007, Apple was still selling its protected AAC files in 128 kbs only, which sounds approximately equivalent to the 196 kbs Mp3 – hardly a high fidelity medium. Since then, Apple has released higher bit rates, with 256 kbs AAC files being sold as the iTunes standard today. Youtube playback is 128 kbs at standard def and 196 kbs in HD. Despite these gradual improvements, in all cases this compression in size involved a concomitant loss of acoustic quality – and a serious sit-down listening to the 128 kbs Mp3 or radio version of *Die Walküre* is like a serious consideration of the aromatic nuances of boxed Pino Grigio.

The inability for the sophisticated listener to appreciate low-quality Data compression classical music to sounds

Some books cannot be summarized (real literature, poetry); some can be compressed to about ten pages; the majority to zero pages.

The Bed of Procrustes, Taleb, 2010

In the same way, most modern music can be compressed to 96 kbs Mp3 without meaningful loss of musical signal. The underlying lack of musical complexity, tonal diversity, and acoustic dynamism is the why modern music can be compressed and still “enjoyed,” but it also why modern music is dead. Music that is actually alive, say cannot tolerate any of its living complexity being lost through data compression. The complexity of the musical fractal (which we can see with the oscilloscope) is smoothed out, and just like in our modern transition to smoothness in architecture (compared to the living Classical, Gothic, Renaissance or Baroque structures), the life and beauty are removed. Modern technology is finally setting free from the very data compression that recorded music once made universal, and rich musical life

Within our lifetime, however, the final significant step toward cheap, convenient, perfect-fidelity home reproduction of classical music has been achieved. Hours of essentially perfect quality music can be downloaded in a few minutes. A contemporary high quality recording well mastered in 24-bit depth, 96kHz sample rate played on a proper system with good speakers or headphones is well beyond as accurate a recording as the human ear can hear – as there are diminishing marginal returns to increased bit depth and sampling rates. Indeed there are ongoing arguments about whether anyone can even tell the difference in quality of super-CD information density. Even from a theoretical standpoint, the 24 bit 96kHz audio files are essentially considered by experts as good as as music play back will ever get. At this point, and even in the days of CDs, the limiting factor becomes the audio system – preamp, amplifier, and speakers or headphones. However today a total outlay of about ~\$2000 is enough for anyone to reproduce about as well as any expert can hear, the greatest classical and romantic operas, symphonies, concertos, and sonatas of all time. This cost

should be considered a necessary part of education, and is actually very efficient educational spending if used correctly.

Dance

Of all the amusements open for young people, none is more delightful and more popular than dancing. Lord Chesterfield, in his letters to his son, says: “Dancing is, in itself, a very trifling and silly thing; but it is one of those established follies to which people of sense are sometimes obliged to conform; and then they should be able to do it well. And, though I would not have you a dancer, yet, when you do dance, I would have you dance well, as I would have you do everything you do well.” In another letter, he writes: “Do you mind your dancing while your dancing master is with you? As you will be often under the necessity of dancing a minuet, I would have you dance it very well. Remember that the graceful motion of the arms, the giving of your hand, and the putting off and putting on of your hat genteelly, are the material parts of a gentleman’s dancing. But the greatest advantage of dancing well is, that it necessarily teaches you to present yourself, to sit, stand, and walk genteelly; all of which are of real importance to a man of fashion.”

The Gentlemen’s Book of Etiquette and Manual of Politeness, Hartley, 1873

Dance is another culturally valued ability which is often neglected even by attentive parents. Confidence and skill in dance gives your children additional social power in many important contexts. When Western civilization was intact, any person of dignity would have learned what is now term “ballroom dancing” to a decent level of proficiency. Remember that dances and balls were social events very much relevant for courtship, and poor dancing would have been seen as an embarrassment. Youtube can show us how important and universal skill in dance was for all members of society, even in the most primitive communities. Everyone dances in healthy societies.

In order to take advantage of the social power of dance ability, a child ought to be taught 1) traditional European ballroom dancing, 2) ballet 3) any other style if dance your family cares about.

Ballet is special as the most spectacular and most excellent type of dance. Ballet training is rigorous and demanding exercise, and requires serious parental commitment. Ballet training also primes the mind for ballet appreciation – and authentic ballets are one of the crowning artistic achievements of Western culture. Unfortunately ballet (along with gymnastics and cheerleading) are notorious for making young growing girls self conscious about body image in a negative way. This is a problem when girls choose destructive diet practices which stunt the growth in order to “be thin.” A delicate balance must be maintained between training intensity and the preeminent importance of healthy development of the growing body. Ballet, or any other training, should never impose on the child’s consumption of abundant butter, steak, fatty fish, and bone-stock and cream education sauces. If used properly, however, ballet can take the place of other body-building exercises such as gymnastics.

Furthermore, there is an insane tendency among over-eager parents to push children into “professional” levels of sport or performance art. This is by no means an aspect of viriculture – indeed such use of accomplishments would be considered vulgar among aristocrats. Professional level excellence in dance is an end in itself, regardless of whether it is ever displayed in public. This

approach also helps keep the accomplishments well rounded, as none of them should ever come at the expense of viriculture as a whole.

Training a child to proficiency in most other types of dance does not require the same time commitment as language or music or ballet. One lesson per week beginning at a young age would be enough to establish dancing confidence that will last a lifetime.

Sport

An essential part of viriculture is an exposure to sports. Being a “sportsman” is so wrapped up in the traditional liberal arts / aristocratic / Ivy League notion of who a valuable person is that sports participation is still a major criterion for admittance to prestigious colleges. Why? Because sport participations sends an honest signal about many valuable human traits. Sports demonstrate an individual’s strength, speed, agility, skill, team work, and capacity for intra-gender violence – all characteristics that normal people implicitly care about.

Then I found Odysseus standing over the corpses that were lying on the ground all round him, one on top of the other. You would have enjoyed it if you could have seen him standing there all bespattered with blood and filth, and looking just like a lion.

Odyssey, Homer / Butler, circa 800 BC

Training in certain sports is more valuable than others. Training a boy to proficiency in handball is not as practical as training him in soccer, basketball, or football – since no one cares about handball. The hierarchy is as follows:

God Tier: Soccer, Football, Basketball

Top Tier: Baseball, Rugby, Tennis, Hockey

Meh Tier: Track and Field, Handball, Water Polo

Shit Tier: Jai Alai, Luge, Curling

If a child is not enrolled in a school, where can they play team sports? In some states, homeschooled children have the right to play on public school sports teams. In other states, the decision is made on an individual basis by the district. In cases where public schools disallow homeschoolers from participating, a parent might try to persuade a private school to allow their child to participate (for a fee, most likely). If no schools in the area consent, there are homeschool sports networks in most major population centers. If there are no around, non-school related sports teams exist. No matter how you manage to do it, getting children to participate in team sports from an early age is important for viriculture. Sports are a major topic of pleasant conversation in adult life, and having a familiarity with them makes social engagement easier. Competency at sports is also a socially valuable honest signal of conspicuous leisure.

In addition to the team sport hierarchy, there are certain solo sports that are socially valuable. These include swimming and skiing, and may include sports like gymnastics, golf, sailing, and equestrian sport. While no child can become skilled in all of these, having a decent competency in some, such

as swimming or skiing or sailing opens social possibilities. Gymnastics especially helps build strong and muscular bodies; remember that the archaic Greeks had only two subjects in “school,” music and gymnastics – indeed the “gymnasium” was the school.

Another subcategory of sport is training in the martial arts. This should be considered an essential aspect of education for boys. This includes general training for no-holds-barred hand-to-hand combat, as well as gun handling. Depending on local conveniences for the parents, the exact type of martial arts training could vary, however it should be one that is actually practical, and not simply another form of ritual dance. Time should be devoted to achieving at least a basic competency in weapons-handling, especially riflecraft.

Both genders, as they reach adolescence, should have basic knowledge of and easy access to weight lifting and stretching as a way to maximize their strength and physical beauty.

Exercise is indispensable for viriculture, so we might as well tie exercise to the valuable skill development by making use of some of the above sports.

Visual Art

The history of art and architecture is an essential aspect of any culture rich curriculum. In addition, the skills of drawing and painting should also be developed to competency. Unfortunately, it is not enough to simply give kids the implements and hope they become excellent, like anything else consistent training must be provided. Luckily, great improvements in drawing and painting skill can be obtained from relatively few hours of professional instruction. Another artistic skill which is a lovely accomplishment but requires no professional instruction is penmanship. Up until recently children were expected to have beautiful handwriting. Today, for just a few dollars, the copy-books and implements necessary to achieve competent in say Spencerian penmanship can be shipped to the house. These copy books have the added benefit of instilling various edifying classical quotations in the mind of the child. Gardening might also be mentioned here as a worthy accomplishment, especially for girls.

Cooking

Training in cooking has become essential for health in the modern world. Nearly all food purveyed by restaurants and institutions is unwholesome in one way or another, so children must be given the appropriate tools to cope with this. Cooking competency requires a combination of book-learning and hands-on training. Plenty of textbooks designed for culinary students provide an excellent overview of the methods of cooking, and can be bought for a couple dollars. These methods must then be practiced in the kitchen. Young children can assist with cooking, and eventually cook whole meals for the family as an honest test of their ability.

Etiquette, Connoisseurship, and Social Grace, Practical aesthetics

He [Homer] presents the courtesy of his heroes as an absolute value; not as an unimportant background to their life, but as a real factor in their superiority. For him, the forms and formalities of their life are inseparable from their conduct. Courtesy is the bloom on their lives. It gives them a special excellence, which they justify both by their grand and noble deeds, and by their blameless conduct in happiness and misery alike.

Paideia: The Ideals of Greek Culture, Jaeger, 1944

School removes your volition in all important ways, even who you speak to. Are not the arts of association as valuable or more valuable than anything you learn when you are young?

Gatto

When our culture was intact, proper etiquette was an unavoidable lesson for educated people. Today even the most informal etiquette of a century ago has degraded into savagery. While the details of good etiquette from past centuries will surely be seen as affectations in the modern world, the spirit and general principles of etiquette have a place in any age. Codified etiquette of the past gave excellent advice of how to behave so as to maintain dignity or grace in many common situations we still encounter. Much of etiquette was about kindness and thoughtfulness to others, and helps tame our natural misbehaviors which arise in company. Social grace and wit are other aspects of etiquette valuable in any age.

Etiquette also concerns itself with dress, which has always been an important aspect of human social interactions. Many parents spent a great deal of money of made-in-China “designer” clothing for children which they quickly grow out of. This money would be much better spent instilling skills and corporeal excellence in the child. However in adulthood clothing can further dignify a beautiful and well developed person. Instead of the modern mass-consumption of poorly made clothing of poor material, excellent dress can be maintained with very few articles. Much more important is the instance of excellent traditional fabrics and craftsmanship, suited to the wearer himself. In this regard we have degenerated with extreme rapidity.

More than two hundred thousand women worldwide worn couture in the 1950s. It was an expected part of a bourgeois woman’s everyday life. Today, in comparison, a mere two hundred women worldwide buy haute couture.

Deluxe, Dana Thomas, 2007

In the past, aristocratic girls were often trained in weaving on a loom, and as women created beautiful clothing and tapestries with this skill. Far from being oppressive, this accomplishment was no different than playing a musical instrument – one whose product could be seen and felt and worn (this was before the days of oil painting). Today robots make our fabrics, and the aesthetic quality suffers tremendously. The skill of weaving on a loom however, can still be learned. A level of commitment comparable to learning a musical instrument (say the harp) could be expected, but the outcomes in terms of handmade fabric would be very valuable.

Connoisseurship is another aspect of education that should not be neglected. Appreciation of many aspects of art should be taught, and most are not very time consuming. Some, like literature or art or music are inevitable aspects of the curriculum. Others need to be sought deliberately, such as connoisseurship in food and wine.

Audiobooks

Just like modernity has allowed us to again appreciate the beauty of uncompressed acoustic music on demand, technology has also enabled us to re-approximate the proper medium of poetry and literary epics – the spoken word. Although audiobooks have existed for many years, they have up until the past 10 years been bulky and expensive. Within the last few years, CD quality recordings of professional narrators have emerged for immediate download of nearly all the classics of poetry and prose for no more than about ~10 each. In many cases, works in the public domain as read by volunteers and published for free. This seemingly simple technology is truly the democratization of knowledge, since the physical act of reading a book is time consuming, requires isolation and quiet, is not also comfortable, and is bad for the eyes – while the act of listening to a book requires far less mental energy, can be accomplished concurrent with other tasks and in any position, and puts no strain on the eyes. There is no reason to worship the book as a medium except for its historical-cultural significance. For educational purposes, the audiobook is far superior, especially when listening is supervised. In practice many more books are read much faster, with better retention, better comprehension, and more enjoyment. Indeed spoken word is the only natural way to experience all poetry and plays – including, Even the novels which were intended to be read privately are much more entertaining when read flawlessly by a professional who does various voices for each character. Judicious use of audiobooks would allow our 18 year children to be far better read than any but the most disciplined classics professors of the past, simply because the experience of listening is less demanding and more enjoyable task than reading. Of course, the physical book must always be available to the student. The audiobook must be paused, and the text referenced and reviewed at key moments.

“Academics” – Including Literature, Mathematics, History, Philosophy etc.

By deliberate training even the physical nature of the human race can alter, and acquire a higher range of abilities. But the human mind has infinitely richer potentialities of development.

Paideia: The Ideals of Greek Culture, Jaeger, 1944

I believe that children are sent to school too early. It seems that pre-K and kindergarten are more for the sake of babysitting than for education. While I absolutely agree that socialization is essential, I also think that attempting to begin an academic curriculum where children must sit down and listen at the age of 5 (standard for kindergarten) is too early. While I absolutely endorse ability

development from age zero, I believe a more reasonable age to begin formal academics is eight rather than five. This provides plenty of time for all of the necessary instruction, without extinguishing the natural exuberance of youth at too early an age.

Keeping in line with our guiding philosophy of conservatism, we ought to design an academic curriculum that has stood the test of time. We should use the years of school to bring a child's judgement "up to speed" with the *Great Conversation*. A child should learn become familiar with the great minds of all time, not through some middleman analysis, but by reading the primary sources himself. This sort of liberal education is common at prestigious colleges, which typically have a college curriculum that attempts to cover the big dogs of the Western canon. But two college semesters is too little too late.

The Western canon ought not to supplement education, but rather it should be education itself, with certain supplements added. Of course great works of other cultures warrant inclusion in a curriculum. And certainly the exact works taught will differ on the basis of parental preference. But, if we are to instill our child with the great accumulated judgment of humankind, classics, primarily the Western Classics, should make up the bulk of the curriculum. These works have stood the test of time, and thereby proved their value in the most legitimate way.

How do we know what the Western canon is? Many have spent their careers discussing this. The details do not matter. There is vague consensus about which human minds have contributed greatly, and this is good enough for our purposes. Clearly not all great works can be included in any curriculum. And the individual works selected or reject matters much less than the aggregate. If your daughter never reads *Moby Dick*, she may lose very little, but if she never reads any of the great works of Greece, Rome, Edwardian England, or nineteenth century France and Germany, she will lose very much. Unfortunately, education in the classics is absent from nearly all middle and high schools, public and primary. Schools were not intended to provide liberal arts education, but rather to produce obedient citizens.

In our quest to maximize the social value of our children, we must design a curriculum that leaves our children with the option of attending college. Let's evaluate the standard admissions requirements during high school for a selective college:

Four years of English

Four years of Math: Algebra I and II, Trigonometry, Geometry, Calculus

Four years of Foreign language

At least two years of **laboratory** science: Earth, Bio, Chem, Physics

At least two years of history: US, World, Government, Econ

SAT and 2 SAT Subject tests

In order to "play it safe" we can maximize each subject category. We arrive at the following generic curriculum for high school academics that would not impede admission to a competitive college:

	9th Grade	10th Grade	11th Grade	12th Grade
English	Literature	Literature	Literature	Literature
Math	Algebra	Trigonometry	Geometry	Calculus
Foreign Language	Language	Language	Language	Language
Science	Earth	Biology	Chemistry	Physics
History	World	US	Government	Economics
Standard Test	-	SAT II	SAT II	SAT

By no means am I saying that this is a *good* curriculum in terms of what actually benefits the child's education, this is simply what colleges require. In order to give the child abundant time to study for standardized tests during the year before university, as well as a great deal of freedom to control his own schedule during that year (to gain experience working, dating, driving, cooking, traveling, etc.), we can shift the curriculum to begin one year earlier.

	8th Grade	9th Grade	10th Grade	11th Grade	12th Grade
English	Literature	Literature	Literature	Literature	<i>Leisure</i>
Math	Algebra	Trigonometry	Geometry	Calculus	-
Foreign Lang	Language	Language	Language	Language	Travel
Science	Earth	Biology	Chemistry	Physics	<i>Leisure</i>
History	World	US	Government	Economics	<i>Leisure</i>
Standard Test	-	-	SAT II	SAT II	SAT

Granting a 17/18 year old child this freedom seems to be a nice thing to do. It helps maximize the test scores, as more time can be dedicated to studying, and it introduces a adult level of responsibility into his day-to-day decision making. This way we are able to accomplish everything required by even the most rigorous universities for acceptance, but never put the child through times of unnecessary stress. The abundant leisure time may also help the child cultivate an aristocratic freedom to pursue interests simply for pleasure.

It may seem stressful to put child through this type of curriculum. On the contrary I believe that it will be much less painful and irritating than normal school, with a greater pay off as well. This is possible because of the tremendous waste of time that occurs in normal schools. By eliminating the waste, we can make education both more "profitable" and humane at the same time. I have no interest in Tiger Mom forcing children to complete tedious busywork assigned for the benefit of teachers, not students. Remember, we are not trying to force children to get "good grades," or get

them into a good college to get a “good job.” Rather the ultimate focus should be on maximizing their human potential, with special emphasis on their social status.

If we begin at age 8 and teach until age 17 (leaving the last year of high school unscheduled) we have *nine* school years of formal education (for reasons we shall see, this really ends up being 7.5 school years). This a tremendous amount of time – about twice the time in college, which is usually wasted in schools. How can we maximize the use of this time without burdening the student?

During the first three years, from age 8-10, I suggest we ought to engage the student in formal academics *half-time*, only about 2.5 hours a day. This allows more time for the consolidation of those skills (whose training began much earlier) that are so important to adult life such as sport, fighting, piano, guitar, singing, dancing, etc. From age 11 on, (around the age of middle school) a greater emphasis should be placed on “book learning.” However, even in the years 11-17, no more than 5 hours a day ought to be spent in formal academics, including independent work.

Five hours a day for book learning turns out to be an incredible amount. If we begin at 8.30am (allowing for the necessary 10 hours of sleep), and allow a generous hour for lunch, the school day can end at 2.30. This is hardly burdensome, and yet it allows for a great wealth of education.

If we break the five hour school day in half, we can assign 2.5 hours to reading/listening to literature and primary sources, and discussion. The second 2.5 hours could be devoted to technical textbook learning, math practice, etc. Some subjects are easier to learn from a textbook than primary sources, especially math, physics, and chemistry.

Exactly how much time would we have for each type of education? Let’s keep in mind that the child should have summer vacation, and all weekends free from academic work. That leaves about 180 days a year, at five hours per day.

$$2.5 \text{ hours} \times 180 \text{ days} \times 7.5 \text{ years} = 3,375 \text{ hours}$$

for **each** reading/literary *and* textbook/practice learning

An average college course has about 40 hours of class time. This means that from age 8 to 17, we could expose a child to about $(3,375 \times 2 / 40)$ *160 college courses* worth of material. That is a lot. Let’s consider just reading/literary education; if we select 150 great works from all time to teach our child. This leaves us

$$150 \text{ books} / 3,375 \text{ hours}$$

an average of 22 hours of class time *per book*

Audiobooks read at about 24 pages per hour. If we used the 2.5 hours for reading/literary instruction solely to listen, then:

$$24 \text{ pages per hour} \times 3,375 \text{ hours} / 150 \text{ books} = 528 \text{ pages per book}$$

528 pages per book is generous, and likely allows buffer time for discussion, explanation, etc. If more time were needed for this, fewer books could be included in the curriculum. Alternatively, time could be borrowed from the textbook/practice learning time for literature discussion.

Let’s now take a look at an example weekly schedule for an 8 year old boy, still on only 2.5 hours a day of formal academics:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Breakfast	Breakfast	Breakfast	Breakfast		
Audiobook	Audiobook	Audiobook	Audiobook	Audiobook		
Textbooks	Textbooks	Textbooks	Textbooks	Textbooks		
Lunch	Lunch	Lunch	Lunch	Lunch		
Martial art	Language	Dance	Martial art	Language	-	-
Language	Team sport	Language	Language	Team sport		
Dinner	Dinner	Dinner	Dinner	Dinner		
Piano	Guitar	Piano	Piano	Guitar		

He wakes up at 8am, and tutoring starts at 8.30. Since literature can be consumed through audiobooks, he can eat breakfast while reading. Textbook learning also occurs in the morning. After a noontime lunch, sport and language training can occur, although it may be expected that an 8 year old trained from birth in language would now be fluent. Keep in mind that even with an early dinner at 6pm, this leaves over five hours of time for sport and language training *each school day*. Music training could occur after dinner, from the hours of 8-10. This is a very relaxed schedule, and leaves 10 hours for sleep each night. Note that the weekends are even more relaxed. Socialization can occur daily at sport training, and potentially at music training as well. There is plenty of time for unsupervised play on weekends and during the summer.

Now lets examine a similar weekly schedule for a 15 year old boy, who now has 5 hours a day of formal academics:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Breakfast	Breakfast	Breakfast	Breakfast		
Audiobook	Audiobook	Audiobook	Audiobook	Audiobook		
Lunch	Lunch	Lunch	Lunch	Lunch		
Textbooks	Textbooks	Textbooks	Textbooks	Textbooks		
Martial art	Team sport	Dance	Lifting	Team sport	-	-
Dinner	Dinner	Language	Language	Dinner		
Piano	Guitar	Dinner	Dinner	Guitar		
		Piano	Piano			

Some major difference can be found as the child is older. Academics now occur both before and after lunch, ending at 2.30pm. If we assume an early dinner at 6pm, this leaves over three hours for sport nearly every school day. Foreign language training has taken a back seat, as by the age of 15, it should be consolidated. 15 year olds are old enough to begin lifting weights. This still leaves two full hours for family dinner, and another two for music each weekday. The teenager schedules still allows 10 hours of sleep each night.

Now that the reader has some idea of what this sort of education entails, I will provide a sample curriculum for a son. The specific books, sports, and languages are, in their details, a matter of personal preference. However, they do try to keep in mind the potential value for adults. Classics are favored because they have proved their worth through the “test of time.”

The Pedagogus and the Governess

In the days of Suetonius, 60 percent of prominent educators (grammarians) were slaves. Today the ratio is 97.1 percent, and growing.

Taleb

Afterwards he often made it clear that he was desirous of a second consulship, and once actually announced his candidacy, but when he was passed by and not elected, he made no further efforts to obtain the office, giving his attention to his duties as augur, and training his sons, not only in the nature and ancestral discipline in which he himself had been trained, but also, and with greater ardour, in that of the Greeks. For not only the grammarians and philosophers and rhetoricians, but also the modellers and painters, the overseers of horses and dogs, and the teachers of the art of hunting, by whom the young men were surrounded, were Greeks. And the father, unless some public business prevented, would always be present at their studies and exercises, for he was now become the fondest parent in Rome.

Parallel Lives of Noble Grecians and Romans, Plutarch, circa AD 100

Classical education is not just a matter of choosing the right books to read, it is also a matter of choosing the right process. Today our process is to imprison children to sit in uncomfortable chairs under fluorescent light during most of their waking hours during their peak physical development, with twenty-eight children taught by one teacher (who was by no means the strongest or most creative student in his university, let alone a good man).

“Then you have a master?”

“Yes, my tutor; there he is.”

“And is he a slave?”

“To be sure; he is our slave,” he replied.

“Surely,” I said, “this is a strange thing, that a free man should be governed by a slave.”

Lysis, Plato, circa 380 BC

The Greek nobility, who developed such profound minds and souls within strong and beautiful bodies, had a very different process. Once a boy was appropriately old to begin his formal education, it was directed under an interested adult tutor, with whom the boy formed a lasting relationship. The “appropriateness” of this relationship has, reasonably, come under scrutiny since then. However the modern interpretation of this man-boy relationship as homosexual pedophilic abuse is exaggearted by our own perversions.

This misunderstanding has become nearly universal, prompting the 2004 reactionary publication of *Homosexuality in Ancient Greece – The Myth is Collapsing* by Georgiades. This entertaining book corrects our understanding of the “love” of the “erastes/eromenos” relationship generally being strictly moral and spiritual, rather than physical, by using the laws and words of the Greeks themselves. Many ancient authors, including Plato, addressed the distinction between spiritual and bodily “love” in the education of boys, and generally agreed that adult men attempting to adulterate the purity of the pedagogical relationship with sexual impropriety should be “restrained by force.”

Or at least we may abolish altogether the connection of men with men.

Laws, Plato, circa 380 BC

As an additional precaution, a pedagogue was often hired to supervise boys. Whether the pedagogue himself provided the education, or simply supervised the education is irrelevant. In any case, a single adult with sincere, non-perverse interests in the child’s educational success provided one on one tutoring in matters of academic and life education.

An experienced elder guides and advises him. He feels the gentler influence of his mother’s love; but she, anxious for her only son’s safety, cannot be consulted at the critical moment, since she would not sympathize with his sudden decision and would only hinder him with her fears.

Paideia: The Ideals of Greek Culture, Jaeger, 1944

This method is the surest way in which education makes excellent men. Aristotle tutored Alexander, Merlin tutored Arthur, and the greatest hero of all was tutored by Chiron and Phoenix.

And he [Achilles’ father] sent me with you to train you in all excellence of speech and action.

Iliad, Homer / Butler, circa 800 BC

Excellence in *action* is critical, and this is where modern tutors generally fail miserably. Worksheets and multiple choice tests can never make an excellent person, even if they were administered by Merlin. Montaigne quotes Horace as confirmation of this active method of tutoring.

Likewise it is an opinion accepted by all, that it is not right to bring up a child in the lap of his parents. This natural love makes them too tender and lax, even the wisest of them. They are capable neither of chastising his faults nor of seeing him brought up roughly, as he should be, and hazardously. They could not endure his returning sweating and dusty from his exercise, drinking hot, drinking cold, or see him on a skittish horse, or up against a tough fencer, foil in hand, or with his first harquebus. For there is not help for it: if you want to make a man of him, unquestionably you must not spare him in his youth, and must often clash with the rules of medicine:

Let him live beneath the open sky

And dangerously. – Horace

Essays, Montaigne, 1580

Danger in this sense gives education a vivacity, without which it produces weak and bland robots, whether the class size is thirty students or just one. The Harvard admissions officer prefer students who excel in solo hobbies that involve physical danger – honest signals bravery and self mastery, and traits that are entirely absent from school reports cards.

Most parents say, “Go to school. Don’t go swimming with sharks, that’s dangerous.”
Our parents said, “you can go swimming with sharks, but you’re not fuckin’ going to school, that’s dangerous!”

Surfwise, 2007

Indeed the fact that students are not routinely graded on traits like honesty, bravery, and strength of will confirms just how base the standards of “excellence” of modern pedagogy have become.

Historically, girls have had a similar method of action-based one-on-one education, only the tutor was often called by a different name, such “governess” in English.

I always say that nothing is to be done in education without steady and regular instruction, and nobody but a governess can give it.

Pride and Prejudice, Austen, 1813

It is naive to expect, as some parents do, that valuable human abilities and traits will arise spontaneously in our children, without repetitive practice.

The first beginnings come from nature, advancement from learning, the practical use from continued repetition, and the culmination from all combined; but so far as any one of these is wanting, the moral excellence must, to this extent, be crippled.

Education of Children, Plutarch, circa AD 100

For there are many human attributes that are not bestowed by nature nor acquired by study but gained by habituation.

Eudemian Ethics, Aristotle, circa 340 BC

This *training* is essential for viriculture. However, no parent alone will have all of the necessary skills required to optimally educate their child. Most Americans rely on hired help in the form of school. But unfortunately school is, at best, insufficient to meet this task. Even in the cases where schools do routinely provide valuable instruction for important skills, such as music, sport, art, and cooking, the exposure is inadequate for the child to reach a level of proficiency that would be notable in his adulthood.

Most skills and traits that are valuable in adulthood are achieved through long practice. Part of the reason these traits appear outstanding in adults is that they cannot be picked up easily. We cannot teach a child to cook, dance, fight, navigate socially, or many other valuable life skills without practice. Some of this practice will be able to be overseen by the parents, especially if they are interested or capable of teaching a particular skill. But parents will also be unable to train their children in many important abilities. This is where tutors must assist.

Tutors have always been used by wealthy parents because of the obvious superiority of educational efficiency through personalized attention. Today, this trend continues among the super-rich.

Personal trainers, motivational coaches, housekeepers, hairdressers, stylists and butlers used to be the fashion-conscious celebrity's status symbols of choice. But these days, if a pop star or actor hasn't acquired a super-tutor, fluent in Ancient Greek and conversational Latin, they're risking severe loss of face. (((Gwyneth Paltrow))) and Chris Martin's decision to advertise for a £62,100-a-year genius to teach Moses, five, and Apple, seven, art, painting, drama, tennis, chess, Mandarin Chinese, sailing, philosophy and French as well as Latin and Greek, has just upped the ante for everyone else.

Sasha Slater *Daily Mail*

While £62,100-a-year is more than most people can afford to educate their children, the general principle that paying to individualized expert training will help our children holds true. I am using the term "tutors" very loosely here. Any professionally hired educational help qualifies. Tutoring is the practical way to optimize education. Below is a list of subjects which warrant tutoring. They are listed in order of the age of the child at which the tutor is first needed.

Foreign Language

Music

Dance

Sport

Academics

Cooking

It might seem prohibitively expensive to tutor children in all aspects of education. It is true that optimal education for children does carry a higher out of pocket cost than public school alone. However, I would argue that tutoring is not more expensive than private school, and much more valuable.

Many fathers, however, go so far in their devotion to money as well as in animosity toward their children, that in order to avoid paying a larger fee, they select as teachers for their children men who are not worth any wage at all — looking for ignorance, which is cheap enough. Wherefore Aristippus not inelegantly, in fact very cleverly, rebuked a father who was devoid both of mind and sense. For when a man asked him what fee he should require for teaching his child, Aristippus replied, "A thousand drachmas"; but when the other exclaimed, "Great Heavens! what an excessive demand! I can buy a slave for a thousand," Aristippus retorted, "Then you will have two slaves, your son and the one you buy."

Education of Children, Plutarch, circa AD 100

The increasing costs of private schooling is causing some to realize that hiring private tutors is in fact cheaper, especially if you have more than one child.

Parents who want to educate their children at home, but lack the time, skill or inclination to do it themselves, are increasingly replacing school with tutors... Mrs. Scott and her husband, Jay, hired their own teacher [for their four daughters]... They found a tutor who charged \$20 an hour to teach the girls at home for four hours on weekday mornings.

"I don't know why more people don't do this," Mrs. Scott said.

The Scotts are among a small but growing number of American families who are reviving the old custom of employing private tutors.

Turning to Tutors, Instead of Schools, NYT, 2003

\$20 an hour sounds a lot less intimidating than £62,100-a-year, especially if we compare the costs of tutors to private school.

$$\text{\$20/hr} * 180 \text{ days/year} * 4 \text{ hours/day} = \text{\$14,400 per year}$$

In comparison, the US per capita cost of public school per capita is \$12,600 during the 2010-11 year. The Scott Family may not have hired the same caliber of tutor as the Ms Paltrow, but my guess is that good, well educated academic tutors for a whole family could be hired for less than the cost to send a single child to private school.

Of course tutors are just people, and the parents must ultimately be responsible for vetting one suitable for their children. Furthermore parents must set goals, supervise process, ensure compliance, manage the education generally whether one has a tutor or not.



Educational Viriculture – Part 4: An Example Curriculum

Posted on [admin](#) Posted in [Book](#)

Remember this is just an example! You will want to make your own.

Spoken Language: From age zero to age eight, immersion language tutoring for about one hour a day per language. Culture rich languages receive priority. My personal choice in order of importance: English, French, German, Italian, Spanish.

Socialization: Age three to age eight, “pre-school,” playgroups, or church groups as a way to meet children and make friends.

Etiquette / General Behavior:

The American instructor, or Young man’s best companion

Ladies’/Gentlemen’s book of Etiquette

Emily Post

Our Deportment

Art: Age two to eight, piano and guitar, one hour daily each. Singing and dance, one hour a couple of times a week each. Drawing and painting training.

Art History: Age 12 to 17.

Vitruvius

Canon of the Five Orders of Architecture – Palladio

Lives of the Most Excellent Painters, Sculptors, and Architects – Giorgio Vasari

History of Ancient Art – Winckelmann

Principles of Art History – Heinrich Wölfflin

Music: Age Zero -17. Separate from music and vocal practice, exposure to the great composers and contemplation of their work. Includes both individual singing and choir. Starting at age 12 to include music theory and history.

World music

Greek music

Roman music

Early Church music

Hidegard von Bingen

Machaut

Dufay

des Prez

Palestrina

Gesualdo

Monteverdi

Bach

Vivaldi

Handel

Haydn

Mozart

Beethoven

Schubert

Mendelssohn

Brahms

Chopin

Liszt

Schumann

Strauss

Stravinsky

Texts: A Popular History of Music

How to Listen to Music

How to Appreciate Music

The Theory of Music, Elson 1890

Opera: Age zero to 17. Edifying themes emphasized early. Many operas after Gluck should come with an “R” rating. Pre-1780s opera and examples of virtue. Ninetieth century opera and examples of unattractive men meeting realistic consequences in the dating world. Ancient Greeks “plays” should be understood to have been more like operas in the modern sense.

Aeschylus~ 500 BC

Sophocles ~ 450 BC

Euripides ~ 450 BC

L'Orfeo – Monteverdi 1607

L'incoronazione di Poppea – Monteverdi 1643

La Calisto – Cavalli 1651

Thésée – Lully 1675

Venus and Adonis – Blow 1683

Amadis – Lully 1685

Dido and Aeneas – Purcell 1688

Médée – Charpentier 1693

Acis and Galatea – Handel 1718

Giulio Cesare – Handel 1724
Artaserse – Vinci 1730
Hippolyte et Aricie – Rameau 1733
Semele – Handel 1744
Orfeo ed Euridice – Gluck 1762
Iphigénie en Tauride – Gluck 1779
Die Entführung aus dem Serail -Mozart 1782
Le nozze di Figaro – Mozart 1786
Don Giovanni – Mozart 1787
Così fan tutte – Mozart 1790
Die Zauberflöte – Mozart 1791
Fidelio – Beethoven 1805
Il barbiere di Siviglia – Rossini 1816
La Cenerentola – Rossini 1817
Guillaume Tell – Rossini 1829
La sonnambula – Bellini 1831
L'elisir d'amore – Donizetti 1832
I puritani – Bellini 1835
Nabucco – Verdi 1841
Linda di Chamounix – Donizetti 1842
The Damnation of Faust – Berlioz 1846
Lohengrin – Wagner 1850
Rigoletto – Verdi 1851
La traviata – Verdi 1853
Les Troyens – Berlioz 1858
Faust – Gounod 1859
Tristan und Isolde – Wagner 1865
Die Meistersinger – Wagner 1868
Aida – Verdi 1871
Die Fledermaus – J Strauss 1874
Carmen – Bizet 1875

La Gioconda – Ponchielli 1876
Der Ring des Nibelungen – Wagner 1876
Parsifal – Wagner 1882
Manon – Massenet 1884
Cavalleria rusticana – Mascagni 1890
La Wally – Catalani 1892
Pagliacci – Leoncavallo 1892
La bohème – Puccini 1896
Pelléas et Mélisande – Debussy 1902
Der Rosenkavalier – R Strauss 1911
Turnadot – Puccini 1926
Snow White – Dinsey 1939

Ballet:

Die Geschöpfe des Prometheus – Beethoven 1801
Giselle – Adam 1841
Don Quixote – Minkus 1869
Swan Lake – Tchaikovsky 1876
La Bayadère – Minkus 1877
The Sleeping Beauty – Tchaikovsky 1889
The Nutcracker – Tchaikovsky 1892
The Firebird – Stravinsky 1910
Daphnis et Chloé – Ravel 1912
The Rite of Spring – Stravinsky 1913
Romeo and Juliet – Prokofiev 1938

Sport: Age two to six, skiing, swimming, and introductions to team sports, at least a few hours per week.

'Tis that saves many a man's life; and the *Romans* thought it so necessary, that they rank'd it with letters; and it was the common phrase to mark one ill-educated, and good for nothing, that he had neither learnt to read nor to swim: *Nec literas didicit nec natare.*

Locke

Age six to 17, local school team soccer, local school team basketball, and MMA a few times per week. Skiing, swimming, and gun handling until proficient.

Homemaking: For girls

Home Comforts: The Art and Science

Cooking: Age eight to 17. Focused on training, but with some study of classic cooking texts.

Le Guide Culinaire – Escoffier

Mastering the Art of French Cooking – Julia Child

River Cottage Meat Book – Fearnly Whittingstall

The Professional Chef

Grammar

Penmanship: Spencerian penmanship

Letter-writing:

Since, then, the art and practice of letter-writing is productive of so much refined and social happiness, a laudable indulgence in it must ever be commendable. While it elevates the noble faculties of the mind, it also chastens the disposition, and improves those intellectual powers which would otherwise remain dormant and useless. Notwithstanding the various beauties and pleasures attendant upon the accomplishment, yet there are many who have given it but a slight portion of their attention, and have, therefore, cause to blush at their own ignorance when necessity demands its practice. There is no better mode by which to test the acquirements of either a young lady or gentleman than from their letters.

Reading: Age zero to age eight, *listening* to audiobooks. A child's eyes are damaged by close work at an early age.

Literature: Age eight to 17. This list is in approximate chronological order, *not* in the order the texts are to be taught. The formative myths should take precedence during early childhood and be repeated over and over. A rearrangement of the texts is necessary to accommodate the mental capacity of the developing child; the subtleties of *War and Peace* will be lost on a ten year old, and the content of *Don Juan* or *Madame Bovary* is more appropriate for late adolescence.

Iliad, Odyssey – Homer

Theogony, Works and Days – Hesiod

Confucius

Tyrtaeus

Pindar

Upanishads, Bhagavad Gita, Mahabharata

Argonautica – Apollonius

The Old Testament and The New Testament (and Bart Ehrman)

Aeneid, Georgics – Virgil

Horace

Metamorphoses, Fasti – Ovid

Martial

Asinus Aureus – Apuleius

Lives, Moralia – Plutarch

Tacitus

Lucian

Attic Nights – Aulus Gellius

Diogenes Laertius

Posthomerica – Quintus Smyrnaeus

The City of God – Augustine

Njal's Saga

The Nibelungenlied

Beowulf

The Poetic Edda

The Song of Roland, The Song of Girart of Vienne

Book of the Marvels of the World – Marco Polo

The Divine Comedy – Dante

Canterbury Tales, The Legend of Good Women – Chaucer

Troy Book – Lydgate

Orlando innamorato

Amadis de Gaula

Orlando Furioso – Ariosto

Gargantua and Pantegruel – Rabalias

Montaigne's Essays

The Lusiads

The Faerie Queen – Spencer

Summa Theologica – Aquinas

Don Quixote – Cervantes

Shakespeare

La Gerusalemme liberata – Tasso

Matin Luther

The law of war and peace – Grotius

Le Cid – Corneille

Paradise Lost, Paradise Regained, Samson Agonistes, Aeropagitica – Milton

Robinson Crusoe – Defoe

An essay on criticism, An essay on man – Pope

The way of the world – Congreve

Gulliver's Travels, A Modest Proposal – Swift

Heaven and Hell – Swedenborg

Voltaire's Works

Tom Jones – Fielding

Rasselas – Samuel Johnson

Julie, or the New Heloise – Rousseau

Tristram Shandy – Sterne

Wilhelm Meister's Apprenticeship, Faust – Goethe

Wordsworth's Poetry

Coleridge's Poetry

Pride and Prejudice – Austen

Don Juan – Byron

The Charterhouse of Parma, The Red and the Black – Stendhal

Three Musketeers, The Count of Monte Cristo – Dumas

Evangeline- Longfellow

Les Miserables, The Hunchback of Notre Dame – Hugo

Arabian Nights

The Physiology of Taste – Savarin

Le Pere Goriot – Balzac

Emerson's Works

Vanity Fair – Thackeray

Resistance to Civil Government, Walden – Thoreau

Middlemarch – Eliot

Moby Dick – Melville

Madame Bovary- Flaubert

The Brothers Karamazov – Dostoevsky

War and Peace – Tolstoy

À rebours – Huysmans

The Education of Henry Adams

In Search of Lost Time – Proust

The Magic Mountain – Mann

Ulysses – Joyce

Plays

Aristophanes

Menander – *Dyskolos*

Terence

Marlowe

Shakespeare

Moliere

Sheridan

Goethe – Iphigenia in Tauris

Ibsen

Wilde

Chekhov

Ancient Language Reading: Age six to 14, training to achieve reading fluency in ancient Greek and Latin.

Philosophy: Age 10 to 17.

Plato

Aristotle

Epicurus

Six Enneads – Plotinus

Epictetus

Cicero

Seneca

Caesar

Marcus Aurelius

Dio Chrysostom

Bacon

Hume

Kant

Hegel

Schopenhauer

Nietzsche

Bertrand Russell

((((Karl Popper)))

Taleb

American History: Age eight to 17.

American History Stories

1491 – Mann

Declaration of Independence

The Federalist

The Antifederalist

Constitution

Washington's Letters

Jefferson's Writings

Franklin's Writings

Andrew Jackson's Writings

Democracy in America – De Tocquville

Lincoln' Writings

The Rise and Fall of the Confederate Government

Ex-Slave Narratives

Cross of Gold Speech

I Have a Dream Speech

World History: Age eight to 17.

There is this exceptionally beneficial and fruitful advantage to be derived from the study of the past, that you see, set in the clear light of historical truth, examples of every possible type. From these you may select for yourself and your country what to imitate, and also what, as being mischievous in its inception and disastrous in its issues, you are to avoid.

Livy

Herodotus

Thucydides

Xenophon

Livy's History of Rome

Cesar

Arrian's Alexander

Utopia – More

The Prince – Machiavelli

Leviathan – Hobbes

History of the Decline and Fall of Rome – Gibbon

The Social Contract – Locke

An Essay on the Principle of Population – Malthus

Capital – ((Marx))

The Origin of the Family, Private Property and the State – Engles

The Communist Manifesto

Propaganda

Mein Kampf

Guns Germs and Steel – Diamond

Why Nations Fail – Robinson

The Tyranny of Experts

The Story of Civilization

The Making of Europe – Dawson

A History of the Ancient World – Rostovzeff

The Uniqueness of Western Civilization

Public Speaking: Age eight to 17. Forced public presentations.

Demosthenes

Institutes of Oratory – Quintillian

Cicero

Lessons on Elocution

Medicine: Age 12 to 17.

Hippocrates

On the Natural Faculties – Galen

Harvey

Aceland Anatomy

Happy Accidents

Overdosed America

Overdiagnosed

Good Calories Bad Calories – Taubes

Earth Science: Age 12 to 17.

On the Nature of Things – Lucretius

Geological evidence for the antiquity of Man- Charles Lyell

Biology: Age 12 to 17.

Origin of Species

The Descent of Man,

Selfish Gene, Extended phenotype

The double helix

Chemistry: Age 12 to 17.

The Skeptical Chymist

Lavoisier

Dalton

Textbooks:

General Chemistry: Principles and Modern Applications Text

Mathematics: Age eight to 17.

Euclid's elements

Archimedes's Works

Conics – Apollonius

La Géométrie– Descartes

Leibnitz's Works

Textbooks:

Statistical models: Theory and Practice

Calculus: Concepts and Contexts

Physics: Age 12 to 17.

On the Shoulders of Giants

On the Loadstone and Magnetic Bodies – Gilbert

Fourier

Plank

Poincare

Scientific Research: Age 12 to 17.

The Art of Scientific Investigation,

An Introduction to Scientific Research

The Structure of Scientific Revolutions

War: Age 12 to 17

Caesar

On the Defense of Fortified Positions

De Re Militari

On War – Clausewitz

Economics: Age 12 to 17

Oeconomicus

Wealth of Nations

Gottfried Feder

Road to Serfdom

Theory of the Leisure Class

General Economic History – Weber

Secrets of the Federal Reserve

The Creature from Jekyll Island

Billions for the Bankers, Debts for the People

“Money” The Greatest Hoax on Earth

Money Masters

The Great Deformation

Psychology: Age 12 to 17

Thinking Fast and Slow

Why Everyone Else is a Hypocrite

Le Ton Beau de Marot

Ethics: Age 12 to 17

Theory of Moral Sentiments – Adam Smith

Practical Ethics – ((Peter Singer)))

Great Ape Project

Eating Apes

Lifting: Starting at age 15

Ideal Physical Culture

The New Encyclopedia of Modern Bodybuilding

Starting Strength

Test Prep: Age 17

Of course, this reading list must be supervised by a pedagogue who will ensure it's coordination with the rote learning aspects of the curriculum in math and science. A good pedagogue should also engage in dialectic on all topics.

Education makes the wise slightly wiser, but it makes the fool vastly more dangerous.

Taleb

Table of Recommended Early Childhood Influences

Literature	Music	Television / Movies
Iliad and Odyssey		
Theogeny and Works and Days		
Pindar		
Aeschylus	Palestrina	Avoid
Metamorphoses	Monteverdi	
Aeneid	Bach	
Gospel of Mark	Handel	(exceptions)
Volsung Saga	Gluck	Snow White
Poetic Edda	Hadyn	Cinderella
Song of Roland	Mozart	Sleeping Beauty
Nibelungenlied	Beethoven	Peter Pan
Orlando Furioso		The Rifleman
Faerie Queen		
Jerusalem Delivered		
Paradise Lost		

You know, I said, that we begin by telling children stories which, though not wholly destitute of truth, are in the main fictitious; and these stories are told them when they are not of an age to learn gymnastics.

Very true.

That was my meaning when I said that we must teach music before gymnastics.

Quite right, he said.

You know also that the beginning is the most important part of any work, especially in the case of a young and tender thing; for that is the time at which the character is being formed and the desired impression is more readily taken.

Quite true.

And shall we just carelessly allow children to hear any casual tales which may be devised by casual persons, and to receive into their minds ideas for the most part the very opposite of those which we should wish them to have when they are grown up?

We cannot.

Then the first thing will be to establish a censorship of the writers of fiction, and let the censors receive any tale of fiction which is good, and reject the bad; and we will desire mothers and nurses to tell their children the authorized ones only. Let them fashion the mind with such tales, even more fondly than they mould the body with their hands; but most of those which are now in use must be discarded.

Republic, Plato, circa 380 BC

This early curriculum is not about the child's understanding, but rather about exposure of a young soul to nobility and excellence. We are essentially forming the shape of the brain, or the "type" of the soul. No reason that children can't be thrown into audiobooks of poetry (which have gotten very good) just like as in the most sophisticated or complex music at age zero. While they of course cannot speak poetry or compose music at a young age, these exposures set the foundation so they they will naturally and easily be able to in their mature adulthood.



Educational Viriculture – Part 5: College

Posted on [admin](#) Posted in [Book](#)

College

We have so far discussed educational viriculture through the child's seventeenth year, designed to maximize his human value. Although by this age the child should be plenty able to make his own decisions, in our modern world college age children are still typically dependent on their family for support (government loans having inflated the price of college beyond the budget of most 18 year olds). Our curriculum gives the child the prerequisites necessary to attend college, but we should assess whether college is actually worthwhile.

I see two good reasons why a child might attend college. The first reason is to gain access to a restricted profession. Today most kids go to college to get a "good job." For most students, college has become a long and boring replacement for vocational school. The apprenticeship system is cheaper, more efficient, and more humane, but sadly we abandoned this ancient tradition in favor of degrees and certifications. There is plenty to dislike about the current system, and it is worthwhile to seek out careers which do not require college as a pre-requisite. However, if a child has his heart set on a career in which a college degree is a necessity, college is unavoidable. In this case, the student should seek out the cheapest accredited institution capable of helping him reach his goal.

The second, more interesting reason to go to college – to gain a degree as status symbol. Especially if a child does not need to concern himself with earning a living, college takes on a different role. Higher education becomes an emblem of conspicuous consumption. In this case, the child should pursue the most prestigious possible degrees, and spend the college years in conspicuous leisure pursuits. The modern ideal "prince charming" is the holder of an Ivy League undergraduate degree. Why? Because this is seen by many to be an honest signal of human value. In order to get one of these degrees, you are subject to a rigorous vetting process, through which only the best applicants are selected. There is overlap between what is valued by an admissions committee and what is valued by others in a social context. Because of this, proof of admission to a prestigious college is a social signal that you are "valuable" person.

Ivy League admissions changed drastically in the 1960s, when "scholastic merit" as measured by grades and multiple choice tests became the primary criteria for selection. Before this time, family and social connections were the primary determinant. This change eroded the traditional aristocratic aesthetic of the Ivy League. Today, the children who manage to get into an Ivy college are pushed by their parents to "achieve" (in very boring ways) from an early age. Sometimes parents push their children at the expense of the child's comfort, free time, intellectual curiosity, and social exposure. In these cases, our ultimate goal of [status without anxiety](#) is compromised.

These enviable youngsters appear to be the winners in the race we have made of childhood. But the reality is very different, as I have witnessed in many of my own students and heard from the hundreds of young people whom I have spoken with on campuses or who have written to me over the last few years. Our system of elite education manufactures young people who are smart and talented and driven, yes, but also anxious, timid, and lost, with little intellectual curiosity and a stunted sense of purpose: trapped in a bubble of privilege, heading meekly in the same direction, great at what they're doing but with no idea why they're doing it.

Look beneath the façade of seamless well-adjustment, and what you often find are toxic levels of fear, anxiety, and depression, of emptiness and aimlessness and isolation. A

large-scale survey of college freshmen recently found that self-reports of emotional well-being have fallen to their lowest level in the study's 25-year history.

So extreme are the admission standards now that kids who manage to get into elite colleges have, by definition, never experienced anything but success. The prospect of not being successful terrifies them, disorients them. The cost of falling short, even temporarily, becomes not merely practical, but existential. The result is a violent aversion to risk. You have no margin for error, so you avoid the possibility that you will ever make an error.

Excellent Sheep, Deresiewicz, 2014

Additionally, while an Ivy League degree may be considered an important social signal, the Ivy "education" itself is not the valuable aspect. Standards of colleges and even private boarding high schools have fallen to degenerate levels. "College" material as we know it today used to be taught, for the aristocratic boys of Britain, at the age of 12 when they would leave their mothers and go to Eaton etc. It seems that the curriculum of those days was at least as rigorous as that which the average 2016 American college freshman struggles through.

	0 - 6	6-12	12-18	18-22	22-26	26-30
19th Century Aristocrat	Nurse	Tutor	Private Boarding School	Private College	Politics, Military, Business, Art, Science	Politics, Military, Business, Art, Science and Family
19th Century Artisan	Mother	Local School or Work	Apprentice	Journeyman	Masterwork	Masterwork and Family
19th Century Peasant	Mother	Local School or Work	Work	Work and Family	Work Family and Community	Work Family and Community
21st Century Rich	Expensive daycare (Mother works)	Private School	Private School	Private College (Parents Pay)	Private Graduate School (Parents Pay)	Corporate Manager
21st Century "Middle Class" (Peasant)	Cheap daycare (Mother works)	Public School	Public School	Public College (Student Debt)	Corporate "Associate"	Corporate "Associate" and working spouse
21st Century Viriculture Ideal	Mother	Homeschool or Tutors	Homeschool or Tutors	Independent Entrepreneur, Artist, Researcher, or Political-Military Agent	Politics, Military, Business, Art, Science	Politics, Military, Business, Art, Science and Family

We therefore have a problem. Ivy degrees provide a valuable social signal, and our “ideal” adults are Ivy graduates. But we know that admission to an Ivy typically comes at the expense of childhood freedom, self-determination, curiosity, risk-taking, and leisure. Ivies do not select on the basis of confidence, honor, nobility, beauty, honesty, or divergent thinking, and the Ivy grooming process may actively work against the cultivation of the legitimate human virtues. How can we make the best of both worlds – to allow a child to attain the honest signal of an Ivy undergrad degree without dragging him through years of inane resume building activities?

I believe part of the problem is that primary schools typically waste time. By training a child in language and music from very early, proficiency can be achieved naturally. By using tutors, the academic portion of any curriculum can be covered efficiently, and anxiety free, while still allowing for more time for dialectic, meditation, and introspection for the student. By steeping the

child in the classics, he will soak in time-tested wisdom, and be spared the government-issued uniformity of the Common Core thinking. Top colleges routinely admit homeschoolers, and other non-standard applicants. By aiming for viriculture, we incidentally check off many of the boxes needed for Ivy admissions, without Tiger Mom depriving our child of his humanity.

In the case that a child does not care to attend a prestigious school for showy reasons, we should help him find career that avoids the need to attend college at all. College as a replacement for vocational apprenticeship is the new norm, but it is a boring, painful, and expensive replacement – and still you don't really come out with any valuable skills.

Non College / Vocational Jobs

The ultimate goal of farming is not the growing of crops, but the cultivation and perfection of human beings.

The One-Straw Revolution, Fukuoka, 1975

There are certain jobs that have never and will never require a degree to pursue. Traditionally these have been the jobs most people perform – with farmer and defender of one's people as the two most fundamental. Today things are no so different. An enterprising farmer can easily make more than a college graduate in annual income, and he can start at age 14 instead of 22. Non-college jobs often carry with them additional benefits. Many of them allow us to be owner-operator, that is the boss, sparing us chronic anxiety over being managed or fired. There is less need to be dishonest or politically correct in these jobs than in the standard corporate setting, since there are no HR departments to keeping an eye on what we say. There is the huge benefit of avoiding being an indentured servant, as so many of our college graduates who now work at Starbucks have become.

It would be shameful for me to be a servant with freedom so ready at hand.

Essays, Montaigne, 1580

The true list of college-free jobs is endless, but some examples are below.

Farmer / Rancher / Hunter / Fisherman

Butcher / Baker / Fishmonger / Cheesemonger / Greengrocer

Florist / Gardener / Groundskeeper

Chef / Cook

Tailor / Weaver

Contractor / Electrician / Carpenter / Plumber / Mechanic

Furniture maker / Sculptor

Artist classically trained at an atelier

Conductor / Musician

Independent Solider

Success in these jobs comes from actually doing good work, unlike so many corporate jobs. However, it is important to keep in mind that the human excellence goes a long way in making life worth living, whether or not one is poor. Indeed, I have a hard time imagining that the product of rigorous viriculture, with his consequence anxiety-free status would have difficulty in whatever work he sought. The aristocratic renaissance man is a life that is certainly more worthy than the college educated employee, regardless of income.

Now the training of men is a difficult and intricate task. Its technique is a matter for educational experts, but its object is for the vision of seers. If we make money the object of man-training, we shall develop money-makers but not necessarily men; if we make technical skill the object of education, we may possess artisans but not, in nature, men. Men we shall have only as we make manhood the object of the work of the schools—intelligence, broad sympathy, knowledge of the world that was and is, and of the relation of men to it—this is the curriculum of that Higher Education which must underlie true life. On this foundation we may build bread winning, skill of hand and quickness of brain, with never a fear lest the child and man mistake the means of living for the object of life.

The Talented Tenth, WEB DuBois, 1903



Gender Roles and Viriculture

Posted on [admin](#) Posted in [Book](#)

When the Greek women married, they disappeared from public life; within the four walls of their home they devoted themselves to the care of their household and family. This is the mode of life prescribed for women alike by nature and reason. These women gave birth to the healthiest, strongest, and best proportioned men who ever lived, and except in certain islands of ill repute, no women in the whole world, not even the Roman matrons, were ever at once so wise and so charming, so beautiful and so virtuous, as the women of ancient Greece.

Emile, Rousseau, 1762

The suggestion that traditional gender roles for women may be linked to positive outcomes for child development will undoubtedly disturb some readers. To be blunt, I believe that for a mother modern

full-time employment outside of the home is incompatible with viriculture. This conclusion is a consequence of the mismatch between our biology and our modern environment. Contemporary wage labor is specialized, and specialized labor, in time, place, and type is generally at odds with effective mothering. If we actually want to realize viriculture goals, we must come to terms with this unfortunate reality.

Those who encourage traditional motherhood have come under attack for what is seen as attempts to bar women from positions of power in public and business life.

Patriarchy, an ideology that guarantees male dominance over women and thereby subsequently denies women access to power and authority, holds the myth of motherhood as one of the principle mechanisms to preserve traditional gender roles and the distribution of power. This myth claims that any woman who chooses not to mother is a failure both as a woman and as a citizen. Maternity is believed to be the natural state for women and that it should be the ultimate aspiration of their lives. Hence, any woman who chooses not to bear a child is a traitor to her very own femininity.

Refuting the Myth of Motherhood in Portuguese Literature, Kendrick, 2003

I myself have little interest in theoretical power dynamics between the sexes. Instead we should simply explore which motherhood practices are most conducive with good viriculture.

Traditional work differed very much from our modern 8 hour shifts performing a specialized task away from our home, friends, and family. This exaggerates the difficulty of viriculture practices for mothers. In an ancestral setting, daily tasks of women were wholly compatible with attachment parenting. Infant care may have been a slight hinderance to a mother's ability to perform productive work around the camp or village, but this would have been understood by all group members as an essential part of life, and the demands on the nursing mother would have been adjusted to suit her capabilities. Healthy human life was and should be extremely communal relative to Western suburban norms, and child care was a joint responsibility. Furthermore, more local community members would be related either by blood or marriage, creating a common interest in good childcare. There was no conflict between work and motherhood, and most women could have carried out social, useful work for the group throughout a viriculture-oriented pregnancy and nursing period. Some societies even gave mothers additional help to ensure good viriculture; the Spartans use their Helot slaves to farm and perform domestic chores freeing mothers to devote themselves to raising strong sons and daughters. This sort of dedication to child care, which would be criticised as maniacal by today's standards, is described in literature over and over among the martial and aristocratic classes during the generate, non-decadent historical periods of the West.

For the average woman in, for example, a small European town of the 1600s, the vast majority of work would have been performed close to home, among people who personally knew the details of her and her family. Traditional gender roles dictated that mothers had the responsibility to maintain their home, and perform many domestic tasks. However, the day-to-day chores of attached-mothers would have included unavoidable interaction with many familiar faces walking through streets to markets, public wells, festivals, religious gatherings, and to the various other unavoidable social interactions that were part of town life in the pre-automobile era. Other mothers with children of similar ages would generally be no more than a short and safe walk through a familiar town. Indeed young children themselves would require far less supervision than in modern America – the chronic

low-grade stressor of ubiquitous violent crime *within* a town was much less bothersome in homogenous societies of the past.

Shal spend thir dayes in joy unblam'd, and dwell

Long time in peace by Families and Tribes

Under paternal rule

Paradise Lost, Milton, 1667

Parents of the past certainly did not bother to pay for dedicated full time “professional” supervision to keep their children safe within town. Unfortunately, contemporary wage-work and housework both suffer from problems are a result of our aberrant living arrangements and architecture. Wage-work is too far from home, too long of a continuous stretch, and is generally managed by someone who does not want a working mother to bring her baby to the job. Housework is too socially isolated, and often too financially unproductive. Today, instead of living in a busy community of friends, mothers live alone in their home or apartment. Although useful and productive work can still be performed at home, the aspect of extreme social seclusion makes this sort of work less pleasant than in prior ages. The automobile and the resultant suburban sprawl, as opposed to pedestrian community life, is partially to blame for the cultural shift from seeing “homemaker” as a laudable career goal – even in the recent past – to being denigrated today.

In a couple of years, with the right moves, you'll be in the city with the rest of us. Of course, if you really make the right moves, you'll be out in the country and you won't be going to work at all.

Mad Men, 2007

The traditional work arrangement for women allowed mothers to engage in attachment care without excessive burden – and this was hardly out of some masculine instinct toward female oppression.

Any man of common right feeling will love and cherish her who is his own, as I this woman, with my whole heart

Iliad, Homer / Butler, circa 800 BC

Since then, the location, duration, and tasks involved in productive work for women has changed dramatically – but our biology has remained the same. This creates a dilemma for viriculture mothering – mothers have productive capacity and want to be vocationally and socially involved in their communities, but modern jobs are incompatible with optimal pregnancies and attachment mothering. Today it is really only practical for a woman to meet the demands of viriculture child care if *that* is her full time job.

If a mother wants to work outside the home modernity will surely encourage her strongly, but the truth is that full time work almost certainly comes at the expense of viriculture. I personally would not want the mother of my children to *have* to work before, during, or after her pregnancy – and it therefore becomes the responsibility of the father, as it ever has been, to provide adequate resources for a comfortable home life.. As (((Christopher Hitchens))) said,

I'm not having any woman of mine go to work. They don't need to work. They can if they like, but they don't have to... I would expect to take care of them.

Sadly this attitude, which prior to 1960 would have been taken for granted as basic decency, is now considered "offensive."

In discussing viriculture and working mothers, we are bound to run into the criticism that I am implying that working mothers are bad mothers. This issue has been endlessly belabored, and it should come as no surprise that *The Atlantic* comes to the rescue of its audience (educated working women) to rationalize work-a-day motherhood is just fine for the child. In an article titled *Should You Bring Your Unborn Baby to Work?*, a stay-at-home-dad whose wife is the breadwinner explores and ultimately vindicates stressful work during pregnancy.

She heads a team, and she's ferociously dedicated to her work—which translated, late in her pregnancy, to a couple of 80-hour weeks and chronic sleep deprivation. When she came home from work at 2 a.m. for the second time in as many weeks, I started to fear that her grueling schedule might affect her health, and that of our unborn son... In the end, our son arrived a week late, large and healthy. He's grown into a solid, bright-eyed baby who laughs and babbles plenty... All of my fretting over her work was perhaps misplaced. My wife was respected; she had control.

Should You Bring Your Unborn Baby to Work?, *The Atlantic*, Velasquez-Manoff, 2015

The author concludes that paid leave for pregnancy (especially the government-funded Scandinavian variety) is the way to healthier mothers and children. However the author's women-can-have-it-all happy ending is flawed for three reasons. Firstly the child will never be subjected to a rigorous evaluation of viriculture outcomes, secondly it ignores the ongoing importance of attachment parenting into childhood, and finally it implies that social leniency to allow complete autonomy for mothers to engage in jobs that are destructive to their child's viriculture is some kind of virtue. Compare our modern attitude to the unabashed eugenics of the early twentieth century.

Children born of over-worked mothers, are liable to a be dwarfed and puny race... She needs care during pregnancy and freedom from work when her child is born; she must have a quiet, easy life while she nurses her children... And there should be no question of virtue in all this, it must be a labour of love, without which the human race would be doomed to extinction.

Search Lights on Health, Jefferis, Nichols, 1898

Another *Atlantic* article titled *The Perils of Attachment Parenting* from 2014 further relieves working mothers of any guilt they may feel about their modern parenting practices.

The dad and his wife had decided to try "attachment parenting" with their newborn son. That meant they slept in bed with their son every night, fed him milk every time he cried, and carried him everywhere they went in a baby sling. Though the intentions behind the philosophy are wonderful—let's raise secure, attached, emotionally healthy children—attachment parenting is an unsustainable model... Some people argue that throughout history, all over the world, parents have kept their children by their side at all times. Yet our Western culture hardly resembles these cultures. (Did these parents have commutes and nine-to-five jobs?) Parents need to be able to focus at work, not be

sleep-deprived, and devote their affection and attention to their kids when they get home.

In their ardor to defend the “needs” and “independence” of mothers, the author encourages a laxity parenting that will never lead to optimal viriculture. The children may well be “fine” by the standards of modernity, but they will not be excellent according to a universal standard.

Even from a grotesquely avaricious perspective on the part of the mother, a single beautiful excellent viriculture son would, as opposed to his poorly developed alternate-self (reaction-norm), earn back more money than was lost by the mother giving up those seven or so years of work – and this doesn’t even come close to taking into account the full benefits to his life. Remember, beautiful socially dominant people are paid more, live longer, healthier lives, and do far better in the dating market.

The time commitment of viriculture infant care is much greater than American mothers typically spend. Although it may be possible to achieve this while working full-time, I suspect it would be very difficult. This difficulty would no doubt impede success for some of those mothers who attempt both at once. Those of us who wish to practice viriculture for our families should recognize this potential difficulty, and plan accordingly.

How can we overcome the need for mothers to work full-time out of the house during her childbearing years? Traditional cultures addressed this issue by pair bonding, and having different expectations for the type of work men and women performed. Once pair bonding became an established practice, cultures which encouraged sex-specific specializations of labor would have likely been selected for.

Just as division of labor can provide mutual advantage in economic exchange, division of labor between mates can benefit both parties. Mating and childcare is often thought of in terms of exchange by biologists. Women are endowed with the ability to gestate and nurse. They also possess adaptations that make them more suitable than men for infant care. These abilities are scarce resources in the eyes of men, who do not share them. Men, on the other hand, have traditionally possessed a superior ability to provide resources. The exchange has been the male providing resources in exchange for the female providing reproduction and early childcare. By specializing in those activities which lend themselves to each sex’s biologic strength, both parties benefit.

A YouTube video titled *Fempocalypse!!* explains the traditional exchange in one sentence.

Patriarchy worked very well for society overall because it provided women with the surplus labor they required to raise their children under the best circumstances possible, at no cost to anyone but husbands and fathers. And men’s ownership of their children motivated the vast majority of men to do more than just subsist, to essentially labor at more than minimum capacity.

Viriculture necessitates children be raised “under the best circumstances possible,” and traditional gender roles make this inherently difficult task easier. Since viriculture is essentially a full-time commitment in itself, we ought not to expect a viriculture mother to remain as financially productive as before she became pregnant. This is the exact solution observed in traditional societies, where women of child-bearing age tend to contribute less food to the group, only to become productive again after their children are grown. Of course, the mothers are hardly being

non-productive during their child-bearing years, these societies implicitly recognize the value of viriculture. It is worth it for everyone for the mothers to focus their energy on their children.

Historically, working women have generally been associated with “savage” or “barbarous” degrees of civilization sophistication, with women shouldering an increasing proportion of productive drudgery as the society gets poorer. Wealthy and civilized societies have more honorific things for women to do than productive work. From this perspective, we can see that the modern social norm of encouraging women to work may simply be a post hoc rationalization of our impoverished society’s need to send women to make money. In reality, modern work for women is a tool of their enslavement, not their liberation.

Indeed the use of non-traditional gender roles was a deliberate technique in the enslavement of Africans in the New World.

By her being left alone, unprotected, with the male image destroyed, the ordeal caused her to move from her psychological dependent state to a frozen independent state. In this frozen psychological state of independence, she will raise her male and female offspring in reversed roles.

Willie Lynch 1712

In this context “the male image destroyed” means that men were rendered incapable of functioning as protector and provider for women. Instead of maintaining the natural human psychology, female slaves adopted a spiritual independence which they passed to their daughters, while maintaining an unnatural and pathologic overbearing protection of the sons. This psychological trick created dependent sons who were, in their adulthood, docile and uninterested in demanding their freedom.

Despite the cruelty of such a system, we know that the psychological manipulation employed was effective, partly through first hand testimonials, and partly because this system of maintaining African slaves functioned for hundreds of years.

The issue of critical importance for the contemporary reader is that the same basic psychological formula of “destroying the male image” as protector and provider is used today to glorify a similar female independence through media influences. Less explicit than lynching and beatings, the constant disdain of post-1960s mass-media for traditional gender roles is no less of a psychological influence on Western women. The children of these “liberated” “independent” mothers are, like the children African slave mothers, raised with unnatural reversed gender identities, and the docile men are thereby unable to overthrow their oppressors.

Unlike the masters of African slaves of the New World, our modern masters are more more difficult to identify. But rest assured that they desire a docile, industrious, working class – and all the better if we do not recognize our own servile condition. The modern master is most simply described as “debt,” which, as we shall see, is the fundamental social-political issue of our day – and possibly of all time. Far from being, as some suppose, “a necessary evil,” debt in contemporary society is part of a terrifying pyramid scheme of global proportions. It is the means of our modern poverty and unasthetic existance, and is at the heart of cultural degeneracy.

Just as for women, the gender role for the average man has changed dramatically since the 1960s as well. Traditionally Dad was the head of the household and the breadwinner. The nature tendency for

paternal authority was often legally ordained, such as with the *pater familias* in generate Rome. Other times, it is a more of a social than a legal norm, such as in early America. In these contexts, viriculture is much more natural for a family and society to achieve.

God reward the father that brought you up so nobly; doubtless he is a baron, rich and strong.

Tristan and Isolde

The modern world has reversed the traditional norm of paternal authority, and the destruction of the family has been the result. Legal changes, first with the enfranchisement of women, and then in the resulting domains of in child-support, divorce and alimony, sexual harassment, gender discrimination, and labor laws has completely changed the landscape of father's rights in the West.

But still I see the tenor of Mans woe

Holds on the same, from Woman to begin.

From Mans effeminate slackness it begins,

Said th' Angel, who should better hold his place

By wisdom, and superiour gifts receav'd.

Paradise Lost, Milton, 1667

The situation has become hazardous for young men that they are increasingly opting out of traditional fatherhood roles altogether. Unlike in the generate ages of the West, when fruitful fatherhood was a divine reward...

Succeed my wish, and second my design;

The fairest, Deiopeia, shall be thine,

And make thee father of a happy line.

Aeneid, Virgil / Dryden, 19 BC

...men no long aspire to the once respected paternal role, partly because we are so poor (we have been robbed of both our traditional artisan skill set by public school, and the purchasing power of our labor by debt-money). Whatever your opinion on changes in gender roles may be, the negative effect on viriculture without a stable household with a male breadwinner should be clear.

The reality of viriculture is that choices the mother makes about how to spend her time will influence the development of her child. In the past, choices were easier. Cultures all over the world assigned young women tasks that lent themselves viriculture. This was probably not explicitly understood, but rather was the only viable option, Plato's "right-opinion," considering that modern child care practices would have led to an unsustainable degree of infant mortality if practiced in an ancestral context. Today women have many options. However, it should not be denied that if a new

mother wants to (or believes she must) return to full-time, outside of the home work immediately after delivery, we can expect that this comes at a cost to viriculture.

In our modern world, we often make income sacrifices for the benefit of children. These are often explicit, such as paying for private school, tutoring, camp, day-care, books, toys, etc. Another common form is sacrificing the mother's potential income while her children are young. However, this does not preclude the mother from engaging in valuable and satisfying activities during these years. It simply means that viriculture lends itself to some jobs better than others.

Of course, the option of abandoning work and raising children is easier for people with money. It may be a sad reality ideal development of children is much harder for the poor, because they cannot afford to leave full-time employment. However, children may develop better on a \$40,000 a year household income with a viriculture mother than \$80,000 with day care, bottle feeding, pacifiers, strollers, diapers, and sleeping in a crib.

On a personal note, most college educated girls I have spoke with believe that attempting a career is more meaningful than attempting to develop and nurture their children as well as possible. To me this attitude seems exactly backwards. Development and education of children seems to me very meaningful, especially when compared with the type of rat-race work most of us perform. Even the more mundane aspects of housework are superior to college graduate's corporate servitude in this regard.

Seen from the outside, housework can look like a Sisphean task that gives you no sense of reward or completion. Yet housekeeping actually offers more oppurtuntieis for savoring achievement than almost any other work I can think of.

Home Comforts, Mendelson, 2005

We have a culture that does not assign the correct value to excellent motherhood. Our culture does, however, value the results of viriculture care present in the adult: physically well-developed, emotionally stable, straight teeth, perfect vision, multilingual, etc. In this way viriculture is a sacrifice for the mother, but one that pays off in the end.



Debt-Money

Posted on [admin](#) Posted in [Book](#)

Mammon (said he) thy godheades vaunt is vaine,
 And idle offers of thy golden fee;
 To them, that couet such eye-glutting gaine,
 Proffer thy giftes, and fitter seruants entertaine.

The Faerie Queene, Spencer, 1590

As we saw [in a previous post](#), universal public school was not designed with human excellence as a goal, but rather to create an large obedient class of workers without artisan skills who would drive the factories and make money for those who own the means of production.

Every worker a cog in motion.

Ragtime, 1996

This true goal of schooling is achieved through diverse means, a major strategy being wasting time, another the ignoring or glossing over the great works of history and literature. But over the last century, it is the educational censorship about the nature of money that has been the most harmful to human excellence. While public education impoverishes us intellectually, and the loss of traditional religion impoverishes us spiritually, it is modern debt-money that impoverishes economically – and is at the center of a web of factors that contribute to our contemporary human degeneration:

1. Debt Money
2. Government Education
3. Loss of Traditional Child Care Practices
4. Loss of Traditional Social Networks
5. Loss of Traditional Architecture and City and Town Structure
6. Loss of Traditional Religion
7. Dysgenics

Understanding how these factors are related is fundamental to understanding the social problems of the modern world.

Societal wealth is a prerequisite for human flourishing, it frees up the necessary time and money for the development of culture – both on a communal and individual scale. And while our modern technology allows humanity to be more productive than ever before, the true human value of this productivity is stolen from us covert means. Debt-money is that means.

“Debt-money” means money that is created with agreement to repay the issuer. In our contemporary debt-money system, shared by nearly all nations on the Earth, we are indebted to the issuers of our money. This may seem like a minor point, but in fact debt-money by its nature possibly the most pernicious force in all human history. Astonishment is generally the reaction where one first wraps his head around the mechanism by which debt-money steals from us. In order to fully comprehend the far reaching consequences of this system some economic background must first be provided.

In the purist possible economic transaction, two things equal value, say painless dental extractions for a 30-day dry aged grass-finished standing rib roast, are exchanged and the transaction is completed.

For the workman is worthy of his meat.

In ancient times precious metals, especially gold, developed as a useful universal medium of exchange because they were rare, easy to validate, and durable. This made transactions such where one party paid in gold common, such a rib roast for gold. These transactions are still pure, since the goods exchanged are of equal value, and they end when the exchange is made. Some issues arose with regard coin clipping and counterfeiting...

As guilefull Goldsmith that by secret skill,
With golden foyle doth finely ouer spread
Some baser metall, which commend he will
Vnto the vulgar for good gold insted,
He much more goodly glosse thereon doth shed,
To hide his falshood, then if it were trew

The Faerie Queene, Spencer, 1590

...but these tricks were generally easily identified, as pure gold has a uniform density.

Because carrying large quantities of precious metals is heavy and risky, people eventually began to store their precious metals in proto-banks, for which they received a deposit slip. This deposit slip was like a coat check ticket, a “you-owe-me” from which the bearer was entitled to his actual wealth at any time. In accounting terminology, these slips are “debt”, the precious metal is the offsetting “credit” – and these slips allowed for the origin of “debt-money.”

For reasons of convenience, these deposit slips took the place of precious metals in many transactions. We are now faced with the first layer of “impurity” in economic transactions: paper “you-owe-me” slips for real goods or services. In this case, the transaction is not complete at the time of the exchange, as the party holding the deposit slip still has no real wealth, but rather he has received debt in exchange for real wealth. Only when the deposit slip is finally brought to the bank and exchanged for gold is the transaction fully complete, as wealth has finally been exchanged for wealth (real goods or services for precious metal).

Using paper deposit slips as a means of exchange is not in itself a problem. However, the aspects of banking that make it fundamentally immoral and destructive are an emergent property of the common use of bank issued debt-money. Banks accepted precious metal deposits and gave deposit-slips. However, early bankers noticed that most depositors did not ask for their gold back every day. In fact, because the paper deposit-slips worked in the marketplace to procure goods and services, they were often seen as “as good as gold” in the eyes of a sufficient number of the holders. On average, banks would always have a large amount of gold in their hoard just sitting around. The early bankers, hoping to make more money for themselves, began the first dishonest practice of banking – loaning this stored gold that others had entrusted to them at interest.

While loaning the gold that other customers had entrusted to banks without their explicit consent is a dishonest scheme, it is only the first step in the evolution of banking evil. The second and more insidious step is the introduction of what is known as fractional reserve banking. Because deposit slips in the marketplace came to be treated “as good as gold,” banks noticed that their customers did not necessarily demand loans of gold *per se*, but would often be satisfied with deposit-slip notes. With this scheme, banks could loan much more money than they ever had actually in real value (precious metals), today about 10 times more.

Then he who is a good keeper of anything is also a good thief?

Republic, Plato, circa 380 BC

Since these deposit-slips were only rarely redeemed, the bank would appear solvent during times of low stress to the banking system. On the rare occasion that a large proportion of the holders of deposit slips would demand their gold at the same time (the inevitable “Gray Swan”), the inherently fraudulent scheme of fractional reserve banking would collapse. The truth that the bank never had sufficient reserves to cover its loan obligations would be revealed for all to see, the majority of holders of deposit slips would never have their gold returned, as it never existed in the first place. At this point the bankers were usually imprisoned or killed.

As banks grew in size, these “bank failures” would occur less frequently, but each occurrence would have further reaching effects, as the number of holders of deposit slips was greater (today banks are the biggest they have ever been, and the threat of massive international failure looms). The infrequency of bank failures, but the great magnitude of their consequence make them, to the average person, Black Swans. Because of an inherent defect in human psychology we tend to have a difficult time thinking about Black Swans. To protect against this human shortcoming and the rare but disastrous bank failures, which may take longer than a lifetime to realize, culture has enshrined solemn regulations against debt and usury in our religions.

And when he had made a scourge of small cords, he drove them all out of the temple, and the sheep, and the oxen; and poured out the changers’ money, and overthrew the tables.

John 2:15, KJV

In the *Cleansing of the Temple*, an event leading up to his death, Jesus, according to the gospel of Matthew, condemns the moneychangers as ληστές, literally “robbers” but more commonly translated to “thieves,” as in the famous “den of thieves” from the KJV. This word use is critical to the story, which in modern analyses implies that Jesus simply Moneychangers were, at the time of Jesus, used to exchange foreign currency required by the temple from religious pilgrims to make sacrifices, but they also served another purpose, as explained in the Encyclopedia Judaica:

Not only did these foreign coins have to be changed but also ordinary deposits were often handed over to the Temple authorities for safe deposit in the Temple treasury. Thus Jerusalem became a sort of central bourse and exchange mart, and the Temple vaults served as “safe deposits” in which every type of coin was represented. The business of money exchange was carried out by the shulḥani (“exchange banker”), who would change foreign coins into local currency and vice versa. People coming from distant countries would bring their money in large denominations rather than in cumbersome

small coins. The provision of small change was a further function of the shulḥani. For both of these kinds of transactions the shulḥani charged a small fee (agio), called in rabbinic literature a kolbon. This premium seems to have varied from 4 percent to 8 percent. The shulḥani served also as a banker, and would receive money on deposit for investment and pay out an interest at a fixed rate, although this was contrary to Jewish law.

Thus the shulḥani fulfilled three major functions: (a) foreign exchange, (b) the changing of large denominations into small ones, and vice versa, and (c) banking. Three terms for “money-changer” are found in the New Testament: (a) kermatistēs (John 2:14), (b) kollybistēs (Matt. 21:12), and (c) trapezitēs (literally, shulḥani; Matt. 25:27, et al.) It seems probable that these three terms correspond to the three functions of the shulḥani outlined above. Thus kermatistēs, from kermatizō. “to cut small,” is one who gives small change; kollybistēs, from kollybos, changed foreign currency; while the trapezitēs was a banker.

Now we can better see why “moneychanging” was especially unholy in the eyes of Jesus – the moneychangers were what we call bankers. That this story is retold independently in the gospels of Matthew, Mark and John solidifies it as an important event in the life of Jesus. The religious condemnation of banking, debt, and usury is clear in the Quran texts as well:

Those who devour usury will not stand except as stand one whom the Evil one by his touch hath driven to madness. That is because they say: “Trade is like usury,” but Allah hath permitted trade and forbidden usury. Those who after receiving direction from their Lord, desist, shall be pardoned for the past; their case is for Allah (to judge); but those who repeat (The offence) are companions of the Fire: They will abide therein (for ever).

Allah will deprive usury of all blessing, but will give increase for deeds of charity: For He loveth not creatures ungrateful and wicked. O ye who believe! Fear Allah, and give up what remains of your demand for usury, if ye are indeed believers. If ye do it not, Take notice of war from Allah and His Messenger.

Al-Baqarah, 2: 275-279

Indeed in the contemporary world Muslims actually adhere most closely to this prescription against usury, although work-arounds exist. But the Jews as well, despite being the group whose folklore is most closely tied to usury and moneylending, are commanded against charging interest.

Thou shalt not lend upon usury to thy brother; usury of money, usury of victuals, usury of any thing that is lent upon usury: Unto a stranger thou mayest lend upon usury; but unto thy brother thou shalt not lend upon usury: that the LORD thy God may bless thee in all that thou settest thine hand to in the land whither thou goest to possess it.

Deuteronomy 23:20-21

While lending other people’s money without consent, and the fractional reserve method of banking are the first layers of the unethical nature of banking, there is final layer of of evil of our contemporary debt-money system. As banks increased in size, they made increasing large loans to princes, kings, and eventually to governments themselves. Since citizens will only allow taxes to rise so high before revolt, loans allowed governments to spend more than their tax revenues allowed, and their allowed bankers to make interest nearly risk free. In this way banks came to

wield political power. Banks and governments became increasingly interdependent with both politicians and bankers benefiting. Using their combined powers, laws were gradually passed in order to legitimize banking as an enshrined government entity in its own right. The first bank of this kind was established as the Sveriges Riksbank in 1668 in Sweden, with the Governor and Company of the Bank of England being established three decades later. These were the first “central banks,” a special type of pseudo-governmental organization that has legal authority to be the exclusive issuer of a national currency. Ostensibly, these banks function as “lenders of last resort” when the fractional reserve banks fail. Over centuries of refinement, this type of bank has expanded their power, so that now nearly every currency is issued by a central bank. Before World War II these banks had private stockholders, but since then the central banks of Europe were nationalized. This was subterfuge however, as the political control of the central banks is still in the hands of banking interests who profit from the policies they set. Whether the central bank is public, private, or a combination makes little practical difference in the scheme.

In the contemporary banking system, central banks loan the government money. The system is maintained because it allows politicians to spend more money than they have, and the bankers to make essentially risk free interest profits. The endless increase in the central bank issued loans increases the money supply. While the actual value of money comes from the human exchanges of goods and services, banks and governments steal this real value with freshly printed money. Where does the central bank get the money? They simply make it up in an account – no real wealth or labor is involved. Why any nation should get its money from a bank loan instead of simply mandating the creation of money itself is a question with only one possible answer: central banks are parasitic entities which work against the interest of nations and people, and exist strictly to steal real wealth and productive capacity for their owners.

This is the grand pyramid scheme of our money – our money is made up by central banks and loaned to us at interest. Therefore there can never be sufficient cash in circulation to pay both the principle and the interest. New loans of money must constantly be made to cover existing debts. Debt money by its nature is bound to impoverish us through perpetual ever increasing debt, and ever increasing inflation.

Inflation is the covert tax that allows contemporary governments spend so much money, without “raising taxes” – and central banking provides the means for its own selfish reasons. If people knew their actual tax rate, revolution would quickly break out. This is the reason why the majority citizens with a “good job” in a “rich” nation like the United States are deeply in debt and one paycheck away from living on the street.

The cultural achievements and human excellence of the Greeks, Rome, Renaissance, Enlightenment, and Modern Europe, and the Young United States, was partly due to these societies had *relatively* less debt-money. The people and the communities were less suffocated by the of the financial slavery to interest. This financial aspect is a essential component of real *freedom*, and it is tragic irony that so many people truly believe to living in the “greatest, freest” time and place despite our perpetual debt-slavery. Freedom is more than getting to choose what color made in China shoes you want from the mall, or how big of a mortgage to get. We never be free unless we have free money.

When I listened to Pericles and other skilled orators I thought them eloquent, but I never felt anything like this; my spirit was not left in a tumult and had not to complain of my being in the condition of a common slave: whereas the influence of our Marsyas [referring to Socrates] here has often thrown me into such a state.

Symposium, Plato, circa 380 BC

Many people are surprised to learn that currencies were once “backed” by precious metals, but are no longer. However, it is naive to think that a return to gold backed money would solve any problems. Thousands of years ago, gold markets were difficult to manipulate, since it was found naturally in small amounts, and could not be manufactured (despite the earnest attempts of alchemists). Today, however, the majority of the world’s gold is owned by central banks, who can contract or expand the quantity in circulation to meet their own interests. The principle of gold-based money leading to accumulated power in the hands of accumulated wealth at the expense of the working non-capitalist classes was the premise of Bryan’s famous “Cross of Gold” speech which was so famous that it cannot be completely ignored even in public school, although the significance is rarely fully appreciated. Silver, which is naturally more abundant, has never been consolidated to the same degree as gold, allowing less risk of artificial manipulation.

The desire for some underlying physical wealth to “back” our money is because this serves as a sort of safeguard against political and banking powers from manipulating the quantity of money for their own ends. But ultimately, the quantity of money is not the fundamental problem of our money politico-economic system; it is rather a problem with the nature of our money. Today money is created through borrowing. We borrow from a central bank, and swear on the “full faith and credit” of the nation, to repay this debt, with additional interest of course. Because central banking has discovered the most effective money making scam in world history, these institutions afford excellent PR, and in many nations, a long and pseudo-august heritage. However, at their core central banks are criminal organizations, made legal through hundreds of years of successful maneuvering.

Let’s consider the American system of debt-money as an example. The central bank is the Federal Reserve, which behaves according to the policies of those bankers who control it. Congress is loaned money from the Fed, which it then has to pay back with interest. Of course, the Fed simply makes up this new money upon issue. The value of each new dollar is stolen from existing dollars in circulation – the ones that normal humans actually did real work to earn.

The history of how the real greatest, freest nation on Earth – a European Enlightenment nation on a massive empty continent – allowed itself to be economically enslaved is a tragedy on par with the Peloponnesian War, and many others have covered it extensively in their books. America certainly wasn’t always like this:

And I sincerely believe, with you, that banking establishments are more dangerous than standing armies; and that the principle of spending money to be paid by posterity, under the name of funding, is but swindling futurity on a large scale.

Jefferson to Taylor 1816

In fact the struggle against the banks has been one of the top two issues (the other being slavery) of American history – although its never fully explained in government school. Early America actually went through a series of central banks, with Andrew Jackson devoting his political career to their destruction. An excerpt from his 1832 veto message of the renewal of the Bank's charter is below:

Is there no danger to our liberty and independence in a bank that in its nature has so little to bind it to our country? The president of the bank has told us that most of the State banks exist by its forbearance. Should its influence become concentrated, as it may under the operation of such an act as this, in the hands of a self-elected directory whose interests are identified with those of the foreign stockholders, will there not be cause to tremble for the purity of our elections in peace and for the independence of our country in war?

Although the Bank struggled for its existence, its charter eventually expired in the 1830s. After this spectacle of the American public had become so familiarized with the dangers of central banks that the next incarnation, the Federal Reserve, was deliberately designed by bankers so as to mask its true purpose. Established in 1913 the Fed has reigned over the gradual impoverishment of the American people – until today we can barely afford the interest payments on our personal debt. Even Woodrow Wilson, who presided over three great blunders of the US in the twentieth century, the passage of the Federal Reserve Act, institution of the income tax, and the American entry into Europe's Great War, understood the problem of central monetary power:

I merely say that, by certain processes, now well known, and perhaps natural in themselves, there has come about an extraordinary and very sinister concentration in the control of business in the country. However it has come about, it is more important still that the control of credit also has become dangerously centralized. It is the mere truth to say that the financial resources of the country are not at the command of those who do not submit to the direction and domination of small groups of capitalists who wish to keep the economic development of the country under their own eye and guidance. The great monopoly in this country is the monopoly of big credits. So long as that exists, our old variety and freedom and individual energy of development are out of the question. A great industrial nation is controlled by its system of credit. Our system of credit is privately concentrated. The growth of the nation, therefore, and all our activities are in the hands of a few men who, even if their action be honest and intended for the public interest, are necessarily concentrated upon the great undertakings in which their own money is involved and who necessarily, by very reason of their own limitations, chill and check and destroy genuine economic freedom. This is the greatest question of all, and to this statesmen must address themselves with an earnest determination to serve the long future and the true liberties of men. This money trust, or, as it should be more properly called, this credit trust, of which Congress has begun an investigation, is no myth; it is no imaginary thing.

Since the establishment of the Federal Reserve, a number of politicians have worked against its growing power, with Congressman Ron Paul becoming a champion of the cause in the last thirty years. With the advent of Youtube, which allowed light to shine through the 60 year fog of mass media brainwashing, his 'End the Fed' message reached millions. This culminated in his presidential runs in 2008 and 2012, in which he received millions of votes, and brought significant public attention to the issue of the nature of money – despite being deliberately ignored by all mainstream media coverage. The legacy of these efforts lives on in the contemporary campaign to

pass an act of Congress to “Audit the Fed.” The record books of the Fed are kept secret, but undoubtedly contain the evidence of the Fed’s funneling American public monies into international private banks by the trillions.

To better illustrate the various types of money and their problems, I have included the chart below. As you will see the United States has used many types money, with the current type in circulation – the debt-based central bank issued variety – being an instrument of economic slavery.

	Precious Metal Coin	Precious Metal Certificate	Pure Fiat Debt-Free Government Note	Debt-Based Central Bank Note	Debt-Based Central Bank issued Base Metal Coin	Internet Based Cryptocurrency
Example	1921 US Morgan Silver Dollar	Series 1923 US \$1 Silver Certificate	Series 1963 \$5 United States Note	Series 2015 \$1 Federal Reserve Note	2015 US Quarter	Bitcoin
Real Value	Value of the precious metal that makes up the coin itself	Paper	Paper	Paper	Value of the base metal that makes up the coin itself	Nothing
Major Problem	Difficult to transport and transmit, subject to physical theft.	Underlying precious metal is subject to theft through unscrupulous fractional reserve lending practices of the issuing body.	Subject to debasement by unscrupulous government printing .	Allows for the real value of the production of goods and services to be stolen from producers who hold of this type of currency. Maintains the government in a permanent state of debt servitude to the issuing banks and their shareholders.	These are just a novelty so that the public doesn't realize what has been stolen.	Dependent on modern information technology. New. ?

I strongly encourage the reader to take close look at the image of the dollar associated with this post. The real value and spiritual meaning of the American money of that day (1896) can teach us just how much we have lost in the last century.



Viriculture in Practice

Posted on [admin](#) Posted in [Book](#)

Weakness in character may constitute the greatest barrier in the reorganization and conservation of our modern civilization.

Nutrition and Physical Degeneration, Price, 1939

So neither ought you to attempt to cure the body without the soul; and this is the reason why the cure of many diseases is unknown to the physicians of Hellas, because they are ignorant of the whole, which ought to be studied also; for the part can never be well unless the whole is well.

Charmides, Plato, circa 380 BC

As Socrates told us long ago, we can't cure the body without the soul. Anyone can attempt viriculture, but moderns will need to undergo a spiritual shift to make it practical.

Socrates: Perhaps we could compare them to sick people who lack the self control to give up their bad habits.

Adeimantus: That's a good analogy

Socrates: What a beautiful existence such people have, constantly treating and complicating their disorders, hoping they will be cured by the latest panacea someone recommends to them, but no matter what remedy they try they always get worse rather than better.

Adeimantus: You describe them well.

Socrates: And the most amusing thing about them is that they consider anyone who tells them the truth to be their worst enemy. They do not want to hear that unless they stop overeating and getting drunk, and give up sloth, and indiscriminate sex, nothing will cure them, not drugs, or surgery, or even magic spells and protective charms.

Republic, Plato, circa 380 BC

This spiritual shift is a reversion to a more traditional, but at the same time richer and more humane way of life.

But there is also a Zen solution to scarcity and affluence, beginning from premises opposite from our own that human material ends are few and finite and technical means unchanging but on the whole adequate. Adopting the Zen strategy, a people can enjoy an unparalleled material plenty, though perhaps only a low standard of living, That I think describes the hunters.

Notes on the Original Affluent Society, Sahlins, 1968

Man the hunter is the paragon of the beautiful simplicity that harmonizes with viriculture. After a tiring hunt, with his most recent kill roasting on a blazing wood fire, he is satisfied resting on a fur rug with his family and friends dancing or telling stories under the stars. His skeleton is full and robust, but he is also lean and muscular, and free of the nagging repetitive stress injuries of modernity, His wife has plenty of fat meat, fresh air, and safety in this community, everything she needs (and nothing she doesn't) for optimal development of her infant, which itself is always in contact with her.

This spirit of life characterizes the generate phases of our history, whether Greek, Roman, or American. However, as societies degenerate, decadence overtakes simplicity. Today we have been brainwashed into a endless cycle of consumption, while neglecting our most basic needs along the

way. Consumption is the modern's recreation, TV advertisements are our campfire, the mall is our church, and the Apple logo has replaced the holy cross for many in the West. Luckily, we can accept the inevitability of status seeking in human relations without drowning ourselves in the horrifyingly unaesthetic and spiritually demeaning nature of modern life. The primary signals of human value and status, the ones which we have evolved to feel most profoundly, are found in our carriage, our wit, our voice, our naked bodies and on our faces.

Modern man "can't afford" a freezer full of grass fed beef and Alaskan salmon, but will turn around and spend the same amount per pound on cookies, crackers, and other dainties which destroy the health of himself and his family. Modern woman "must" work full-time as a mother, yet her income is spent sending the children to daycare, buying a 33% bigger house, a BMW, and a new pair of shoes every 3 months. Modern families will set the thermostat at a freezing 65 F, stealing valuable energy from growing children, only to save money for jet-setting vacations, christmas presents, birthday presents, new clothing, iPhones, and purses. Even money put to use "saving for retirement" would serve its purpose better growing excellent strong children who will support their parents in their decrepitude.

In practice the viriculture life can be simple and streamlined. A well equipped kitchen, a barbell at home, a bookcase full of classics, decent loudspeakers, a decent electric keyboard, radiant heat, and plenty of fresh air and pastured butter and beef is enough to grow children worthy of the Heroic age. On the other hand, public school, day-cares, cars, clothes, TV, and video games will contribute nothing to developing human excellence in our children.

Even if you admire certain child-rearing practices of some traditional society, it may prove difficult for you or adopt that practice in rearing your own children if all other parents around you are rearing their children in the ways of most modern parents.

The World Until Yesterday, Diamond, 2012

A family culture that is compatible with viriculture may look different than the average American household of today, as moderns sheepishly follow the fads set by big Agra, big Pharma, and big education. But we can have confidence knowing that these same viriculture practices have been shared by the great cultures of the past. In this way, viriculture children becomes cultural torchbearers, carrying the embodied wisdom of the ancients into the future.

Conceding our folly and guiding our children toward excellence

Much of wisdom is knowing how little we know, and we moderns have been overconfident lately. Reality is so complicated that we can only grasp at truth in most domains. This is further complicated by the fact that we are animals, not rational beings, and our ability to think is tethered to our primate biology. Given our fallibility, the most honest philosophical position is one of perpetual doubt, questioning, and lack of confidence, as Montaigne says "What do I know?"

However we must still make critical decisions in spite of our ignorance. Here we do best to stay humble in the face of tradition, old culture, God, and our ancient authorities – as their embodied wisdom knows more than we do. In the West today we have the hubris to ignore this wisdom: we take on massive debt, trust big government to educate the next generation, send our women to work-a-day professions far from home, and feed their babies formula from a bottle and their children “energy bars” for lunch.

All of this flies in the face of traditional standards of normalcy, and we are paying the price with our deformed faces, ugly stunted bodies, depressed, anxious, and untrained minds, and souls that lack even rudimentary virtue.

But we have every reason to consider these modern attitudes an historical aberration. Indeed the tide is already turning, and the value of the embodied wisdom of the past is being recognized by millions. We have been living in disharmony with the nature of the universe, we had the hubris to impose smoothness on a fractal world, and in doing so we killed the life around us. But this can never last. We are like the lab chimps – it’s time to step out of our smooth boxes and realize what we did accomplish and what we can accomplish again.



Lab chimps see daylight for first time in 30 years

The ancients really knew what they were talking about when they described “harmony,” it is the same whether we are talking about overtones in a chord, or organizing our lives in tune with the fractal geometry of Nature. The modern world is a cacophony, and viriculture is a humble attempt to tune into the superior wisdom of Nature. For all of our mistakes, we moderns have now have the opportunity to see the full scope of human history and beyond, to turn philosophy to practical use, and to guide ourselves and our children to a beautiful and excellent future.