

# **NOT BY GENES ALONE – HOW CULTURE TRANSFORMED HUMAN EVOLUTION**

**BY**

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## **CHAPTER ONE CULTURE IS ESSENTIAL . . . .Pg. 1**

P3 Southerners have a culture of honor. They are more sensitive to slights and their cortisol levels go higher in response to slights.

P7 Superorganism is wrong because it ignores the rich interconnections between culture and other aspects of our behavior and anatomy. Culture is as much a part of human biology as walking upright.

P 12,13 We imitate others and particularly those with high rank.

P 14 Genes alone cannot explain maladaptive behavior. This book will focus on our declining birthrates.

## **CHAPTER TWO CULTURE EXISTS . . . . Pg. 18**

P28. In IBM cultural differences clustered and persisted even though IBM had a strong corporate culture.

P 32 Russians ruthlessly tried to stamp out culture to no avail.

Values of the old country differentiate the size of land tracts purchased by differing immigrant groups in North East America to this day.

P. 34 If the Soviets could not make its people one, what hope do other western nations have? This is an argument for stopping Islamic immigration now.

P. 35 There is “no evidence that variation among groups has any genetic component. . . . virtually none of the behavioral differences we see among the peoples of the world have a genetic basis.”

P. 35 – 42 he looks at Korean adoptees going to the US and Anglos to Indians to show that people are all able to absorb all cultures without friction. Note that he does successful cultures to unsuccessful cultures in all cases.

## **CHAPTER THREE CULTURE EVOLVES . . . .Pg. 58**

P 55 The slander is

Geneticists = racists

Free choice = capitalists

P 59 Cultures evolve by conserving technology and selection [but survival of the what?

We do much without thought, so remembering to question must be conscious if we are to maintain it]

P. 63 The debate is whether culture is discrete, faithfully transmitted bit, ala memes or a 'cultural variant' (their term) which is not necessarily discreet or faithfully transmitted. They also use idea, skill, belief, attitude and value.

P 67 Cultural inertia can come from conformity to the belief of the majority. But, it can also happen with parent to children cultural transferring. Peer value transfer is much more dynamic.

P. 77 Cultural traits that stop us from reproducing are maladaptive.

P. 80 Great Twain quote that says we get our opinions and identities from associations and sympathies, rather than reasoning and examination.

P 81 Hallpike and Dawkins are on opposite sides. Dawkins is a "universal Darwinist" with Susan Blackmore and Daniel Dennet. Hallpike and Sperber hold that cultural variants are not particulate and faithfully replicated, so Darwinian ideas of variation and selection cannot be used to understand cultural evolution.

P. 90 But cultural complexes are passed on, not tiny independent bits. Seventh Day Adventists and Americans do replicate their culture.

P 93. Anti-Hallpike – it is not units, but belief clusters that transmit.

P. 95 A model is helpful as it explains. The historical model of 1776 also explains evolution. [within a context, 1776 came out of a long history and cannot come out of Ilongot headhunters, think also of Martin Luther. Thinking is most black and white in men at the time of adolescence, when they'd be warriors. Nuanced evaluation of both sides doesn't pay in nature] As decisions by big leaders working as cultural thinking in cultures that have decision making processes.

#### **CHAPTER FOUR CULTURE IS AN ADAPTION . . . Pg. 99**

p. 99 Individual learning is costly. But it must adapt.

105. Only orangutans and chimps use tools. Vervet Monkeys learned skills and passed them on.

108. Many examples of social learning in animals.

109. Imitation for lower primates. Bonobos and gorillas don't use tools. We say "monkey see monkey do," But they are not good imitators.

113 Interesting to think that status and imitation in the fashion industry.

117 Deep values are best done by imitation. Surface choices by learning.

118. At times evolution will favor those who pay almost no attention to their own experience. Pure imitation – conformity bias – works best in a stable environment.

120 – Two learning heuristics: imitate the many and imitate status. This all predicts people from stable environments will imitate more (Africa?)

122. This is so when the environment is stable and information is hard to get

125. We imitate high status local males

134. Brain growth has really grown as temperatures have become more variable in many species, not just ours. That is why we are flexible. Environmental change. This despite how costly brains are. Longer lives go with bigger brains as learning takes time. Longer childhoods also equal more tools.

138. Large groups are necessary for complex imitation to get off the ground and stay off. But Tasmanians lost tool complexity with 4000 members on their island.

140 – History of mankind: 4 million years ago the first bipedal hominids appear in the fossil record. For the next 2 million years Africa had many hominids. For the first 1.5 million years, these hominids provide no artifacts.  
The earliest flaked stone tools are 2.6 million years old from Ethiopia.  
But there is no evidence they were smarter than contemporary apes.  
Homo ergaster are from 1 million to 100,000 years ago. They develop faster, so were not as smart as, homo sapiens.

141 1.4 million years ago a more sophisticated Acheulean tool kit appears. It is a tear-drop shaped axe. It is common for the next million years. The same tool kit exists in Europe without more diversity than local materials creates.

142 Even geographically distant hominids make the same tools for 1 million years. Is this genetic? Small brains and rapid development.

143 500,000 ago Homo heidelbergensis appear.  
Neanderthals appear 300 – 200,000 ago. They developed at a near human rate.  
About 350,000 brains grow and tools vary, we get the middle stone age tools.  
About 160,000 years ago, modern humans appear. They disperse 50,000 years ago.

143 But last common Neanderthal ancestor with us was 500,000 years ago. Language may be very recent. You can imitate tools without language.

144 – We don't know, but might have been mute until fairly recently.

146. We now have large brains and little climate change so there is little proof that cultures are now adaptive or adaptive to current conditions. They were adaptive. They are not adaptable to a stable environment (but we do change the environment via habitat creation).

#### **CHAPTER FIVE CULTURE IS MALADAPTIVE . . . . Pg. 148**

148 If culture is adaptive, why is horse meat adaptive in France but not here? Why do first world workers have so few children? Darwin provided for maladaptation via diversity where Christianity said that all was designed perfectly. But camera design shows that it would have been better to have our eye nerves come off the top like an octopus to avoid the blind spot.

150 – Much human behavior is a big mistake from the genes point of view. Anti-gene behaviors are predicted by the costly information hypothesis.

151 – Their costly information hypothesis attributes maladaptation to population-level evolutionary trade offs, that are intrinsic to cultural adaptation.

153. Selfish memes can reduce fitness as bacteria do to their hosts. They are not necessarily pro-human. Leaders now (due to education needs) will have less kids, but their status will give their ideology a disproportionate influence.  
Adaptations involve trade offs. Pigs are too heavy to fly. Birds have hollow brittle bones. Our ability to imitate built in the capacity to imitate poorly thought out propositions. Bitterness is a rough guide to toxicity. This is cheaper than building in a genetic reaction to every specific plant that will be found every where. More investment in smell learning would have required a snout, not just our four types of sensors. This is a heuristic. The heuristic mechanism allows cheap learning. It also means parent (genetic) impact is lessened and memes evolve faster than genes.

Hence memes can be maladaptive. Memes also win over genes cause information goes kid to kid, not parent to kid (as gene learning), for adaptive reasons. This keeps up with the times and increases sample size.

160 Instead of genes that teach us how to build Kayaks, we get a rough understanding of physics and an ability to imitate. The module must be general and weak. Imitation is effective and cheap.

Imitation is good on average even at the cost of being able to catch bad ideas. People being predisposed to imitate the majority (conformity bias) and in group similarity (regardless of content) is a good idea. Prestige imitation bias too. The preference for big peacock tails passes on the gene for preferring big peacock tails too. Thus the system is self reinforcing. Because more people like it, it has prestige. Because it has prestige more people like it. The system feeds on itself. And the best minds and big funds drive this lifestyle, which feeds on itself.

[When celebrities are consumerist whores and drug dealers have big cars . . . It was the case that the local influence was great. Now, via media, the whole world wants to be a gangster hip-hopper from NY]

167 Many people who pray do not get sick. And many who do pray have success. Actual scientific truths take a lot of work. [Yes. How long did it take to establish that tall men do better? Perhaps we are predisposed to affirm more than to deny].

170 On the farm genes and culture go together. The decline in birthrate is due to social, not economic changes (detailed analysis shows). In birth values it is the parents against the culture. They want grandkids, the culture says no.

176 We have more free time than in 1965, but watch 15 hours of TV per week, per adult, more. Especially women now have different (work) avenues of prestige. Big digression on Anabaptists and Amish resisting the birth rate decline by controlling all media access. Muslims also resist it, but theirs is dropping too. Due to TV the third world is dropping birthrates at an earlier stage of modernization than we did.

188 – Our culture is a lot like our lungs. They work great, but make us susceptible to respiratory infection.

189 The big mistake hypothesis is the idea that our genes were adaptive to Pleistocene times and are now dysfunctional. It assumes that they were adaptive then and does not explain birth rate decline. But the heuristic of the cultural one does.

190 – Group cultural explanations account for our cooperating with strangers. The big mistake can't take us past kin and those related to us.

## **CHAPTER SIX CULTURE AND GENES COEVOLVE . . . Pg. 191**

191 Everyone needs milk is catchy but most adults cannot tolerate milk after the age of weaning. But the scientists of the third world are not in an environment where this is so. Who can and cannot is predicted by a history of dairying in the population. They think this gene – culture co-evolution has played an important role in the genetic evolution of human psychology.

192 The distribution of cultural variants can be explained by natural selection, guided variation, and a variety of transmission biases.

193 For example, before the spear human bodies were stronger. The evolution of language selected for bodies that could use language (vocal and auditory adaptations and

grammar learning machinery) None of this would have happened without a language to make it useful. Men must control their anti-social natures and women must behave appropriately or face exile.

Dairy life is 300 generations old, ability to cumulate cultural complexes is 500,000 years or 20,000 generations old.

194 Sociobiologists accept that genes effect culture, but not the reverse. Genes control culture and if culture gets out of control, genes will pull them back in. If culture is on a genetic leash, the culture is a very big dog.

More they are mutualists.

**In most species cooperation is absent or very limited with very little division of labor.**

Cooperation and symbol marking come out of this.

Larger, more coherent groups out compete smaller disorganized ones.

**The psychology where we want social rewards and avoid social sanction would come out of this.**

196 We are also predisposed to know who is in our group, to identify with and fight for.

We knew who our family was, symbolism has allowed us to know who our tribe is.

[If there is one group that decides to drop this and another that doesn't the one that retains its solidarity will win, the gene and culture will be selected for, the disunity against – fatally]

197 Group selection emphasis of late sixties has in 40 years become kin selection. Group to the individual.

This kin selection model works if the group you're in is not random, but related to you.

This doesn't work with big groups.

200 Moralistic punishment of defectors can work, but has problems. Why should individuals punish? It takes time and is unpleasant and they get no personal gain (only the group gains). If I shun and all others don't I lose a friend.

Secondly, moralistic punishment can stabilize any arbitrary behavior (wearing a tie).

Punishment can stabilize cooperation or not cooperating. Moral punishment tells why cooperation stabilizes, but not why it starts.

203 There are kin, individual, group and multilevel explanations.

But which can stabilize and provide enough variation for selection to matter?

204 In primates, and other species, gene flow by migrating members, easily outdistances genetic differences that happen between groups by natural selection. The groups are the same genetically. My genetic fitness does not increase by cooperating in a large group for genetic reasons. What can make this happen? Moralistic punishment and conformist bias are the two mechanisms needed for large cooperative groups.

Conformity bias would say people are Christian because others are and do not have enough evidence to judge.

207 Darwin said there must be a struggle to reproduce, variation and the variation must be inheritable. With group level competition the differences weren't inheritable. Darwin wrote that at a group level morality gives survival value.

Cultures must be distinct and compete. They do not need to be sharply bounded.

Assimilation takes care of idea flow. Physical migration needn't thus erode differences.

Small subculture variants can be maintained via competitive edge. Drift in large populations will be small. Group competition is common in small-scale societies.

Raiding and warfare were huge.

KROEBER started documenting this. New Guinea provides the best examples free from Western contamination. The groups get weakened and then suddenly are extinguished. When getting weaker, people abandon ship [hide in Korea].  
209 New Guinea folk had extinctions between 500 – 1000 years but subgroups went extinct much 15% in 25 years was common. And their change in technology was tiny. Group – beneficial cultural variants can spread because people imitate successful neighbors, not only through destruction. Imitation spread works faster than annihilation spread. Mutual help and female protection caused Christian take-over of Rome for example.

212 Symbolic marking is generated by this process. Tribes have lots of them to differentiate each other. But this is in the face of obvious two way norm adoption. But Mexican kids in California learn good English and adopt Anglo customs. “Californians” in turn prefer salsa to ketchup and bash piñatas. WHAT?  
Symbolic marking allows people to identify in-group members and thus who to imitate. Second, the selective social interaction happens due to markings. Thus one can know how to reap the rewards of social life and what to avoid. Those who are most faithful to the values will do best and thus perpetuate them via status. This model works better than the markers tell you who to be altruistic to models. These are great reasons for homogeneity, but so abstract.

Shame and guilt are evidence that we are then programmed to expect group norms. And evolution would not trust us with the ability to scrutinize the best cooperative selfish behavior ratio. Favoring the long term and larger group good would prevail over immediate considerations. [Really?]

Guilt could deal with immediate impulses. These would be built on top of kin preferences so that both would live and conflict together. Other animals have no such conflict.

Language and loyalty instincts must have evolved in concert.

Social psychologists have found people do good even when the possibility of personal reward is prohibited. Empathy exists. In Bateson test, people who knew others were helped even though they didn't do it themselves were very happy. Those who were prevented from helping more unhappy.

People in the “Dictator game??” Give away money they get for participating.

People also punish anonymously. They burn to punish someone who cuts them off even though they'll never see this person again. And people help strangers in bomb blasts when it is not something they'll get paid for. Empathy exists.

221 Markers can tell us who to be empathetic with, who to suspect and who to kill.

Minimum difference groups were run on the basis of liking Klee or Kandinsky.

People showed that the default setting of humanity is to help their own.

But this abstracted empathy has evolved culturally that is beyond the kin gene and face to face reciprocity that strict genetic models predict.

People, incorrectly, think that ethnic groups have inborn characteristics.

Adjustment between groups is hard because of customs, food, hygiene, hospitality etc that divide them.

Very few Germans helped Jews. Large impersonal groups can claim strong allegiances.

Many in the social sciences just think that the allegiance to small groups upscaled to large organizations. This is based on small enough groups causing allegiance being gene selective. They think the small group psychology did not upscale and that the cultural distinctions play a stronger role.

228 Those in poor environments have more institutions to maintain solidarity. It is a testimony to the strength of tribal instincts and their associated cultural institutions that societies lacking in formal leadership don't have Hobbesian breakdowns. They think the institutions that foster strong leadership, inegalitarian social relations and division are built on top of social "grammar" originally adopted for life in small societies. Our social instincts do not prepare us to submit to command or tolerate inequality.

Command backed up by force is not enough. One they lead to selfish warlordism. Secondly subjugation rarely holds.

232 Each level of authority replicates the structure of hunting and gathering bands. Bonds of individual reciprocity and small – group esprit leaven tendencies to arbitrary authority deriving from status in the larger hierarchy. The high ranking take on much of the humble man's approach to authority. This is supplemented by in-group symbols.

234 This can create problems as sub-groups often have enough tribal cohesion to organize at the expense of the larger system. Lower level military units for example. Charismatic innovators launch new belief and prestige systems.

Broad support requires that folks think things are fair and have a room for a status of their own.

Culture and genes play a big role. But culture cannot be discarded. Social instincts are not just kin based. Gene based explain our similarity to primates. Cultural explanations explain our differences.

## **CHAPTER SEVEN NOTHING ABOUT CULTURE MAKES SENSE EXCEPT IN THE LIGHT OF EVOLUTION . . . . Pg. 237**

P 237 Nothing in biology makes sense except in the light of evolution. Without evolution biology is a pile of sundry facts that are not meaningful.

Concurrence was William Whewell's idea and a favorite of Darwin that E. O. Wilson revived.

Their theory was connected via five kinds of support where pure evolutionary theory is weak.

Logical coherence, investigation of proximate mechanisms, micro-evolutionary studies, macro-evolutionary studies and patterns of adaptation and maladaptation.

The logical consistency was done with mathematic formulas they left out for us.

Proximate evidence is like children being raised in another culture being like the locals and people in the same environment having different cultures.

Micro-evolution allows controlled experiments. Culture is a population based phenomenon.

Macro-evolution shows that the system of social learning was likely an adoption to changing climate. Culture and genes can account for this, not genes alone. It shows why other animals didn't get it. It also explains the boom of civilization in the 5000 years that genes cannot. The timescale fits.

Patterns of adaptation and maladaptation fit. Maladaptation is explained very well by the crude heuristics thing. Impressionable observers risk imitating poorly adapted cultural variants, but specific programs are not flexible. Ours is fast and frugal.

The role of selfish cultural variants increases via natural selection at the expense of the parents when culture replaces genes. Low fertility is an example.

244 Culturally selected traits are still in conflict with genetic tendencies that favor small kin groups and only face to face reciprocity.

Only gene based sympathy cannot explain large scale empathy. Human social institutions get us to look out for the society. Mom's, reluctantly, send their kids off to war.

Genes did, inadvertently, benefit through cultural adaptation that brought about the survival of the most realistically adjusted altruist.

Gene only models have problems in each of the five domains. The tracks of culture are all over human behavior.

We teach biology as an integrated whole. The social sciences are isolated from each other and the natural sciences. Perhaps the evolutionary theory of culture will help link them.

246 There are micro / macro problems. Economics, for example, start with the individual and expect that to hold in a group situation. Psychology does not entail the fact that most information is cultural. If you are sociologists or anthropologists you have no room for individuals.

Many individual decisions have an influence, in the long run, on the collective and population properties affect what will be done by individuals.

Historians say that individual, never to be replicated events make history. Certain tools only work in certain venues to certain purposes.

Hamilton's rules work in large areas of biology and falter with us a bit.

Models help us because we are stupid and have trouble with the immense complexity of real situations. [Historians can look at top dog presidents, the structure of revolutions and population dynamics to explain concrete historical incidents.]

249 Art is sometimes functional and sometimes symbolic. A style may signal belonging to a culture or a status within it. It isn't random. Competition can lead to the excesses of baroque.

Happiness happens relative to others. What makes folks happy vary without regard to wealth in Western nations. Utopians cannot get folks to join them. Corrupt regimes must



be repressive. Low trust societies have authoritarian overlords. We can help societies with Darwinian analysis.

A theory is an engine for generating new questions. Social scientists often refine the great men of before and have no where to go. Theories of social evolution are a good area to study. Most descriptions are qualitative not quantitative. Reverse it. For example, what effect results from the dispersal of literacy?

Evolutionary questions underlie the rise of complex societies, modern humans, agriculture, new political institutions election cycles. Cultural evolution is a big dog on the leash. Hard to control. Gandhi didn't stop the Muslims from leaving or the caste system. If we apply evolution we may better be able to guide it.

254 From the evolutionary position, human Exceptionalism is a big problem.

Darwinians are generally humanists, they do not think of humans as little organisms. So many older scientists try their hand at philosophy that it is considered a normal sign of aging. Scratch many scientists and a nature mystic bleeds. Models are beautiful (mathematical ones). You need them to properly study evolution.