

# **An Essay on Evolutionary Psychology (Sociobiology) and the Meaning of Life**

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Disclaimer: I have no formal education in sociobiology (my background is in electrical engineering); however, since my teens, I've been interested in evolutionary theory- more so for its philosophical implications than the biological details. 2/3rds of this essay is a summary of the cited references and can serve as an introduction to the subject. About 1/3, though, is blunt personal opinion ("unscientific musings"): I try to address some of the controversial issues that people like Richard Dawkins tend to skirt around. Perhaps their main focus is simply on promoting basic belief in evolution (vs. creationism) w/o the added controversy of sociobiology. Comments can be sent to: [evo\\_psych@yahoo.com](mailto:evo_psych@yahoo.com)

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## **Introduction**

Since the publication of Charles Darwin's "**The Origin of Species**" in 1859, the theory of evolution has become widely accepted in the scientific community. Natural selection is now considered the primary process by which animal, plant and microbiological species change (usually slowly) over time and by which new species emerge from existing ones. The pertinence of evolution to homo sapiens- us- though, has always been the most controversial aspect of Darwinism. In recent decades, sociobiology or evolutionary psychology has "upped the ante" of the controversy by now purporting to explain the development of stereotyped human nature as a series of adaptations. (Just as our standard physical form is assumed to be the result of adaptations initially due to random genetic mutations and then favored historically- but not necessarily in the future.) IMO, the general process of natural selection in shaping the human form and behavior is almost certainly correct. However, some sociobiologists overreach by attempting to explain too much with adaptationism. This essay then is another attempt to examine the relatively new field of sociobiology and its possible implications.

## **The Mind is the Body**

Mental ailments were once distinguished either as psychological or neurological disorders. Media reports of new scientific studies, though, are now routinely rife with a blurring in the distinction between the two. Increasingly, behavioral problems like compulsive gambling, alcoholism, drug addiction, anorexia, violence (and other criminal behavior) are now being linked to physiological "disorders" in the human brain. To be blunt, though, the traditional distinction between the "mind" and body (brain) has always been suspect (possibly even ludicrous). It's simply been the case that the physical mechanisms of the brain have never been understood unlike, say, the heart or kidney.

The human brain has been and remains the ultimate "black box" in medicine and engineering. And this is no surprise, since the most complex, modern supercomputer, which can only now be understood barely on a system-level by an individual, remains a "tinker-toy" compared to the human brain let alone, say, the brain of a cockroach. In fact, understanding all aspects of the human brain may simply be beyond human understanding. The remarkable progress seen in technology, particularly in the semiconductor IC industry, is misleading: some people now think "nothing's impossible" anymore. However, despite all of the "miraculous" progress of the 20th century, there are and always will be fundamental limitations. Some things are impossible and will remain so, no matter how much scientific progress we make (e.g., fundamental thermodynamic constraints).

Ultimately, the human brain is "just" a machine (albeit an incredibly complex one). Certainly, if a stapler, typewriter, automobile and computer are all considered machines, then the human brain is one as well- just to a different degree of complexity. If this is accepted, then there can be no real difference between psychological and physiological disorders except that psychological disorders involve the brain, which no one understands. The same thing applies to emotional/ psychosomatic problems (stress, depression and "imaginary pain all in the head"); even though no obvious brain damage or chemical disorder exists- the underlying process in the brain is just elusive. Treatments for behavioral problems then are really all the same: *both* drug and behavioral therapy work by causing corresponding physiological changes in the brain; even though the specifics are beyond our understanding now. (E.g., no one really understands the chemical process of human memory.) The "mind" is that which is generated by the physical brain.

As for the human "soul", the idea is becoming increasingly quaint. For ex., what happens to the soul of a person who

dies of Alzheimer's or CJD? Is their soul forever "impaired" in the afterlife? And if not, then how can a soul have much to do with a person's "essence" and memory in the first place, if behavior depends so much on the physical brain? Belief in the soul is simply based on wishful thinking for an "afterlife" rather than on any real credence; from a mechanistic POV, if humans have souls then other machines might as well have them too.

The ultimate point of all of this is that there isn't any metaphysical difference (like a soul) between living and dead things. Living organisms are just incredibly complex machines. Ultimately, the distinction between life and death is an arbitrary one. Forget the "scientific" definition of life: it would be far more truthful to simply define "life" as anything, which is reasonably (arbitrarily) similar to us humans.

**Hardware vs. Software: A Crude Analogy**

Viewing the human brain as a machine and not some metaphysical abode of a soul resolves (I think) the seemingly perpetual quandary of heredity vs. upbringing. After WWII, the importance of heredity on influencing the phenotype (of intelligence and behavior) was almost denied understandably because of the backlash against Nazism (eugenics). The human mind was viewed as a "blank-slate" shaped by nurturing; heredity wasn't entirely denied, but it was certainly de-emphasized by mainstream psychology.

The discovery of DNA, and the growing evidence of the pervasive influence of genes, though, has swung the pendulum back the other way since the 1960s. In 1994, the publication of the "**The Bell Curve**" by Charles Murray raised a furor because of the author's insistence that heredity is probably the greatest factor in IQ differences between white and black Americans after all. [Murray, though, mistakenly believes IQ tests measure innate aptitude (genetic mental capacity) instead of really being achievement tests. Also, "intelligence" is actually comprised of numerous discrete mental functions: abstract, math, mechanical, memory, music, political skill, physical coordination, spatial, verbal, etc. However, IQ tests test only a select number of such mental abilities. (Most tests focus on math and verbal skills vs., say, musical or mechanical ability.) So ranking someone's intelligence with a single quantitative number by averaging an arbitrary subset of mental skills is meaningless.]

Recently, proponents of what is essentially the "blank-slate" view of the human mind have countered this by re-emphasizing the vital importance of a child's first few years of life on the brain development (of behavior and intelligence), prompting some psychologists to again blame the root cause of crime on poor upbringing. The problem with this debate is that like all such debates (e.g., "tastes great vs. less filling!" :-), the real world is far more complex than that. For some reason, people tend to look for singular explanations for something rather than accepting that a multitude of complex factors may be responsible.

Perhaps the most apt metaphor for the complex interaction between human heredity and upbringing is the interaction of computer hardware and software; although in the case of humans, "software" (upbringing) can actually change the "hardware" (brain) by promoting the growth of neural connections during childhood. Actually, computer software can change hardware too; but as with the brain, only to the extent implicit in the structure of the hardware: e.g., field programmable gate arrays (FPGAs) are semiconductor Integrated Circuits (ICs), which differ in their inherent physical

complexity and storage capacity. FPGAs consist of "logic blocks" with programmable interconnections (crudely analogous to neurons); some FPGAs are simply built faster and more complex than others; however, their performance is just as dependent on their programmed interconnections. I.e., **two designs** are involved: physical design of the semiconductor device (like heredity) and software configuration (upbringing). Multiple configurations can even be stored in a memory chip, so that FPGAs can be reconfigured "on the fly" to implement entirely different digital logic functions (in verilog or VHDL).

In computer hardware, the great advantage of software is the flexibility it offers: software allows a single computer to do many diverse operations. For a given task, software performance isn't as good vs. a dedicated machine, of course. But usually the performance degradation due to software is an acceptable tradeoff for the much greater flexibility. Software upgrades are also easier and faster and more cost-effective than hardware changes. The same applies to the (mental) flexibility of humans due to upbringing (culture) vs. heredity.

A computer is, of course, limited by its hardware (memory, microprocessor, clock speed, etc.) in the type and complexity of the software it can run. In fact, a computer can't even implement a software instruction unless it's supported in hardware at some basic level (e.g., microcode). Therefore, in that sense, any software a computer can run must be implicit in its hardware; so neither computers nor the human brain are really "blank-slates". However, although the *ultimate* performance and capacity of a computer system are determined by hardware, software is what determines the *actualized* performance. Software and hardware then are equally important: one can do nothing without the other. But hardware establishes the base parameters and the extent by which they can be modified by software; e.g., given the same software, an Intel Pentium will always outperform the slower, less complex i486. On the other hand, the most powerful supercomputer in the world can easily be outperformed by a lesser computer, if the latter has much more efficient software (e.g., a better algorithm). A computer will only actualize its capacity to the extent as dictated by its software. For a given computer system, software alone can be the difference between it performing as a simple word processor or as a complex war-game simulator.

*Likewise, the human mind can think or feel nothing that isn't somehow implicit in the biological brain.* Human thought isn't a universal thing, but a small subset of all possible designs. Rejecting the traditional blank-slate view of the human mind, though, is disturbing since this inevitably leads to questions like the real "root" causes of crime and to whether or not "free will" exists...

**On Free Will**

Richard Dawkins' "**The Selfish Gene**" (1989) concludes that humans alone are capable of overcoming the dictates of our genes. In an endnote, he remarks that critics have accused him of "having it both ways": advocating genetic determinism, and yet, also allowing for free will with his concluding remarks. Dawkins counters that most would agree that the sexual libido has been shaped by natural selection; and yet, it can be suppressed. He offers this as an ex. of how the dictates of our genes can be countered. But the capacity to suppress one's sex drive must also be shaped somehow (directly or indirectly) by natural selection. So what does that prove? He's assuming (I think) that all genes have been geared towards maximizing reproductive fitness by natural selection; and that suppressing the sex drive

seems to run counter to that. I would argue instead that such ambivalence is actually genetic as well, i.e., we don't "overcome our genes"; rather we have the genetic capacity for such contradictions.

It should be obvious, but this POV still remains controversial, that *ALL human characteristics (hearing, sight, smell, taste, touch, dance, hate, crime, language, love, music, pride, racism, religion, technology, whatever) have a genetic basis*- otherwise, they could never be expressed regardless of upbringing. A "murder" or a "gay" gene, for ex., may not exist, but such behavior has to be implicit in the genotype. (Actually, genes have a cumulative, interactive (gestalt) effect, so no single gene is responsible for any trait; but there are probably "trigger" genes, which are favored by natural selection, so that some traits can spread faster along Mendelian lines as Christopher Badcock suggests in **"Evolution and Individual Behavior" (1991)**.) This is analogous to the fact that a computer can't execute a software instruction unless it's ultimately supported in hardware. The absolute cause then of any human behavior is the human genotype. This would be self-evident, if not again for the prevalence of the blank-slate view of the human mind. *But if the blank-slate view is correct then why, if a plant is abused as a seed, doesn't it grow up to be a mass-murderer or a drug dealer like a human might? :-)*

Let's just be real and admit that if someone commits a horrific crime, then the absolute reason they did so is simply because they're "built" that way. This explains why serial-killers like "Son of Sam" and Ted Bundy did what they did- *ultimately, it was just them all along*. But in human relations, we usually only care about relative blame: "what would I or at least most people have done under similar circumstances". So in that sense, it's entirely appropriate to focus on upbringing (software) as the "root" cause of crime. However, it's almost certainly the case that some people (e.g., serial killers) are simply more predisposed to commit crime due to biology. I suppose the "ultimate" saint then wouldn't even have the (genetic) potential for criminal behavior regardless of (a poor and abusive) upbringing- "sinless" as an inanimate object!

When I was younger, I didn't understand what "free will" was supposed to mean: you used to hear people say free will is impossible due to social conditioning; because of the nonstop advertising and propaganda people are exposed to. Likewise, some argue free will can't exist, if genes "determine our destiny". Now, I understand that by "free will", what people really mean is a conscious decision based on one's "true" (metaphysical) intention: the idea of an "immortal soul" that's "above it all" and independent of the physical mechanisms of the universe, including the physical brain; as opposed to "I can't help the way I am" because I'm mentally ill or I have a brain defect. Just like people "can't help" the way they look; maybe they can't help the way they act and think: *and that's the crux of the free-will debate*.

Murder is defined as deliberate killing; if someone kills another person accidentally, though, then legal sentencing is much more lenient than for murder. The reason for this, of course, is because there was no conscious intention to cause injury. And most of us agree that everyone should be forgiven for a slip or two that "could've happened to anyone". Even so, in recent years, penalties for car accidents due to drunk driving have stiffly risen because of growing public intolerance for DUI; the arg. is that even if a person is incapacitated, they can still be blamed for choosing to drink (or take drugs) while sober- when they supposedly had free will; at the very least to deter others from doing so as well. However, even a habitually drunk driver, who's killed many people in car accidents, still wouldn't be charged with 1st degree murder.

Some argue that if a person commits a brutal killing while under the influence of crack cocaine or alcohol; or even while sleepwalking, they also deserve leniency because they were temporarily "insane": they didn't really "know what they were doing", so they should receive treatment (to cure them) instead of blame and punishment. An extension of this arg. is that likewise people with a brain disorder or a genetic defect shouldn't be held responsible for their actions because they also "can't help" the way they are. Some criminal defense lawyers already cite genetic "defects" or chemical "imbalances" as the basis for absolving their clients of any culpability for their crimes; such people blame their heredity or mental disease [e.g., XYY chromosomes, low levels of serotonin]. Likewise, some alcoholics blame alcohol for making them violent (frequent excuse of wife-beaters- "I didn't really mean it"). But I think that's just an excuse; rather, it's the case that alcohol weakens one's "self-control" (unleashes something inside that was there all along).

I saw a June 1997 **"Dateline" (NBC)** about a man, who'd murdered his girlfriend: during the trial, a neurologist testified that the defendant wasn't responsible for his crime because he had an "abnormal" brain structure, according to a PET scan. If successful, this defense could result in a reduced sentence or even acquittal; even though no one denies the defendant killed his girlfriend. Some brain abnormalities are due to brain injury (caused by a blow to the head perhaps); but many of the theorized biological causes of criminal behavior like "low" levels of serotonin are actually minority traits, not "defects". There are, of course, developmental fetal defects- process errors in implementing the genetic code. But most genetic "defects" are really just "undesirable" traits (e.g., hemophilia, peanut allergy, etc.)- ex.s of biological diversity. Who says what level of serotonin is really "normal" anyway? (Except based on statistical distribution among a population.) It'd be like saying brown eyes are "normal" and blue eyes are "defective".

People simply vary in their personal likes and dislikes: for ex., some men like women with big breasts; some men like women with long legs; and a minority of men ("bad seeds" like Ted Bundy) get a sadistic thrill from raping and murdering women- it's as simple as that. Bundy reportedly blamed pornography for his actions, but that's simply an excuse; rather, porn helped to bring out the "worst in him." For people like that, there's no "cure" to make them "normal". The way they are is "normal" for them- despite the naivete of some liberal psychologists: no "childhood trauma" is necessary; it's just their nature.

I also saw an Aug 1997 ABC news report that child abuse has a permanent effect on the brain, causing "abnormalities and defects". Some liberals (like Hollywood director, Rob Reiner) now seem to blame all criminal and violent behavior on "brain defects". This is wishful, naive thinking and displays an incredible ignorance of human nature. Too many naive people simply refuse to admit that violence is fairly common in human nature. It doesn't require an abusive childhood or a brain defect to be expressed. Hey, sometimes bees sting, and sometimes, people kill: look at war, in which atrocity committed by the "common man" becomes commonplace. What's actually happening (I think) is that early upbringing and nutrition adjusts the "settings" of expressed behavior over an individual's "range" (determined by genes). [A prime ex. being that children with bad parents tend to have poor parenting skills too, because parenting skills are instinctive (genetic) and also learned behavior.] But the latent behavior, esp. violence, remains in the subconscious, which is why "ordinary" people can go crazy during war, committing all kinds of unimaginable atrocities; and can then go back to being "normal" afterwards. Likewise, I guess due to poor upbringing, some kids like street gang members have their default settings set permanently to "violent-all of the time". More specifically, in **"The Moral Animal" (1994)**, Robert Wright cites speculation that upbringing affects serotonin levels in the brain. But as stated before, some people are simply more likely

to be violent due to genetic variation.

According to Wright, by the end of his life, Darwin had concluded that free will is delusional; that "no one deserves credit or blame for anything": people are in effect robots, and when they do or say a certain thing, they do so because they're "built that way". Darwin also wrote that a "wicked person should be pitied as sickly rather than hated". However, Darwin also felt that such awareness was dangerous, if it ever became common knowledge, because it'd undermine law and order; and such "necessary" societal notions as personal responsibility. Today, Wright believes the "cat is out of the bag" now because of the modern awareness of genetics and brain chemistry in influencing human behavior. He cites the classic arg. that free will must exist, because: *if the mentally ill aren't responsible for their actions, then none of us are responsible for anything we do- and they might as well fling open all of the prison gates* (after all, insanity is just a minority viewpoint). Wright contends that the problem with this arg. now, of course, is that "those in the know" know it to be false: they know that our consciousness is the product of our physical brain- a soulless machine. The idea that our conscious mind is representative of our "true" intent (immortal soul) is a myth. The mind is a product of a machine; so certainly, in the spiritual sense, free will doesn't exist, and none of us are responsible for anything we do or think then. But is this simply a convenient excuse; or does it actually absolve people of all responsibility for their actions?

Personally, I understand this arg, but I still reject it. As far as I'm concerned, if "bad" genes make a person evil- or if a brain defect causes an "uncontrollable" desire to commit a crime-*then blaming their heredity (or whatever) is equivalent to blaming themselves: who and what we are is parameterized (defined) by our genes and upbringing, so where's the conflict?* How can anyone really make a distinction between their DNA+upbringing and "themselves"? It'd be like an axe-murderer blaming the crime on his hands, and not the rest of "himself".

I guess I have the audacity to suggest that the "mentally ill"- like paranoid schizophrenics- are evil; even if it isn't their "fault" for being so (i.e., their "soul" didn't "choose" to be that way). I mean, why shouldn't they be held responsible for what they are? ***A raging fire and a lethal virus aren't "responsible" for their devastation; but that doesn't mean we shouldn't try to stop them-or does it? :-)*** IMO, if someone demonstrably has a brain defect or other characteristic (like childhood abuse) that makes them more violent than other people, then that should actually be GREATER justification to lock them up; instead, it usually results in leniency (because they couldn't "help it").

Someday, it'll probably be possible to "cure" the "criminally insane" by altering their brain chemistry with drugs or surgery. But this wouldn't be about "curing" them, but rather changing them to conform to society's laws. And I doubt it'd ever be as cost-effective as a simple execution (with a bullet as practiced in China). I suppose one negative of evolutionary theory is that it shows we're not "children of god"- there's nothing really "sacred" about human life. If millions of innocent cats and dogs are annually "put to sleep" in the US simply because they're inconvenient to human society, then what's the big deal of executing guilty people, who actually deserve to die? During wartime, thousands of innocents are blown away for "strategic" purposes- and nobody cares. (As Stalin said, *"the death of an individual is a tragedy, but the death of a million is a statistic"*.) And this always happens during wartime- and war always seems to happen despite fervent vows for peace. So what's the big deal of executing guilty criminals, who actually deserve it? Why not have a little more consistency in conduct between peacetime and wartime? (Is this cynical or what?) I strongly disagree with Wright when he suggests that blame and punishment are pointless. As far as I'm concerned, vengeance is a major component

of "justice".

I'm not advocating executions for all criminals- just for the "absolute worst of them"- those who pose a serious violent threat to society. In fact, I think the infamous Susan Smith of South Carolina, who was sentenced to life in 1995, for drowning her two children isn't a general threat to society. IMO, sterilization and a nominal prison sentence would've been a more appropriate punishment for her. Nor am I advocating harsh prison sentences for all criminals like California's "Three Strikes Out" law or NY's harsh drug laws. Personally, I'd rather see a dozen non-violent offenders get a legal "slap on the wrist", then to have one violent offender get an early release. And yet, due to prison overcrowding (exacerbated by harsh drug laws), violent criminals are serving only a fraction of their sentences to make more prison room for non-violent drug offenders. It's absurd how many violent criminals (murderers, rapists and muggers) are released early due to prison overcrowding where upon release; they "do it again". How many sex offenders, esp. child molesters, despite repeated incarceration and treatment continue to be repeat offenders? It's almost as if the "justice" system doesn't really care about public safety. The state of Florida, for ex., has been known for having a "revolving-door" prison system.

IMO, if a person is habitually dangerous, then they should be locked up even if they haven't committed a murder (yet). Murder is considered the most serious crime with the most severe penalties; but personally, I'd be a lot more concerned about a violent offender, who'd severely injured many people as opposed to someone, who'd simply shot and killed someone. The latter might get life-imprisonment, but the former would probably get only 5-10 years (and, of course, would probably do it again upon release); now if they'd simply been locked up for life in the first place...

The bottom-line should be whether or not a person poses a risk to society (even if they "can't help the way they are"); this point of view, though, is anathema to many defense lawyers. It may seem extreme to some, but in my opinion, life imprisonment (or even execution) for violent and dangerous people regardless of their mental condition or whether or not they're "responsible for their actions" is just fine: it's tantamount to putting out a fire. (The issue of moral culpability is irrelevant.) Liberals emphasize the extreme importance of early upbringing- well, the problem is they're right. By the time a serious offender is in his teens, the efficacy of rehabilitation is extremely doubtful (too much has been "hardwired" in the brain): prevention programs are usually effective only for young children. Some criminal offenders have horrific backgrounds and other extenuating circumstances, but that doesn't make them any less of a threat. (Ok, that's the end of the "diatribe".)

### In the Beginning

According to current theory, in the beginning, this planet sustained no life, only a chemical soup comprised of simple, non-living compounds. Over millions of years, though, even very unlikely events can occur by chance. Gradually, a minority of such compounds through small, cumulative steps became self-replicating: they achieved a reproducible pattern. Self-replicators, though, shouldn't necessarily be considered "alive": note, the ex. of crystal formation in Dawkins' **"The Blind Watchmaker" (1986)**. DNA is comprised of simple bases (nucleotides) and is the current mode of replication of carbon-based life on this planet. Although the results (phenotype) of DNA may be extremely impressive, genes are just combinations of a four-letter "alphabet": adenine, guanine, cytosine and thymine. Some believe that the complexity



of the human eye, for ex., proves the existence of God- "because the eye is so complicated it couldn't possibly have evolved randomly, so God must've designed it, QED". And yet, the incredible complexity of the eye's architecture can be reduced to a combination of only four letters- the same material of which simple bacteria are made of. When thought of as such, perhaps the gradual evolution of the eye (over an inconceivably long time-scale from a human POV) doesn't seem so unlikely then.

This notion of "something from nothing" invokes disbelief from theologians; but it's akin to the old notion that if an infinite number of monkeys were to start typing, one or more of them would eventually type out Shakespeare's **"Hamlet" (1602)**. Evolution is simpler than this, though, because it doesn't require infinite resources or instant results. Simply put- many, many blind iterations broken into many, many steps CAN stumble onto something gradually (which is why, humans must continually devise new antibiotics against bacteria. Bacteria aren't intelligent, but they still have an enormous advantage over us because of their sheer # of iterations). Evolution shouldn't be so unbelievable when one considers the many iterations and the incredible time scale involved (millions of years). And complexity isn't so impressive, once one realizes that even the most complex algorithm can be broken down into smaller, simpler steps (e.g., digital signal processing algorithms).

Darwin depicted evolution as being a slow, gradual process that occurred over millennia; and this is usually the case. Stephen J. Gould, though, has argued that sometimes, major genetic changes can occur suddenly. This is analogous to the idea that geological climate changes slowly over millennia. Now, it's known due to analysis of Antarctic ice that at times, the earth's climate has changed rapidly over decades, not millennia. Similarly, human culture usually changes slowly over generations; but sometimes, social revolution can change it suddenly within the span of a few years. Certainly, the evolution of numerous dog breeds of all shapes and sizes derived from the wolf due to human intervention shows that gene-pool changes can be relatively rapid. (Who says natural selection has to be "natural"?)

The theory of natural selection simply states that given that replicators exist and that variations (brought about by random mutation- the vast majority of which are harmful, of course) also exist among such replicators; then those variations which happen to lead to higher replication rates will tend to increase in quantitative frequency relative to those other traits that don't- and that's ALL it says. It doesn't mean that genes or any other kind of replicator are "trying" to replicate; rather, over time, the gene pool will simply tend to consist of those genes, which have happened to have done so. Because those genes that happened not to have done so obviously won't be around as much, if at all, as those that did. Given the time scale evolution operates over, there must also be "obsolete" (atavistic) adaptations- adaptations for which the selective pressures which brought them about in the first place are no longer present; perhaps these adaptations are even in disfavor now. This doesn't mean they can't persist anyway (due to inertia) unless, of course, they're strongly disfavored. A gene's frequency in a gene pool is determined by its relative rate of reproduction, so those with higher rates will have higher frequencies compared to others with lower rates. Obviously, only those genes, which continue to be reproduced, will continue to exist in a gene pool. But even those genes with relatively lower reproductive rates (minorities) will continue to exist as long as the rate is nonzero. That's all there is to natural selection.

A mechanistic view and the fundamentally arbitrary distinction between life and death have been emphasized in previous sections because evolution is a mechanistic process (albeit a blind and stumbling one w/o any real intent or purpose). It's

just a process that occurs because it's allowable under physical laws; and in fact, it's not inherently different or more "special" than any other common physical phenomenon like soil erosion or the formation of stalagmites. As described in Dawkins' "**The Selfish Gene**", replicators like genes shouldn't be thought of as having "purpose" or intent or as part of some metaphysical design. In fact, "replicators" is a misnomer of sorts since replicators aren't really trying to replicate (or do anything for that matter). The only difference between a replicator and a non-replicator is that a replicator happens to replicate and a non-replicator doesn't. What replicates and what traits lead to higher replication rates are entirely determined by the EXTERNAL environment. There's no inherent "superior" trait that'll automatically have high replication rates; a trait that has high reproductive success in one environment might "bomb" in a different one.

As stated by Darwin, because reproduction, not survival, is the basis of evolution, natural selection is almost the same as **sexual selection**; of which, male peacock tail feathers are widely cited as a classic ex. Large tail feathers may be a great disadvantage in terms of individual survival; but they can still be favored by natural selection, if males with them have an advantage in terms of mating because they're more attractive to females. How did peacocks with the longest tails become attractive to females in the first place? Well, that seems to be like asking which came first- the chicken or the egg? (Maybe the human male preference for females with large breasts; or the female preference for tall males is the same kind of thing: no obvious practical advantage except that those who are so endowed are more attractive to the opposite sex and hence are more likely to reproduce- a self-perpetuating thing.)

In peacocks, it's theorized that elaborate tail feathers are indicative of "good genes" and health; this might indeed be the case, but it doesn't have to be. The fact that other birds don't do this (some use song or color or nest-building) implies it might be mere happenstance- serendipity (like all adaptations). Some expect natural selection to be a rational and optimizing process. But the actual reason may not make much sense (non-optimal), but it can still persist anyway as long as the birth rate is nonzero. That's the bottom-line.

I saw a Summer 2000 "**Discovery**" TV doc. on the life cycle of salmon, which perfectly epitomizes natural selection. The doc. showed that after salmon are hatched (usually thousands); only a handful survive the journey downstream to the ocean and the journey back upstream to reproduce; the vast majority fall prey to ducks, pelicans, seals, bears, fisherman, etc. Those who actually complete the journey and succeed in reproducing seem to have done so more by dumb luck than anything else ("there's no destiny, it's all random"). Certainly, luck is the greatest factor in succeeding on an individual basis for salmon (and the rest of us); hell, being lucky is more important than anything else! And yet, one can still see that over a large span of time, salmon that swim faster or jump higher would tend to have a slight statistical edge over other salmon. One can see how an adaptation (a shift in the statistical mean of these traits) could gradually form over centuries and millennia; even if it's almost all dumb luck on an individual basis. [The key word is *almost*, of course.] Also, one can see how salmon survival would be greatly enhanced if salmon had protective spikes (like porcupines); or if they didn't have to return to the same river that spawned them. Obviously, though, these adaptations haven't come about because the requisite random mutations haven't happened to happen: Again, "good enough" is the bottom-line.

**Survival of the Fittest**

Natural Selection, though, is still popularly thought of as "survival of the fittest", a phrase introduced by Herbert Spencer before Darwin even published "**The Origin of the Species**". Spencer's phrase is usually interpreted to mean that evolution is a ladder towards increasing complexity and "progress"; and that "fittest" means that only the superior (should) survive and prosper. But as emphasized by Badcock, natural selection is really about *differential reproductive success* only and has absolutely nothing to do with "progress" or even individual survival. So "survival of the fittest" is a catchy, but meaningless phrase.

Greater complexity is often taken to mean "higher" evolved; but in actuality, all species that exist concurrently in time are equally evolved- they just took different paths. The evolutionary ladder is not of "progress" but of time; so today's worm, shark and human are "equally" evolved, since they exist in the same time. Dinosaurs may've been more complex than modern slugs, but they're 65 million years lower on the evolutionary ladder. In pulp science fiction, the idea of humanity's inevitable evolution into a kind of superhuman demonstrates this typical complete misunderstanding of evolution. Who knows how the future environment might turn out? The "man of tomorrow" might be a flatworm-like creature with a smaller brain, not some gleaming superman with a super-intellect! Superhero comic books (e.g., X-Men's "homo superior") are esp. replete with this erroneous belief.

Ultimately, the bottom line of natural selection is the birth rate vs. the death rate. Individuals with traits, which increase the birth rate or at least keep it above the death rate will remain in or even come to dominate the gene pool by default since presumably those that lack such traits will either die out entirely or become minorities. But keep in mind that those traits in a gene pool with the highest reproductive rates are by no means optimal, i.e., the traits with the highest POSSIBLE replication rate- they're only the "best" of what's appeared so far. Natural selection is a blind, stumbling process; the "ideal" adaptation may never be actualized simply because the requisite incremental mutations towards it didn't happen to happen to the bewilderment of some adaptationists who forget this: ***New traits can only appear RANDOMLY- not due to necessity!*** So even if a trait can be proved to be an adaptation doesn't mean it was somehow inevitable or the "way it was meant to be".

Many other alternative, but equally effective, or even "better" adaptations may've been possible, which just didn't happen to happen. The very fact there's so much incredible bio-diversity (some 30 million species of co-existing bacteria, plants, fish, insects, reptiles, mammals, birds)- so many different species that can coexist in the same environment- so many life forms that have "niche" existences (salmon, kangaroos, panda bears, penguins, elephants, camels, cactus, tortoises, hummingbirds, etc.)- demonstrates that "optimization" isn't the driving force in evolution. Rather, "good enough" is all that matters. Adaptationism is, of course, also limited by biological constraints (due to physical laws); or to limitations imposed by past biological "baggage". Worms and birds, for ex., may have a common ancestor, but I doubt worms are likely to evolve wings anytime soon.

The final misconception is that the products of natural selection represent "the way things are meant to be". Well, if that's the case, then obviously, natural selection has nothing to do with producing happy and well-adjusted people. Some have suggested that people are unhappy today because modern life is so different from the ancestral hunter/gatherer environment. Well, maybe there was less of certain forms of stress, but I doubt people were happier then; they were probably even more miserable due to the harshness of that lifestyle (reflected by an average lifespan of 30). Again,

natural selection doesn't necessarily bring about optimization.

In truth, the world "as it is" isn't an accident because natural selection isn't random; but for all practical purposes, it might as well have been. I mean, entirely different and maybe even equally likely outcomes were possible- that just happened not to have happened. It's like flipping a coin...if history were to be replayed (with some small variation) then we wouldn't even necessarily exist as a species. All of this should be self-evident, but still misconceptions abound. For ex., I read a recent article in which it was suggested that sterility might be "nature's way of keeping undesirable genes out of the gene pool". This is nonsense- what's "undesirable" is completely arbitrary- the bottom line is what's reproduced and what's not. The most "undesirable" traits imaginable would dominate the gene pool if they out-reproduced other traits.

What's "better" doesn't necessarily have anything to do with what succeeds. Success in evolutionary terms is measured in terms of prevalence ("sales"). An ex. of this can be found in modern capitalism (where evolutionary terminology now abounds). For ex., Apple Computer's operating system (OS) is commonly regarded as being better than MS-Windows, but so what? Microsoft has had far more sales (more reproductive success), so it's the industry leader. Apple's Macintosh was supposed to be better than the IBM PC; but the PC was an open standard whereas Apple fought to keep the Mac proprietary; hence, the PC became the industry standard, because it had more "reproductive success". Or for years in the computer industry, backwards compatibility with the Intel x86 architecture and the MS-DOS OS (despite the extreme constraints and performance degradation) were absolutely essential for sales success. Of course, at some point, adherence to an antiquated system may become intractable, leaving the way open for a revolution...

**Optimization/Arms Races**

Stephen J. Gould is fond of describing bacteria as the most reproductively "fit" of all organisms simply because in sheer numbers and diversity they far outnumber all other life forms combined. By the standards of evolution then, bacteria are the true "Master Race". As stated before, evolution is only peripherally related to complexity. That is - natural selection doesn't select for increasing complexity; but complexity can certainly develop just as long as reproduction still continues. Otherwise, the two have nothing to do with each other.

The natural question is how complexity comes about then. Well, as explained by Dawkins in "**The Blind Watchmaker**", typically, competition for scarce resources (often between members of the same species and even competition at the cellular level) leads to an "arms race". For ex., in all likelihood, some tree species are so tall due to an arms race among them in competition for sunlight. Dawkins notes that if all trees stopped growing, then a "settlement" could be made; but, of course, if some trees don't abide, then... Arms races can lead to rapid increasing complexity and "optimization" (of sorts)- just look at the incredible results of the arms race between the US and the Soviet Union during the 1950s-1980s. More weapons progress came about in a few decades than in the previous millennia combined. [To be precise, military arms races have existed for centuries, but they really took off in the 20th century, not because people are smarter today, but because a certain "critical mass" had been achieved in terms of population size; agrarian production, industrial output, health and education.] Or consider the arms race between bacteria and antibiotics- a constant and ongoing war; even though in 1969, the US surgeon general naively declared that the war against infectious disease had been won. Now, staph bacteria exists that is resistant to all known antibiotics...it just goes on and on.

Comparable arms races exist in all manner of things. At the social level, for ex., there's an arms race between con-men (charismatic and persuasive people who lie and cheat others, using their social skills) vs. the gullible. Of course, people are becoming more sophisticated in general, but the con-men are getting better too. So it goes.

Matt Ridley, author of the **"The Red Queen"(1993)**, refers to such arms races as the "red queen" syndrome- where constant effort is required just to "stay in one place" (keep up with the competition). This is evident in modern capitalism (esp. the semiconductor chip industry) where constant competition can lead to a kind of optimization (more features at a lower cost). Just like a biological arms race can lead to competing adaptations among members of the same species or between different species. (The details are still unknown- personally, I like Elaine Morgan's "aquatic ape" theory- but at some point in prehuman history, a unique and (probably) rapid arms race led to our greater intelligence- making us different (language, art, tools) from all other primates.)

Arms races can lead to incredible complexity, but the key thing to remember is that there are plenty of traits that never get caught up in one. What does so seems to be a random (mutation) thing. So traits that have been static for many generations are either adequate ("good enough" as they are); or not leading to extinction (for now at least); or they just never got caught up in an arms race.

The downside of arms races is that so often they seem mindless and out of control from something as mundane as political campaign fundraising; or the increasing size of SUVs on the road; or the fashion industry (where models have to be increasingly thinner and taller); or the increasing media emphasis on sex and violence (where constant novelty - shock value- is required to maintain raaaattings); or runaway modern technology; or the proliferation of weapons of mass destruction. If things seem hopeless sometimes, it's because we have no self-constraints to contain us. In the mundane case of SUVs, the hope is that rising gasoline prices and environmental concerns might stunt their popularity, but so far, that's not the case. So much of modern capitalism is about money, status and power- it's a mindless arms race where things are done ("progress") just for the sake of doing them (like climbing a mountain because it's there). IMO, work should ultimately be about the production and equitable distribution of goods, so that people can provide for their families - but this seems to be forgotten in the wake of the "power trip". But just because we wear fancy business suits and drive luxury cars doesn't mean our existence is fundamentally different from, say, cows- kind of kills the ego, right? Hell, if life really is about raising families, then perhaps daycare should be a priority in the workplace even if it hurts business efficiency and the company's "strategic corporate mission initiative" plan!

The world consists of a bunch of randomly initiated and seemingly out of control arms races: perhaps we're all trapped until the inevitable bang.

**Selfish Genes and Altruism/Cooperation**

Unlike asexual reproduction, which offers near-100% fidelity, sexual reproduction only results in 50% genetic replication of an individual's genes. So it's obvious that most individual genes are quickly diluted over several generations (1/2,1/4, 1/8, 1/16...). So an alternate definition of a genetic adaptation is any gene, which is retained over the long-term due to natural selection.

The basis of "selfish gene" theory is that genes are the fundamental unit of natural selection. It used to be thought that the basic unit of selection was the individual or even the group before the discovery of DNA. But in fact, individual survival is favored by natural selection only to the extent that a certain amount of time is required for an individual to reach sexual maturity; mate, and to raise offspring. Therefore, what comes after child rearing isn't a factor in natural selection: I think aging and infirmity have more to do with thermodynamics than natural selection. [Some have speculated erroneously that menopause, for ex., is an adaptation that allows older women to assist their kin as maternal backup.] The jury is still out on group selection, but it seems an unlikely thing (unless it's a *cultural adaptation*).

As described in previous sections, the bottom line in natural selection is the replication rate of genes. Most of the life on this planet is in the form of bacteria and viruses; but more complex, multi-cellular life forms are also possible in which many cells "work together" (for the most part with some exceptions like cancer!) in a common package- i.e., an individual body. In such cases, genes are selected not on an individual basis, but on a package, "whole is the sum of the parts" basis. Furthermore, due to reproduction whether it be asexual or sexual, there will be groups of individuals, who share many common genes relative to other groups of individuals. What this means is that traits that promote gene replication can work on the individual package-level and a group-level, if the group is comprised of closely related individuals, who share many genes, i.e., a family. Again, it must be emphasized that genes aren't trying to replicate themselves- it's just that those that happen to do so will be around in greater numbers than those that happen not to do so. "Selfish genes" is just a useful metaphor as Dawkins readily acknowledges.

In "**The Moral Animal**"(1994), Wright cites the ex. of ground squirrels, which make noises to warn other squirrels of predators even though this draws their attention. Such altruistic behavior makes sense in the light of "selfish gene" theory. Even if the squirrel, which gives the warning, dies; it makes sense, if many of its relatives, with whom it shares many genes, are warned and therefore saved. This gene-centric view then explains "kin-selection" altruism: why it makes "selfish gene" sense for closely related individuals, who share many genes, like parent-child and siblings to tend to sacrifice and cooperate with each other more (for their "own flesh and blood") than they would for non-relatives. However, of course, individuals have no way of knowing how closely related they really are so the actual algorithm works on "family" members- the most likely relatives- even if they're not really related. It's also interesting to note that parents sacrifice more for their children than siblings do for each other even though they all have the same genetic relation- about 50%. This is so because obviously children are more dependent on parents than they are on siblings, whom which they actually compete against for their parent's affection and care ("sibling rivalry"). Likewise, I doubt that identical twins are more caring than, say, fraternal twins even though identical twins share 100% genes- simply because identical twins are too rare for any specific adaptation to form. So the degree of genetic relation in itself isn't the driving factor in kin-selected altruism. (No one would dispute that in GENERAL family members treat each other better than they do non-relatives; but considering how tumultuous and even violent parent/child/sibling relationships can be, is it any wonder then that relations between different ethnic groups can be so problematic?)

Kin-selection explains a lot, but there's another broader force at work too known as TIT FOR TAT: 1. Cooperate with others initially until they don't reciprocate 2. Have increased cooperation with those who reciprocate (reciprocal altruism) 3. Stop cooperating with those who don't reciprocate unless they really change. TIT FOR TAT is a simple algorithm that has been shown in computer simulations to "win out" in the LONG term: it benefits more participants than other

algorithms so far conceived such as purely selfish or purely altruistic strategies. TIT FOR TAT overlaps with kin-selection, but it also works on relations between non-relatives as well. But just because TIT FOR TAT has been mathematically shown to be the most beneficial in the long-term by no means implies that it monopolizes human nature. It's only a statistical trend. In humans, TIT FOR TAT is obviously more complicated than this simple algorithm. In fact, people probably practice it, if at all, to varying degrees. Some people, for ex., feel very obligated to a debt and will always try to repay it; others will gladly take favors w/o paying them back or they'll only repay those of higher status. There are also many instances in which selfish, "every man for himself" canons work just fine rather than cooperation, which is why such behavior is still plenty common.

Reciprocal altruism is seen among many other animals like bats, which share blood with other bats, because they'll be "paid back" eventually. In humans, Ridley makes a very strong case that reciprocal altruism really took off due to meat sharing among hunters. Even the best hunters could go hungry due to bad luck, so it became an adaptation for hunters to share meat with those who'd previously shared meat with them out of gratitude. Wright, in particular, makes a very convincing case that something like TIT FOR TAT works in the human brain and that it's the probable adaptationist basis for human sympathy, gratitude, forgiveness, trust, friendship, loyalty, indebtedness, civility/manners, trade/barter, justice, "playing by the rules"; and also suspicion, indignation, resentment, grudges, and revenge ("**getting even**"). I mean, this can't be proved yet, but it fits most people's attitudes so well. If someone does something nice for you, most people feel grateful and try to reciprocate; or they owe that person a favor with someone saving your life being considered the ultimate debt. If someone "screws" you, though, you want revenge and you feel justified in doing so.

Actually, revenge isn't merely "an eye for an eye" as commonly thought, but worse. The actual algorithm seems to be to retaliate (harder): like dueling someone to the death for a verbal insult- kill before being killed? Or today, we have people being shot on the road for driving too slow; or for cutting someone off; or for honking. The retaliation and escalation aren't in proportion to the original offense, but we justify it, and make excuses for ourselves, by saying, "well, he started it!". Isaac Asimov once described the desire for revenge as a "mad passion...for returning a blow with a harder blow in instant return. The desire for getting back at an offender is so keen, so sharp, so demanding that it leaves the desire for food or sex in the shade". And we all know this to be true. (Perhaps this escalation is another arms race?) Culture has stepped in to defuse this, though, with the invention of etiquette. How many of us have felt a flare of anger at someone for an offense; or for not acknowledging a favor, which fades once they apologize or say, "thank you"? A recent study said that southern males tend to have better manners than in the rest of the US. The same study also said southern males are also more combative, and easily offended; so they rely on etiquette to alleviate this.

In the modern world, TIT FOR TAT can readily be observed on the nation's roads. The fact that driving doesn't always result in fatalities is proof that it exists; but, of course, it's not the only strategy. Obviously, more people can drive on the road, if we accommodate each other: observe and obey traffic rules; and most people do so. A minority of people, though, are predatory in nature and completely selfish. They speed, tailgate, don't signal, run red lights; and cut off other people and drive like maniacs- and get away with it for the most part. Of course, when they don't get away with it, they usually end up getting themselves killed. But the fact that most of the time they can get away with it means that such behavior can continue to exist. Now if everyone drove like that, then no one, of course, could get anywhere. In a way, like parasites, aggressive people *need* passive people; otherwise, they couldn't get away with what they do. (For non-alpha males, I suppose it's easier ("less bloody") to "give in" instead of fighting back.)

The AAA classifies "road-ragers" as: 1) Speeders- those who drive as fast as possible even if it means running down other people. According to one report, the more dangerous it becomes, the faster some speeders will drive to "show off". 2) Competitors- those who fiercely "race" against other drivers. 3) Vigilantes- those who seek to punish other drivers, who commit traffic violations. 4) Narcissistic- those who get angry at other drivers who don't drive to their standards. 5) Passive/aggressive- those who don't cause trouble unless someone crosses them first, e.g., cuts them off; then they might retaliate by shooting the offender- a fatal, but classic ex. of TIT FOR TAT.

Road rage is due in part to the fact that drivers are anonymous and autonomous in their vehicles; people don't need each other as much due to modern technology; so there's much less incentive to be courteous as there would be on a train. However, road rage is also just a modern expression of dueling- something that's been going on for a long time. Anyone who really wants to understand road rage should look into the history of dueling going back to pistols, swords and fist fights; so road rage is obviously not a "direct" adaptation, but it's implicit. Perhaps it's an unintended consequence of human hunting instincts (like domestic cats, who still hunt birds).

Driving is too recent an invention for any specific genetic adaptations to emerge from it, of course; but I once read an editorial in "**Analog SF**" that "stupid" people- like drug abusers; reckless drivers; people who don't wear seatbelts; smokers; people who practice unsafe sex, etc.- should be allowed to do so; so that natural selection "can do its job" and "weed them out". This is true in theory, but it's a high price to pay in human lives (but if modern lifestyle persists for millennia, then it'll happen anyway).

The point I'm making is that predatory, unprovoked aggressive behavior naturally exists in human nature. Even if most people practice TIT FOR TAT, some won't (remember, it only leads to long-term statistical success). In truth, some people out there are purely selfish, predatory and aggressive by nature: would-be alpha males. There are simply people out there (mostly, but not all male), who'll attack and kill other people (w/o provocation) out of blanket hatred (e.g., racism and misogyny); for the sadistic thrill of it ("wilding"); or because you were inconveniencing them ("you were in their way"). This is entirely contrary to what those who blame all human aggression on bad upbringing believe, of course. But they're simply wrong. TIT FOR TAT has been viewed by some as a blueprint for world peace, but I think not. After all, most human relations are still antagonistic and cutthroat ("us vs. them"). Sure, there are pockets of cooperation among families or other small groups (even among vicious gang members like the Mafia or the Bloods and Crips); but otherwise the peace is held together by a truce sustained more by apathy and wariness than "goodwill to all men".

In "**The 7th Victim**" (1953), science fiction writer, Robert Sheckley, depicts a future society in which murder is legalized for willing participants- to provide an outlet for innate human violence- in order to prevent another world war. Sheckley suggests that human aggression is inextricably linked with human drive, courage and tenacity, so that it's a necessary "evil" for long-term survival. On the other hand, Charles Harness' "**The Paradox Men**" (1953) suggests that all human civilizations inevitably collapse (due to war), because of the human mentality to "kill first, examine later"; because human nature is far more violent than it "has to be". Harness suggests that human progress would've been ten-fold faster, if humans were less violent. (Note: modern humans have existed for 100,000 years, but known civilization goes back only 8,000 years.) Personally, I agree with Harness, but that's a pointless issue: some right wing, survivalist-types might



argue we're not violent enough. The simple fact that we exist proves that historically at least, we've been "adequate" enough to endure so far.

How we turned out wasn't inevitable or destined to be- many other alternate adaptations were possible. (The incredible diversity of life on this planet is proof of that.) Adaptations are cumulative (built upon each other like a pyramid); so in our case, since our early ancestors were so aggressive (unlike the path plants took); then, of course, it persists because it's the core upon which the rest was formed. Subsequent adaptations then were more likely to be like-minded. [Note: individual aggression had to develop first before cooperation, because the former is less-complex.] So I think we're more violent than we had to be- we could've easily been more "rational", but so what! Natural selection has nothing to do with optimization.

There's a lot of variation and ambivalence across the spectrum of human nature. And of course, much violence is out of sheer necessity- pure self-defense ("kill or be killed"). Most of human history has been a life and death competition for food, water and shelter- which is why violence declines in prosperous times. But some violence has nothing to do with economic necessity. Simply put, we are ally, but also predator and prey, to each other: we live in a "dog-eat-dog" world.

**Sex: The Way it is**

To some, men and women are from "different planets"; but since natural selection is driven by sexual reproduction, then human sexuality has to be a major focus of evolutionary psychology.

According to a recent UN report, the bulk of women, esp. in the 3rd world, endure "traditional" misery because of their sex. Note the prevalence of forced marriages, forced prostitution, and the often-brutal treatment of girls and women by men as sexual chattel. Even in a modern society like the US, many women are beaten or murdered by close male acquaintances. It's such a common thing, and yet, it's rarely the focus of the media- too common to be newsworthy? Not all women endure such treatment, of course, but I think all of us would be stunned by the true magnitude of the problem. Women are undoubtedly the most oppressed "minority"; and yet, they're 50% of the human race. For example:

[I read a Dec 1994 news account of a rape victim in Bangladesh, who was whipped by Muslim clerics, who blamed her for the crime; apparently, she needed 3 male witnesses to affirm her innocence.]

[I saw a pair of **"20/20"(ABC)** stories (1996) about Army drill sergeants, who rape female soldiers; and US state troopers, who stop female drivers and rape them- both with impunity (some have committed dozens of rapes). Note: wife beating is far more prevalent among "macho" professions like the military and law enforcement and athletes, esp football and basketball players.]

[I read an Aug 1997 story of an Egyptian father, who beheaded his 25-year old daughter after she eloped with a man he disapproved of to restore family "honor". Of course, he would've never done that to a son. I also read about another Egyptian man, who beheaded a 4-year old girl, after discovering she wasn't his biological daughter.]

[It's estimated millions of women today, mostly in Africa, have undergone genital mutilation- removal of the clitoris and sometimes even closure of the vagina with a lock- a kind of "branding" as male property.]

[I saw a 1998 "Fox Files" segment about a notorious June 1993 crime in Houston, Texas in which six gang-members, raped and tortured to death a 14 and a 16-year old girl, who had been walking home. The segment showed news footage of one of the teen defendants as he spat at reporters; called the female reporters "bitches"; and shouted obscenities. This crime is often cited by proponents of capital punishment in the US.]

[I read a news story that female virginity is so "prized" in Peru that rape victims are often pressured by family members to marry their assailants in order to avoid "disgracing" the family name. I also saw a Jan 1999 news story about a Jordanian man, who shot his own sister 4 times, because she'd been raped- to preserve "family honor".]

[In March 1998 (Jonesboro, Arkansas), two teens shot their ex-girlfriends and a dozen other students on school grounds out of revenge after being dumped. This is only the tip of the iceberg. How many women murder their ex-boyfriends by comparison? Consider the millions of women who are stalked and terrorized by boyfriends and ex-husbands; if a woman breaks up with a man, she runs the risk he may go berserk and murder her. After lying, cheating and theft, domestic abuse may be the most common crime in the world.]

[I saw a Jan 2000 **"20/20"(ABC)** story about men, who horrifically disfigure women who reject them with sulfuric acid- most common in countries like Jordan, Pakistan and Bangladesh- where women are considered "male property".]

[I saw a Feb 2000 **"International Dispatch"(PBS)** about purdah. The doc. described a Pakistani woman, who was hacked to death by her in-laws, because she spent time alone with her male cousin.]

In all cultures and societies, only women can be thought of as "sluts", never men. Women are universally condemned even for the hint of promiscuity while it's almost accepted behavior for men (e.g., only women were stoned for adultery, not men). Many contend that culture is to blame for the double standard, but perhaps this is only true indirectly in a subtle way.

In truth, men, esp. gay men, are the true "sluts"- the ones who think about sex the most; the ones who tend to be the most sexually promiscuous; and the ones who are least faithful in relationships, not women. For ex., consider the statistic that some gay men have been known to have 500 different sex partners in a year! I doubt that even renowned heterosexual male "sluts" like Bill Clinton, Warren Beatty, Hugh Hefner and JFK ever came close to that (not from a lack of trying I'm sure). If women really had a libido like men, then some females (excluding prostitutes) would have comparable numbers too. In actuality then, women are the limiting factor in the frequency of heterosexual sex (unlike gay men, lesbians also tend to be fairly monogamous). It's completely unfair, but women are regarded as "sluts" simply because they "look the part" (bear the children).

In general, there is simply a fundamental difference between the male and female sexual libido. As one comedian put it, "when women are horny, they're like men who aren't even thinking about sex!". The obvious difference is that male lust is

visually fixated and activated by the stereotyped female physique (large breasts, wide hips, long legs, buttocks and a pretty face): it's comparable to the "hunger" inspired by the sight of food. The mere sight alone of an attractive woman is enough to sexually arouse a man within seconds. Sexual intercourse is also extremely pleasurable for men because of the sensitized nerve endings of the penis; and most men can quickly achieve orgasm within a few minutes (followed by a period of refraction- loss of sexual appetite and exhaustion, which is why men fall asleep after sex). To be blunt, sexual lust is a fundamental drive in men with priority only after thirst, hunger, sleep, health and physical safety. For women, though, sex is more like a "hobby". Now certainly, many are greatly enthused and even fanatical about their avocations (dancing, golf, jogging, surfing, skiing, tennis, stamp collecting, etc.); but there can be no real comparison between enthusiasm for a hobby, say, and genuine thirst for water.

During puberty, testosterone activates a part of the male brain that is attuned to the female physique. Women have the same part of the brain too, but if activated, it'd be focused on female anatomy too. So if women were to lust for anyone, it'd be for other women (which would happen if they had sufficient male hormones). Certainly, women appreciate good-looking men; but female sex hormones don't produce an equivalent visual lust for the male physique; in other words, women simply don't lust for men or desire sex as men do. It's never been a case of women "teasing" men: withholding sex from men while secretly wanting it just as bad as men do except in escapist (male fantasy) pornography. So the "Hugh Hefner" philosophy that "nice girls desire and enjoy sex as much as men do" is simply untrue, but it's a convenient philosophy to have in order to justify philandering.

Women are sexually aroused by physical stimulation- foreplay- a long process (15-20 minutes) compared to the few seconds it takes to arouse a man. The sight of a naked man simply doesn't "do it" for women; compare the sheer overwhelming # of porn magazines of nude women vs. Playgirl (widely read by gay men); or the number of female prostitutes to male prostitutes, who mostly cater to a gay clientele. Also, in popular entertainment (escapist fantasy), women physically desire and enjoy intercourse as much as men do, but this isn't true. For one thing, the vagina doesn't have nerve endings comparable to the penis- at best, intercourse is painless with sufficient lubrication. Furthermore, most women are incapable of achieving orgasm via intercourse alone- the clitoris is the female equivalent of the penis, not the vagina. Women require approximately 20 minutes of direct clitoral stimulation to achieve orgasm, so most women can only orgasm via masturbation or oral sex.

And yet, some men believe women enjoy "rough" vaginal intercourse; or are "begging for it"- i.e., want to be raped. This is just a delusion like paranoia or egomania. Many men also want to have a large penis (presumably so they give increased pleasure to their female sex partners), but I think men want it more for their own sake and self-esteem. Women can, of course, enjoy sex (just like we can all enjoy a swim or a walk in the park), but not with the frenzied desperation of men. I really think they mostly enjoy the close physical intimacy of hugging/foreplay; and, of course, they desire and enjoy orgasms too. But for women, orgasm is more of a "mechanical reflex"- a physical response to clitoral stimulation (it's more impersonal than for men). It's like throwing up by sticking your finger down your throat vs. seeing a repulsive sight. (Sex is far more visual for men.) Because of this difference in libido, men tend to view women as "sex objects"- not as people with feelings. They can't deal with an attractive woman without thinking of having sex with her in the background; I doubt many women have this problem with men.

In the debate on teen pregnancy, I've heard teens have sex because of "raging" hormones. This is undoubtedly true for most guys, who are so desperate to "get laid" they don't care about the consequences (pregnancy or disease). But for girls, who have sex- their motive isn't lust; but rather the desire for physical intimacy; peer pressure, simple curiosity, apathy and boredom; the belief they must "give in" to avoid being dumped by their boyfriends ("if you love me, you'll do it"); and to feel "grown up", "cool" and "popular". And some girls, esp. fatherless girls, are so desperate for male affection, they exchange sex for love ("men give love for sex, and women give sex for love"): most girls seem unaware that many guys will lie for sex.

However, just because women don't lust for or enjoy sex as men do, that doesn't mean, of course, women can't be sexually promiscuous. After all, I'm not suggesting sex is an unbearable, disgusting ordeal for women like in the old Victorian notion; nor am I saying girls aren't interested in sex- it's just that statistically their interest is an order of magnitude less than men. Some women simply exchange sex for favors. There's the old Hollywood cliché that aspiring actresses have to trade sex for casting favors- just a business transaction. Most prostitutes are, of course, forced (even sold by their parents!) into it, esp. in 3rd world countries, because of sheer urban poverty or drug addiction (overpopulation- "excess supply"- cheapens human life I suppose). But some willingly choose prostitution, esp. the "higher-class" operations, because of the relatively high pay. For such women, casual sex, is just a job and "doing" a bunch of guys is no big deal to them. It's been said that men want sex for the sake of sex while women trade sex ("always in exchange for"). Prostitution and pornography then are simply the seedy side of capitalism (supply and demand). "Sex sells" and men are the main consumer target.

Sexual modesty in women then is primarily due to the fact women simply don't desire sex as men do. But it's also due to fear of pregnancy and disease; and because female virginity until marriage is promoted in much of the world by strict parents, especially by fathers. (Note: teen mothers tend to come from fatherless homes.) Many girls are raised to be "virtuous"- shocked and embarrassed about sexual matters. (As is sometimes the case, a genetic adaptation is reinforced by a cultural adaptation.) Also, some women are aware that most "men are pigs" and so are wary of men; there's the old adage to women that a man will lose respect for them, if they sleep with him.

There's nothing new in all of this: before the sexual revolution in the US, men were historically viewed as sexual predators, which is why chaperoning used to be a common thing. Hell, I'll take a cheap shot at television too- TV sitcoms like NBC's **"Friends"** may be funny, but they depict sex as recreational fun w/o any real-world consequences or dangers; and they depict men as "cute guys" rather than the sexual predators most of them are.

In Islamic nations, women are required to wear veils and "modest" clothing and they're often blamed for sex crimes perpetuated by men. (If the woman had been more "modest" like not allowing herself to be alone with a man in the first place, the rape wouldn't have happened, so it's really her own fault.) In all fairness, though, women shouldn't be forced to wear veils; rather men, the true "guilty" party, should be required to wear blindfolds! It's a vicious double standard, but it's so common. In the West, women (only attractive ones, of course), who wear "sexy" clothing are still often blamed if they're raped; i.e., they were "asking for it". For ex., I read of a jury in Florida, which acquitted a rapist because the victim had been wearing a "tight" skirt. Men, who wear "sexy" clothing, though, aren't raped; not because of compassion, but because of a lack of sexual interest among women and (most) men: apathy, not kindness, prevents most crimes. Men's

bathing suits are far more revealing than women's, but how many men are raped for wearing a flimsy bathing suit?

I've heard it said that men can't be raped because sex is so pleasurable for them: if force was used to initiate sex, a man would come to enjoy it so much, it wouldn't really be rape. But this isn't necessarily so as any guy who's ever been kicked in the balls can attest; or as male prison rape victims well know. The implication of this, though, is that only women can be raped because sex isn't as pleasurable for them. But if they really do secretly desire and enjoy sex like men, then they can't really be "forced" to have sex; and many macho rapists insist their victims were really "asking for it". But, of course, that delusion is the motivation for them to commit rape. Like if a girl is "slutty" (wears revealing clothes), and flirts with men; some men will see her as "legitimate prey"; or if a woman invites a man into her home after a date, some believe she "deserved" it, if he then rapes her. All of this really shows that some men are looking for any excuse, no matter how flimsy, to justify rape; either because they want sex by any means necessary or due to misogyny. It's delusional- just like some men are so arrogant and egotistical, they want to literally "conquer the world".

Some psychologists and feminists contend rape has nothing to do with lust, but is really all about power. This is certainly a factor in some cases: some men do rape women to "punish" and humiliate them and I'm sure this is a big factor in male prison rapes. But let's face it, there are many rapists who do it just for sex; they're simply thieves that steal sex just like some steal money and property. It has nothing to do with power then. Men who have sex with drunk and incapacitated women (like that male nurse in Florida who impregnated a comatose woman); or who use "date-rape" drugs like Rohypnol fall into this category I suppose.

But there's also an undeniable link between male sexual lust and sadism and violence (something undeniably predatory about sex). In locker rooms, men refer to sex as "fucking", "banging" and "nailing"; not "making love". Some violent men are domineering and abusive to both men and women; but some are like that only to women. Consider wartime accounts of atrocities in which soldiers just shoot the men but rape the women and cut off their breasts and butcher their bodies. Or consider the far more common occurrence of men who terrorize their wives, but not other men. [Note: sexual deviations like fetishes, voyeurism, exhibitionism, child molestation, sado-masochism and porn addiction are almost exclusively male-related.]

In his long-running "**Gor**" series, fantasy writer, John Norman, repeatedly expounds the belief that all women, esp. the "uppity" ones, subconsciously desire to be dominated and subjugated (and repeatedly raped) by a powerful, masculine warrior with a giant penis, i.e., a "real" man. But then, he is writing fantasy (for a male audience); by definition, fantasy is escapism, a denial of reality. However, this is a very common attitude, esp. among the most violent members of society like drug and biker gangs.

Also, hardcore pornography, whose audience is overwhelmingly male, wallows in sexual sadism and violence against women. Just like pro-wrestling (all fake) and Hollywood action movies pander to male power fantasies (e.g., "lone male wipes out all opposition in a blaze of gunfire") to sell tickets. Porn is blamed for giving men impossible standards of female beauty. (Well, all mass media can be accused of that.) And obviously, the growing incidence of male porn-addiction due to its easy availability over the Internet is an "unintended consequence" of the visual nature of the male sexual libido. Porn has also been blamed for "encouraging" men to rape because it caters to male rape fantasies

(delusions), often depicting women (and children) as enjoying being raped and as eager and willing participants in deviant and degrading sex. But, of course, these women (usually dirt-poor; or drug addicts; or failed actresses and models) do the porn for easy money; not because they're "eager" participants. The ugly truth is that porn makers script and produce what their overwhelming male audience wants to see. So what does that say about human nature? As previously mentioned, serial killer, Ted Bundy, blamed porn for his misogyny and his sex crimes, but that's just an excuse. Rather, the danger of porn is that it appeals to, encourages, and brings out the worst in men.

When I was in college, I read a letter in the school newspaper from a female student, complaining about male students, who'd chant "rape her" at the screen during movies. In a follow-up, several students thought she'd overreacted. Granted, most of those suburban white male students won't actually commit rape themselves; but still, action isn't that far from thought...certainly, it's that attitude that leads to "date rape".

Misogyny is akin to racism- some neo-Nazis, for ex., have psychotic, obsessive hatred for all blacks or Jews, and commit horrific violence against the focus of their hatred. Likewise there are plenty of misogynists (the type who constantly refer to women as "bitches and whores") who despise- fear?- and have absolute hatred, resentment and contempt for women- and commit rape (not just forced sex, but mutilation and murder). Like Ted Bundy or serial killer, Danny Rolling, in Gainesville, FL (1990), who raped and butchered some female college students. Someone like Bundy was probably no threat to other men, but a vicious, sadistic predator to women...just like some KKK members are "genteel" to fellow whites, but capable of extreme hatred towards blacks. (I've had a minor taste of that: on July 4th, 1992, I was threatened by a racist in front of the Lincoln Memorial in Washington DC, because he didn't like the way I'd glanced at him.)

I suppose such misogynists hate and resent women for rejecting them; or for not consenting to "sex on demand". (Or because they hate their mothers and hence stereotype, and despise all women.) They think "wicked" women "tease" them while really wanting it just as bad. That's not true, of course, but since when has truth mattered in human affairs? (Is it a elk's fault, if a leopard hunts it?) In other words, they hold other men to a different and FAR more lenient standard (due to an absence of malice) than they do women simply because they don't desperately seek to have sex with other men.

Rape is defined as forced sex, but this is a poor definition because it brings up the notion of "seduction": sometimes "no" can mean or become "yes". But defining rape based solely on sexual consent is completely unfair. For ex., even in a modern nation like the US, it wasn't until the 1970s that a man was convicted for raping his wife- marriage for many means implicit sexual consent. But this is crazy when one considers how brutal domestic abuse can be- I mean, just because a woman consents to have sex (says "yes") shouldn't mean she's also consented to be brutalized: If two people meet and shake hands (one offers the handshake and the other accepts, then it's an act of mutual consent- no problem- which was initiated by either party or both. But suppose, someone initiates a handshake and the other party accepts- they shake hands, but the former then crushes the latter's hand. Is it then the latter person's fault for having consented to the handshake? Was s/he "asking for it" whatever "it" might turn out to be? This is, of course, a ludicrous argument, but it's similar to the type used in sex crime trials in order to "blame the victim". The difference between "consensual" sex and rape should be as obvious as the difference between a hug and a chokehold; but the context of sex muddles everything.

## Sex: The Adaptationist Reasons Why Or the Egg vs. the Sperm

First of all, the basic question of sexual reproduction itself must be dealt with- namely why sexual reproduction even exists; esp. when asexual reproduction seems better for "selfish gene" pursuits. Why settle for only 50% genetic reproduction when 100% reproduction is possible? (And is perfectly viable and practiced by many species.) Even though this seems to be a simple question; according to Ridley, the best modern science has been able to come up with is that sexual reproduction produces more diverse genetic combinations than asexual reproduction; and therefore provides better protection from parasites and harmful mutations in more complex organisms (in stable environments). That is, the reason seems to be due to effects borne at the cellular level. So the traditional answer that two sexes are needed because of the necessary division of labor: men are big and strong and are needed to protect women while women care for the babies may not be the direct one. There may be some confusion between effect and cause here. So the following is speculation relevant mostly to humans. (The incredible diversity of life let alone the considerable variation among other primates demonstrate that this is only one such possible path and doesn't represent any optimal state or the way "things are meant to be".)

The point is that human pair bonding is something outside of kin-selection and TIT FOR TAT (for the most part). And the main reason for it is that sex provides genetic protection from parasites and disease. In fact, *disease immunity is probably the single most important trait in terms of natural selection (over intelligence, looks, height and strength)*. And that's because most selective pressure occurs at the cellular level. History is usually depicted as being made by "great men"; but as described in William McNeill's **"Plagues and Peoples" (1977)**, a lot of human history has simply been about the masses reacting to one disease crisis (smallpox, measles, black plague, tuberculosis, syphilis, cholera, influenza, malaria, polio, AIDS, etc.) after another. So one of the fears of genetic engineering is that a new killer disease will be inadvertently or even intentionally created; e.g., with genetic crops, the nightmare scenario is an agricultural plague like in John Christopher's **"Death of Grass" (1956)**. Another legitimate concern is that with the advent of "designer babies", people will select for looks, intelligence, etc. based on fads and fashion, resulting in a lack of genetic diversity (and reduced species disease immunity). One plague might wipe out all of humanity then whereas today, for ex., a minority of people are immune to AIDS.

According to research, modern men are generally most attracted to women with big eyes, symmetrical features, a clear complexion, large breasts, long legs (for running) and a 0.7 waist/hip ratio. It's theorized this is so because in the ancestral hunter/gatherer environment, these traits increased reproductive fitness, because they correspond to youth, fertility and overall good health, which are ideal for childbearing. It's theorized that the 0.7 waist/hips ratio, in particular, is important because human infants have large heads as a consequence of larger brains; so a "hourglass" figure is "proof" that a woman has genuinely wide hipbones for childbirth, and not just wide hips due to fat. (An ex. of an arms race between the sexes.) Modern generations then are supposedly the descendents of men, who favored such women in the past. So most men today find such women the most attractive; and this certainly seems to be the case, if fashion and porn magazines are reliable indicators. Those men who favored otherwise left fewer offspring, so this preference then is an adaptation. For ex., men who favored older or sickly women would tend to have fewer children since their mates were less fertile and less likely to live long enough to raise their children. Also, death of the mother/child due to childbirth is still very common; and a woman's physique and health are obviously very important in regards to that.

Furthermore, the theory goes that men want to have sex with as many women as possible because sperm is "cheap and plentiful" and they have nothing to lose by it. Even if they don't help raise their children (zero paternal investment), some of their offspring might survive anyway and reproduce as well. This is a "selfish gene" adaptationist explanation then for male sexual promiscuity; and it's very plausible when one considers that any male can in theory father hundreds- even thousands of children- whereas even the most promiscuous female can only bear a dozen or so children at most. So male philandering seems almost "natural" then when one considers the enormous potential reproductive success: hundreds- even thousands- of children by many different women (for an alpha male) vs. a dozen or so with one woman (monogamy).

According to the same research, women tend to be attracted more by a man's social status rather than his physique or age, presumably since high status men tend to have the "fittest" genes; and also because high-status men tend to make better providers for children. Also, youth is far less important for men than in women, since there's no age limit for male fertility. (There's a major exception to this rule: it's no secret that women overwhelmingly prefer taller men. This is probably since taller men tend to be physically stronger; also, high status is associated with male height: taller men tend to make more money and are promoted more often in corporate America; and they're more likely to win political elections.)

Women, though, are the ones who become pregnant and are burdened with raising the children [and also only have a finite number of eggs; and are not fertile their entire lives like men], so they should tend to be much more coy ("hard to get") and much more selective in choosing sex partners than men. As Ridley states, it's almost always the case that men have to "make the first move", and "impress the girl" to initiate relationships. (Ridley hints that music, poetry, art, humor, etc. may all be due to sexual selection in order to "impress women".) It's also a cliché that "men pick, but women choose" and that men are "afraid of commitment"; and that women are far more eager for marriage than men. Therefore, women "want" the "best" genes paired with theirs- and they also want a man who'll provide the most parental support possible; i. e., a good provider, who'll make a long-term commitment because it takes so long to raise children. However, they don't necessarily get both from the same man...

Promiscuity then simply doesn't make as much sense for women as for men, since it won't increase the number of children they can bear. But it's theorized that female promiscuity can make sense in the following scenarios: 1) If sex is traded for favors (food, money, drugs), e.g., prostitution. 2) If many males then provide support (or at least are less likely to harm a female's offspring) because of confused paternity. For ex., lions routinely kill any lioness' cubs fathered by another male before mating with her. #2 would also make more sense, if a promiscuous female could have selective fertility; i.e., pick the "fittest" father by "choosing" (consciously or unconsciously) when to become pregnant. Actually, whose to say there aren't female adaptations like this? Perhaps there are and they've been countered by male sperm adaptations (arms race).

3) For "alpha" males, who have the "fittest" genes, females are far more likely to initiate sex and settle for an "one-night stand" (e.g., women screaming and fainting over "top" alpha-males like Frank Sinatra, Elvis Presley, Beatles, JFK, Rolling Stones, Aerosmith, N'Sync, etc. After all, #3 is essentially what females do in the majority of other species (in which males provide zero paternal investment)...



Therefore, according to Ridley, if most men had their way, they'd all have harems, consisting of scores of beautiful and young women (esp., teenage girls, who have maximum years of fertility). And if most women had their way, they'd have monogamous, romantic devotion from a tall, handsome, rich and powerful man. What's historically occurred in human societies instead is monogamy for the masses with pockets of polygamy(harems) to varying degrees for a minority of high-status men.

I suppose a modern cliché that epitomizes this is of a young and beautiful Hollywood actress, who marries a powerful movie producer (multi-divorced, of course), who's decades older than her- both "get what they want" out of each other.

Both Wright and Ridley relate the adaptationist theory that male status and power are correlated to the number of sex partners. Ridley describes the harems (1000s of women!) for a single "alpha male" emperor of the ancient world. This is an extreme ex., but clearly there's truth in this- high status men (politicians, star athletes, famous actors and musicians) do tend to have the most sex partners. Former NBA basketball star, Wilt Chamberlain, for ex., has boasted of having sex with over 20,000 different women! The adaptationist theory goes that men therefore seek power and fame not for power per se, but because, historically, it's led to very high reproductive success. And right from recent headlines, we have the case of President Bill Clinton, who has likely had hundreds of affairs. In a recent essay, Dawkins while not condoning Clinton does criticize the condemnation from other men who would likely do the same thing in Clinton's position. With modern birth control, despite hundreds of affairs, Clinton and his idol, JFK, fathered only 1-2 children vs. the hundreds of children of ancient emperors. But again, men have sex "for the sake of sex", not reproduction. Ridley describes how ancient emperors carefully monitored the fertility and menstrual cycles of women in their harem to maximize the number of children, but I would suggest this practice was a cultural adaptation (in a non-democratic society). I mean, they tried to have so many different sex partners due to a genetic adaptation, but they tried to father so many children due to a cultural adaptation. (Perhaps genes that make a man a prolific and popular sperm-bank donor are the next "fittest" thing!)

In species like seals and gorillas, males compete with each other to become alpha males, who then father (and sometimes support) many children with many different females. Therefore, the genes of alpha males come to dominate the gene pool because they have a near-monopoly on reproduction. Obviously, such populations would quickly become in-bred, which is why no one lineage stays "alpha" for too long. Also, of course, there's a limit to how many wives any male (no matter how "alpha" he is) can practically maintain. In fact, the bigger the harem, the greater the "infrastructure" support required from non-alpha males (e.g., the large number of peasants required to support the nobility class), who are mainly monogamous and lucky to get any mate at all. So promiscuity is something desired by most men but practiced by only a few. That is- men have a much greater *variance* of reproductive success than women: men can have MUCH higher reproductive success than women (if they're alpha males); but in general, men are MUCH more likely than women not to reproduce at all.

Cynics should note, though, on a more positive note that monogamy (a strong emotional attachment) between men and women is also considered an adaptation: a long-term emotional pair-bonding being favored since human children are helpless when born and are ideally raised by two parents, which may take decades. Also, although men are far more likely to abandon their children than women, at least most men are capable of loving their children (motive for paternal investment); unlike male seals, who often trample their own offspring! I've also read news reports about men in Africa

and Asia, who contract AIDS from prostitutes, and then infect their wives (and children), leading to the death of their entire family. So again, given the sheer impact of diseases on the human genome, perhaps STDs are a major factor in the adaptation for monogamy. The idea being that historically, the aforementioned strategies were more successful in gene-reproductive terms and have therefore come to dominate but not necessarily monopolize the gene pool. (The existence of other (competing) strategies will be discussed later.)

The fact that women bear the children also explains the double standard between the sexes. Despite the fact that men tend to be FAR more sexually promiscuous than women, many men demand with brutal jealousy, absolute sexual fidelity from their wives, while they themselves strive to be promiscuous. As stated before, philanderers are "studs" and are often even admired for their "conquests". Or if they are condemned like Bill Clinton, society is far more forgiving of them then they would be for a woman. On the other hand, women, who commit adultery; or are promiscuous; or are merely divorced are "tramps". Sometimes, women who are completely faithful w/o the hint of infidelity are regarded as "cheap sluts" by insanely jealous husbands; and are beaten or even murdered on suspicion alone, esp. in the 3rd world.

Well, the adaptationist theory goes that men may mistreat women (with intense jealousy) to ensure "their" children are really their biological offspring, and not fathered by another male. (Men who actually murder their wives out of insane jealousy have an extreme form of this.) Women bear the children, so they have no doubts of their own children's maternity- hence they have no adaptationist need for such sexual jealousy. In fact, as Wright notes, women are, of course, hurt by male sexual infidelity; but they're FAR more tolerant and likely to forgive it than vice versa (e.g., Hillary Clinton). In fact, Wright says women tend to be more concerned about emotional attachment to another woman vs. sexual infidelity alone (presumably because of fear of abandonment or at least a diversion in support then). Men, though, have been known to murder their wives on the mere suspicion alone of infidelity (e.g., Shakespeare's **"Othello" (1622)**). This also explains another double standard- why female virginity is highly prized, but male virginity isn't. It's a cliché that men want to "play the field" with a bunch of "sluts" and then marry a virgin. Marrying a virgin makes a woman seem "sexually pure", i.e., no hint or suspicion of other men. Hell, in some cultures, widows are supposed to kill themselves, because no other man will have them. So promiscuous men are merely philanderers, a mild term; but women with the hint of promiscuity are "whores". In theory, women also adhere to this double standard- think of other women as tramps- because they view them as potential rivals for their husbands. Also, some women will even view a male virgin as a "loser", who must be "unfit", if he can't attract many women; some speculate this is why affairs with married men are common.

Here's another thought- this may also go back to rivalry between males. Some men compete- threaten and fight other men over women- but only the physically stronger ones can do this. It may be that weaker males, who can't fight other males, dominate their physically weaker mates instead- no matter how unfair. Like some guys will beat up another man (potential rival) for even talking to "his woman"; whereas other men would beat their girlfriends instead as "punishment" (out of extreme jealousy and mistrust) to "keep their women in line". Or if a woman is raped, her male mate may blame her instead, since it's easier to blame her than fight a potentially stronger male? Or does it make "selfish gene" sense for a man to abandon his mate, if she's been raped, because she may then be pregnant with another man's child even if she was blameless? Also, again given the enormous impact of disease on human history, perhaps men are also obsessed with female "sexual purity" because a highly promiscuous male will inevitably become infected with something fatal (e.g., syphilis) unless all of his sexual partners were virgins and are monogamous to him. Maybe, ancient

harems then were guarded by eunuchs to ensure paternity of children and to protect the alpha male from STDs.

Of course, males can have legitimate doubts of the true paternity of their offspring. Male cuckoo birds, for ex, are often "tricked" into raising chicks fathered by other males. It's theorized that female cuckoos pick alpha males to fertilize their eggs because they have the "best" genes; and they then select the most nurturing male to raise the offspring (being a "nice guy" isn't an alpha quality I guess). But selfish gene theory dictates that traits are selected for promoting reproduction of an individual's genes, not for the good of the species. Therefore, it makes perfect "selfish gene" sense for a male to have sexual jealousy and to kill offspring fathered by another male- better that than to risk wasting a lifetime of his resources, raising another male's children! *So it seems that male sexual jealousy goes hand in hand with the amount of male paternal support.* Many speculations also follow from this. For ex., adaptationists believe natural selection should favor children, who physically resemble their fathers; because fathers are assured of paternity and should be more likely to provide support then. Perhaps males will tend to be less jealous in more diverse gene pools, because each child will have a more distinct look than in a gene pool with less diversity. (E.g., if a white man's wife gives birth to a black child, then he knows it's not his- as opposed to much of Africa and Asia where hair, skin and eye color are more uniform.)

**Exceptions to the Rule: The Follies and Limits of Adaptationism**

The basis of this adaptationist theory is the scarcity of female eggs vs. the fecundity of male sperm. But this isn't the actual cause of human sexual behavior. As previously described, most men have a strong, visual sex drive fixated with the stereotyped female form. This is why men tend to be the "woosers" and "coaxers"; and are more sexually promiscuous than women. Women, though, lack such a strong libido; so, of course, in general, women are more "coy" and less eager for sex than men. Notice, that this disparity in libido between men and women APPROXIMATES (the real world is more complicated than this) the adaptationist explanation. The adaptationist theory then is really a **teleological** explanation that doesn't correspond to the actual motive, which is the difference in sexual libido between men and women. Of course, the ultimate reason for human sexual behavior is brain chemistry. (A process no one really understands.)

An ex. of a teleological explanation is that plants grow toward a light source because they need light for photosynthesis. But the real reason is phototropism, a chemical reaction to light, which just happens to make plants grow towards light. It's just serendipity that phototropism happens to promote photosynthesis. Another ex. is the male sex drive. In actuality, men want to have frequent sex for the sake of sex. Now, it just happens that frequent sex, of course, increases the likelihood of pregnancy and increases reproductive success. But this is a far different thing than saying that humans have a "strong desire to reproduce". Again, effect, not intent, is what's selected: all adaptations start off as serendipity...

Sociobiologists examine stereotyped human behavior and attempt to reverse-engineer the probable underlying adaptationist scenario that led to their dominance in the gene pool. These adaptationist justifications don't, of course, correspond in any way to conscious or subconscious human motives. It's just that ancestors, who happened to have these behavioral patterns (due to random mutation), have historically had more reproductive success statistically. The danger of adaptationism, though, is that all too often an adaptationist explanation is taken to mean the way "it was meant to be". I mean, some might read the previous section and conclude that, "hey, men are meant to philander and that's

that". Wright, though, in "**The Moral Animal**" astutely notes that taking such an attitude leads to a self-fulfilling prophecy. [Also, the real awful truth is that only high-status men are "meant" to philander; non-alpha men aren't "meant" to have any mate at all!] But just explaining something as an adaptation doesn't mean it was inevitable or had to happen that way. (Many alternate adaptations- perhaps even "better" ones were possible.) Stephen J. Gould is fond of emphasizing that humanity "as is" is an accident in the sense that we could've easily turned out differently. We're only a couple of coin flips away from having turned out completely different as a species; or from not even existing as a species at all.

Another major mistake is to try to explain everything with adaptationism. (Most Darwinists, though, do acknowledge that other forces besides adaptationism like random drift are in effect.) For ex., I once saw a children's TV show, showing zebras eating grass; and the narrator declared that zebra stripes are an adaptation, because they provide camouflage protection from leopards; but how can they prove that? I could just as well argue that the grass had adapted to be attractive only to the zebras rather than the more lethal leopards! Unprovable adaptationist theories are so easy to make up...

Where does the speculation end? For ex., I once saw a massive, scholarly tome in a bookstore about Joseph Conrad's "**Heart of Darkness (1902)**" and Francis Ford Coppola's "**Apocalypse Now (1979)**". Now, I've read the book and I've seen the movie; but the academic, ivory-towered contributors to this study have overanalyzed the two to death. They read and interpret things in these "works of art" that were probably never intended- like seeing faces in clouds.

The truth of an adaptationist theory is of absolute POLITICAL importance, though, no matter what qualifiers scientists make. If an adaptationist scenario could actually be proved, then most people would take it to be the "way it was meant to be"- let's just admit that. But even if the historically true, adaptationist scenario for a behavior can be found, actual human behavior will only be a vague APPROXIMATION of the theorized adaptation. For one thing, in most cases, an adaptation won't completely dominate the gene pool. That is, an adaptation is a statistically-favored trend- individuals will have those genes that correspond to the adaptation in varying degrees, if at all. Even if a specific trait is favored, there will still be variations in the expression of said trait (due to random drift)- some of which may lead eventually to future adaptations...

Minority traits will still endure- and even traits that might be the opposite of the general trend and make no "selfish gene" sense can still exist- in the minority that is. In electron velocity drift, for ex., electron flow becomes polarized in one direction statistically. But individual electron behavior can't be described accurately at all- some in fact go in the opposite direction of where they're "supposed to go". This is just a restatement of the obvious- that individual behavior can't really be determined by stereotype or broad generalizations. For ex., even if a child grows up with two good, loving parents in a comfortable suburban environment, that's no guarantee that child won't grow into a serial killer! Now certainly, statistically, children would tend to turn out better in such an environment overall, but no guarantees can be made at all on an INDIVIDUAL basis (esp. in a multi-dimensional design space). Just like no one can predict what an individual electron will do.

This is esp. true as the complexity of an organism increases. With simpler organisms, an adaptation may in fact be so overwhelmingly beneficial that it'll entirely dominate the gene pool: all those who lack it will simply die or not reproduce

successfully at all. As complexity increases, things become much more muddled. In complex organisms, traits are due to the interactive effect of numerous genes- so it's very hard for natural selection to filter out "bad" traits. A single "defective" gene that causes death (before reproduction) on the other hand is easily selected against; but not necessarily to the point of extinction (if recessive versions exist or if the mutation recurs). Disease immunity is one trait that may compensate for the lack of more obviously "superior" genes. Also, instead of being "win-win", traits may be "win-loss"- offering both advantages and disadvantages. (Consider sickle cell anemia, an illness, which was selected in Africa, because it provides protection against the more deadlier malaria.) In some cases, traits might dominate the gene pool due to simple accident- maybe by being peripherally related to another more obviously advantageous trait (e.g., like being on the same chromosome).

Finally, there may be traits, esp. in complex organisms, that aren't adaptations at all, but are simply due to random genetic drift (neutral traits due to chance). And yet, some adaptationists may try to explain them as adaptations anyway and devise elaborate theories to do so. I once read of a theory that tried to explain the "Eskimo face" as an adaptation to the cold. Well, this could just as well be due to "random drift" or an "Adam and Eve" scenario where neutral traits came to dominate a population by default because there were no other options. Think of a small group of people that survive a plague because of genetic immunity. Well, all of their other genes would come to dominate the gene pool too by default just because they were part of the package that included the essential trait of disease immunity, not because they were an adaptation that "won out" over others.

Ultimately, natural selection says nothing more profound than "what lives, lives": genes must reproduce in order to continue to exist- it doesn't imply optimization of traits. Even so, some adaptationists are trapped in the mindset that evolution is a ladder; or they look for subtle adaptationist justification for everything. It would be so typically human for someone to devise an adaptationist theory for this human tendency. Whenever dealing with minority traits or traits that don't make any obvious adaptationist sense, the question inevitably arises whether they're really "niche" adaptations- with subtle benefits that have yet to be discerned; or whether they're due to random drift, new mutations; and/or traits in the process of being negatively selected. Grounds for endless debate I suppose.

**The Limits of Adaptationism: Part II**

To anyone familiar with human nature, adaptationist theories seem to explain much; but most of them can't be proved because the actual historical record has been lost. In the previous section, the adaptationist explanation (few eggs vs. many sperm) for the differences between male and female sexual behavior hasn't been proved, but I for one believe in it because it makes intuitive sense to me. It explains too much about human nature, at least for me, not to be true; but that's not proof, of course. But in some cases, adaptationist theories may be plausible, but they may not be the true historical scenario by which traits were favored. Only a time machine could explain WHY we really are as we are now- little stupid things in the distant past (think of Ray Bradbury's **"Sound of Thunder" (1952)**) must've had enormous impact on our current genotype. Sociobiology, though, does provide a general context for examining behavior and it gives some indication of why a trait may persist in a gene pool. However, some sociobiologists make the mistake of assuming that all behavior is the result of adaptations or must somehow enhance reproductive fitness: they expect traits to be rational and to make sense. They forget that most if not all species go extinct eventually; so often traits that don't make much sense, but for which they struggle to find rational explanations for anyway, may not really make sense and

may in fact be leading to extinction.

Some adaptationists also make the mistake of looking for adaptationist reasons in "all the wrong places", esp. in minority behavior. Such musings must always be viewed with suspicion. Again, some forget that natural selection is rife with terms like "tendency and statistically favored": not all members in a group will share an adaptationist trend even if it's reflected by the majority. Actual behavior will only be an approximation of the idealized adaptationist theory, and individuals will only have the adaptation to varying degrees (with Gaussian probability distribution), if at all. So all kinds of weird and inexplicable (in terms of reproductive fitness) minority traits can exist at the bell curve's ends. Also, even "bad" traits can persist, if the package as a whole continues to reproduce. This is esp. true as complexity increases. If it sometimes seems that adaptationism explains a bit too much; then maybe that's because some adaptationists are overreaching...

For ex., how can adaptationists explain: 1) Homosexuality? 2) Parents who kill their own children? 3) Suicide? 4) Men who rape and murder their victims? 5) Adoption ("unintended consequence" of parental feelings?) 6) Puberty (delayed sexual maturity protects children, esp. girls, from sexual molestation?) 7) Masturbation (an "outlet" for low-status males?) 8) Miscarriages? 9) Snoring (a self-defense mechanism during sleep, which deters predators?)

Male sexual behavior, in particular, is prone to expressions that make no obvious gene-centric sense. This can happen because semen is "cheap", not because behavior like fetishes, voyeurism, rape/murder, sadomasochism, pornography, child molestation, oral/anal sex and masturbation are somehow favored. In other words, males can still father plenty of children in spite of "wasteful" sexual activity. Homosexuality, for ex., obviously doesn't make much reproductive fitness sense- this hasn't stopped some from trying, though. Some speculate, it might be a means of "male bonding". Badcock [ref 1] theorizes male homosexuality might be a kind of "stealth" heterosexuality- a means by which non-alpha males can gain female trust by appearing "non-threatening". Badcock isn't suggesting that gays are actually subconsciously heterosexual after all. What he's saying is that adaptations are selected for based on the outcome, not the intent. But why resort to such agonized convolutions when other non-adaptationist explanations abound? First of all, the key thing to remember about homosexuality is that it's a minority trait- maybe, that's all the explanation required. Most men are attracted to the stereotyped female form, but perhaps a minority of men's tastes happens to correspond more closely to the stereotyped male form. Or consider the possibility, that homosexuality isn't inherited, but is some kind of congenital characteristic. (Chemically, do gays have feminized brains due to fetal programming?) In that case, natural selection couldn't really disfavor it. Many gays have children anyway, so how could it be negatively selected? Either way, it's a minority trait destined to remain in the minority.

Badcock also discusses adaptationist theories for the female orgasm. But only since the 1920s was the female orgasm even acknowledged to exist. Commonsense would also dictate that the majority of women haven't historically experienced orgasms; let's face it, most men even today don't bother to try. The truth of the matter may be the obvious- the clitoris is simply the female equivalent of the male penis. Genetically, men and women are near identical- the difference is mainly in the expression of genes due to hormones. That is, the female clitoris and orgasm aren't female adaptations, but are simply an "unintended consequence" due to the overwhelmingly genetic commonality between the sexes.

As previously mentioned, there are also some adaptationist theories for female menopause- like it enables women to act as maternal backup for their kin. But things that happen after the age of reproduction can't be selected. Also, few women in the ancestral environment probably even lived long enough to reach menopause. Instead of being an adaptation, menopause probably reflects some biological constraint.

If the "ideal" female physique is so prized and advantageous then why isn't it prevalent among women? (Face it, beautiful women are usually treated better, period, by both sexes.) Well, one answer is that plenty of men, esp. non-alpha males, will still have sex with women who don't have the "ideal" physique. (Some men are so desperate, they'll even have sex with blowup dolls!) And since men compete for women, only the alpha males, will get the best-looking women whereas the average man will have to "settle" for an average woman. Ridley also cites the "red-queen" effect: in an ongoing arms race, people are never satisfied with the status-quo even if the current status-quo is far better than what it had been in the past. In fact, we may very well be in the midst of an arms race for taller men and for women with bigger breasts: "male height is to women what female breast size is to men" :-). Another answer is that physique alone doesn't guarantee a good mother: obviously, personality and intellect are important too. (Although given the high prevalence of death of the child/mother during childbirth, physique/health may historically be more important.) For the very same reason, not all men are big and strong; the strongest military in modern terms isn't the one with the biggest and strongest troops; but the one with the most advanced defense technology and the best leadership. Another reason is men are judged more by their status than their looks: so how can the daughters of such men be expected to have the "ideal" physique? After all, women inherit half of their looks from their fathers; so all adaptations must be a compromise between the sexes.

Another oddity is the male preference for women with a beautiful face. From a reproductive POV, the face shouldn't matter as much as the body, but it does for most men. Women tend not to care about looks as much as men do, but some women do care very much. (Maybe because their male ancestors cared so much?) Ridley speculates that a pretty face is a strong indicator of youth and health, but there are plenty of plain girls who are young and healthy. He also cites the theory that both men and women want good-looking mates in order to have more sexually attractive offspring- another ex. of sexual selection. Perhaps the answer lies in simple aesthetics. (Some people lust for gold and diamonds simply because they're "beautiful".)

Personally, I speculate it also has to do with the importance of facial expressions (esp. smiling), and body language, in judging people even though they don't necessarily correspond to a person's true personality behind the facade. The face is incredibly important in human relations because it's the basis for "reading" other people's motives- conmen, actors, salesmen and politicians know this. (Obviously, there's an arms-race between liars- those who use trickery and persuasion to cheat others while appearing "sincere" and "trustworthy"- vs. those who can see past the "false advertising".) In relationships whether they be personal or business, it's more important what you SEEM to be than what you really are inside. Maybe a beautiful face seems more trustworthy and maternal? I've also heard the theory that the classic beautiful female face is very feminine (i.e., strongly reflects the influence of female hormones, and is therefore indicative of greater fertility and a maternal nature). Or hey, perhaps the male attraction for a beautiful female face is an adaptation "meant" to disfavor homosexuality; after all, men and women aren't that physically dissimilar. Some of these theories may be correct; or there may be some other subtle reason for this that has yet to be divined; but there doesn't

have to be, which is the point of this section.

A previous section cited the theory that genes, which make a child physically resemble its father, should be favored, since that would increase the likelihood of male paternal investment. That may be so, but the best thing for a child to be (regardless of paternity) is cute (like Shirley Temple). Cute, adorable kids are MUCH more likely to be loved and treated better, period, whether by the biological or adoptive parents. (Note: non-cute babies are much more likely to be abused or even killed, esp. when they cry.) Why is this so? Maybe because by definition, a baby is supposed to be a "cute small thing"; so this is an adaptation even though not all babies are cute? Or here's an oddball theory: ever notice that only "cute" animals like dogs and cats, which resemble infants, become pets? Which came first? Are animal pets an unintended consequence of human bias towards cute infants; or is it possible given the incredible symbiotic relationship between humans and dogs that human babies are in part favored because of their resemblance to cute puppies? One could even speculate that male bonding with dogs during hunting led to "kinder, gentler" and more parental men: perhaps men and dogs "domesticated" each other!

Another political minefield is the theory that rape is an adaptation. (Because adaptation is often misconstrued to mean the way "it's meant to be".) Comedian, Bill Maher of "**Politically Incorrect**"(COM), has argued that men are stronger than woman, so they can force them to have sex- rather than the conventional view that men are strong so they can fight other men over women. Certainly, since rape can result in children, I think it's an adaptation (albeit a minority one)- in the same sense that lying, bullying, hazing, blackmail, robbery, kidnapping, extortion, war, torture, murder and slavery are adaptations. Also, it's very likely that the practice of abducting (and raping) women, esp. foreign women, was historically very common as the "spoils of war". After all, it's very common today in modern warfare; and in the trafficking of women. (E.g., Nepalese women brought to India; or Burmanese women brought to Thailand; or Eastern European women brought to the West as sex slaves.) However, some rapists also kill their victims, esp. in wartime- something that hardly has reproductive fitness value. Rapists' chief goal anyway whether they be enemy soldiers or date rapists is sex for the sake of sex- not in the hopes of fathering offspring.

In theory then, if all pregnancies due to rape were aborted, then over millennia, the incidence of rape would decline; but I doubt it'd be selected out completely due to the complexity of human sexual behavior. Many men who could be potential rapists may never do so in their entire lives due to fear of punishment, so how can natural selection select against a "potential" and not an actualized behavior? Also, rape is very obviously closely linked to non-rape sexual behavior, so I doubt natural selection has the precision to filter it out. However, it can be argued that the common male delusion that women want to be raped is an adaptation. Just like one can argue that egomania is an adaptation- both provide the motive for "selfish gene" pursuits. After all, how could a man rape a woman, if he didn't feel his "prey" deserved it? Or how could a warlord conquer and slaughter other people, if he didn't feel superior to them?

Another bizarre notion is the theory of sperm competition in polygamous societies (in which female promiscuity is common because sex is traded for favors). In such societies, male sexual jealousy shouldn't be as strong, since men aren't interested in long-term pairings (marriage), but simply in having sex with lots of females (like chimpanzees). In such cases, those who sleep with the most women and produce the most sperm (largest testicles) will father the most children. Badcock even speculates this is why some men are sexually aroused by the thought of other men sleeping with



their wives; or why group sex and gang rape occur. (Is this adaptationist drivel or an ex. of concurrency?)

As for #2-#3, some have tried devising adaptationist reasons, but perhaps we're simply seeing natural selection in action. That is, as time goes by, the number of people who commit suicide; or who murder their own children will decline (be weeded out of the gene pool) unless social conditions become increasingly stressful. It's also been suggested convincingly that miscarriages and infanticide could be adaptations: it makes selfish gene sense to abort or abandon a child, if conditions are poor; or if the child has a birth defect. Well, even if some cases of spontaneous abortions are adaptations; in most cases, reproduction has persisted in spite of them.

Regardless of how a child was fathered, historically, the death of the mother and/or child during child birth was so common and infant mortality has also been so high that- well, adaptations aren't as clear or as pronounced as they might be due to all of the "noise": adaptations have to operate in a low *Signal-to-Noise* environment.

**Flexible Strategies: "Niche" Roles and Concurrency**

Previous sections described the current adaptationist theory of human mate-selection. A stereotype of this theory is that men want young and beautiful women because they make the best child bearers; and that women want rich and powerful men (alpha males) because they have the "fittest" genes and make the best providers for children. In the animal kingdom, elephant seals are often cited as the prime ex. of this theory in that a few alpha males dominate mating (e.g., a harem of female seals). In this scenario, there's constant competition among males for females. The "alpha male" then is the one who's bested the other males and the females likewise choose him because he's proven himself to have the "best" genes; the alpha male then is the one who "wins" the females.

But how much does this correspond to human conduct? As previously noted, harems have occurred in human history (in agrarian societies) among emperors. (A major difference being that empires are inherited, meaning that sometimes the so-called "alpha" male isn't so "alpha", just lucky.) Certainly, by stereotype, high status men (celebrities) have sex with many different women (groupies). But are powerful men really more attractive to females? (E.g., women throwing themselves at rock stars.) Or is it just that the powerful get by force what they want from both men and women? [E.g., Ridley describes how "men of power"- like Roman slave owners, feudal lords and Victorian gentlemen obtained sexual services from females in their households- essentially in exchange for room and board.] Perhaps both are simultaneously true. (E.g., some secretaries fall in love with their (married) bosses; others, are forced to sleep with their bosses to avoid being fired.)

First of all, an obvious question is the criteria for being "alpha". Both Wright and Ridley equate "alpha" with high-status where status is culturally relative. Wright believes that attraction to high-status is a genetic adaptation, but high-status is determined by culture. (An ex. of mental flexibility.) For ex., in the ancestral environment, high-status men were the best hunters ("star athletes"); in agrarian societies, high-status men were wealthy landowners and high-ranking members of the nobility and military; today, high-status men are the rich and famous (lawyers, doctors, politicians, CEOs, actors, musicians, star athletes). This list doesn't include inventors and scientists, though, because they don't seem to have much reproductive success. Perhaps charisma, fame, musical talent and athletic ability are historically more "alpha" than

intellectual achievement. (On the other hand, if everyone spent all of their time fighting and dueling- trying to be alpha males- then no one would have invented anything, and we'd still be living in caves.)

By stereotype, most men want a beautiful, young woman who is also chaste, kind and intelligent. Most women seek romantic devotion from a tall, handsome, rich and powerful man- a "knight in shining armor" who'll treat them like a princess. Some high-status men, e.g., celebrity actors and musicians today may have that "PR image". Historically, though, the majority of high-status men have been egotistical, sadistic mass-murderers like Attila the Hun, Genghis Kahn, Julius Caesar, Mao Tse Tong, Adolph Hitler, Joseph Stalin and Saddam Hussein. So I doubt most women could actually love or be happy with the reality of the typical high-status male, who have been mostly arrogant butchers. (It would be like a slave adoring his master because he has power over him or a serf peasant mooning over his lord.) Modern brothels are the closest analogue to ancient harems- but I doubt that women in harems were any happier than, say, prostitutes in Thailand today. But it's a living and it's better than starvation.

But a major tenet of adaptationist theory is the prime importance and sheer impact of female choice (sexual selection) in natural selection. (Some even attribute human intelligence, height, language and humor, etc. primarily to selective pressures due to female choice.) As previously mentioned, any rational adaptations derived from female choice would be expected to take into account the reality of few female eggs vs. many male sperm and all that follows from that. Clearly, one can see how female choice could be a major factor in human evolution. For one thing, monogamous pair-bonding obviously works best, if it's a mutually desired thing. And yet, historically due to the prevalence of arranged marriages, few females (or males) have had much choice.

In fact, considering the blatant sexism of most societies, marriage for most women is often akin to slavery. For ex., I saw a recent "20/20" story about a Somalian born model, who ran away from home as a teen after her father arranged a marriage for her to a 65-year-old man in exchange for 5 camels! Or I saw an "International Dispatch" episode about a British citizen who sold his two daughters into a lifetime of drudgery, labor and childbearing in a remote rural village in Yemen. We like to think things have improved in the 20th century, but let's not forget the bulk of humanity lives in the 3rd world. In many 3rd world marriages, women are treated as servants and sexual chattel and used for hard labor. Many men in such marriages just use their wives for sex w/o any affection and terrorize them with violence. (I saw a 1999 news account of an Egyptian man, who murdered his wife because she didn't serve him tea fast enough!) Hopefully, few would call this "love". But natural selection doesn't "care" about any of that- once again, the bottom line is sustained reproduction.

The answer must lie in that even if there are many cases with no female choice; there are still cases where female choice is involved. (How many couples have eloped even if their parents objected?) Therefore, even if it isn't always explicitly exercised, female choice is still selected for and therefore can be a major factor in natural selection. (Any bias even if small can have major impact over a long period of time.) Also, female choice may've historically had MUCH greater impact before the more recent cultural adaptation of arranged marriage; I read of a theory in **"From Hell" (1999)** by Alan Moore that early human societies were matriarchal (female dominated) until men realized their role in human reproduction whereupon society became male-dominated (coinciding with the advent of civilization).

But I also think the standard adaptationist theory while valid is also too simplistic; the aforementioned stereotypes do happen, but there are other trends as well (even if less prevalent). What's actually happening I think is CONCURRENCY (due to niche or even competing strategies); that is, all of these happen. There are some men and women who fit the mainstream adaptationist stereotype, but other strategies exist (to varying degrees). Therefore, as ex.s of concurrency: some women ("groupies") really do throw themselves at high-status males (celebrities) so star-struck are they; and some women marry for money ("gold diggers"); but some seem to fall in love almost out of (maternal) sympathy; and some men/women seem attracted by the exotic (for genetic diversity); or some men only care about looks, but some value personality and intelligence too; or some women are only attracted to big and tall men ("love a big, strong man in a uniform"); but some want "nice guys"; or some value intelligence/talent/wit over brawn; or some men (pedophiles) prefer children; or some men prefer other men and some women prefer other women, etc. In other words, there are genetic variations in mating preference just like there are genetic variations in height, blood type, allergies, personalities, hair, eye color, musical tastes, whatever. Not because diversity is necessarily selected per se, but simply because it happens (random drift can lead to "niche roles"). (I leave it to the statisticians to determine the actual real world percentages.)

Concurrency is esp. prone to exist with increased complexity, which is why it's not so obvious among simpler animals like seals. In fact, concurrent strategies often form a kind of dynamic balance (equilibrium ratio) with each other. The basic point is that with increased complexity, there's more variation: we don't all want the same thing in life or in mates- individual preference varies too much. As with everything else, there's a probability distribution in people's preferences and tastes. For ex., although there's apparently a universal standard of beauty, I doubt a consensus could be made on the "most beautiful woman in the world"- some men prefer blondes and some prefer brunettes, etc. Likewise, even if high status is culturally determined for the most part, there's still variation in what type of high-status attracts-e.g., a famous athlete will only impress some women whereas others would only be impressed by a famous musician.

**Adaptationist Ambivalence: Concurrency PT II**

Complexity develops in stages and in small increments. Human behavior is unique among all animals in terms of its complexity but, of course, there's much commonality with other animals. A hierarchical description of evolved animal behavior is as follows:

- 1) Reptilian- purely selfish/solitary mentality. Sharks are the epitome of this: solitary, brutal and aggressive creatures w/o any intra-species cooperation. And yet, this kind of behavior because it's simpler had to come about first before cooperation, which requires more mental "infrastructure", could develop. Single mothers abound, because males provide zero paternal support, and "nice guys" definitely finish last in this scenario. (Constant competition weeds out the weak.)
- 2) Kin-selection and small social groups dominated by alpha males, who are usually the physically strongest, and who have a near-monopoly on mating. Wolves, seals, lions and some primates (including some human societies) are like this. Individual brute strength is still the most important trait, but group cooperation is increasingly important- outsiders are despised. Males provide minimal (zero) to some paternal support. In human societies like this, the alpha (synonymous with arrogant) male takes what he wants and is ruthless to enemies and domineering to allies, who kow-tow to him out of fear or even near-worship. With his army, he plunders his foes and takes whatever he wants- including any women.

From his POV, what he does is always "right" ("might makes right"). And this behavior is a cliché throughout human history as practiced by tribal chiefs, warlords, kings, emperors, dictators, gangsters, drug lords, etc.

3) Reciprocal altruism, which may lead to large social groups: in such systems, intelligence, wisdom, political skill and cooperation are of more value, than physical strength. This behavior requires the most mental infrastructure: "be nice to others as long as they're nice to you" is the (true) golden rule. In this scenario, "nice guys" (those who cooperate) can finish first (or at least make out alright), if they have the support of other nice guys. #3 can also lead to democratic institutions. People who believe they're the most important to society (a frequent belief of the military and nobility) also believe they deserve all of the benefits and power. Historically, the elite have acted as if the rest of humanity exists only to serve them! However, as society becomes more complex and populous (a sign of wealth), the alpha males, who by definition, are a minority after all, simply can't control it all anymore. Power becomes shared (and divided) because it HAS to and society becomes more equitable.

Modern civilization may be mostly based on #3, but we still retain and practice degrees of #1-#2 as well. For ex., any modern dictator should be easily overthrown "by the people"; but most stay in power due to support from the military, which is trained to follow the chain of command- i.e., atavistic kow-towing to the alpha male! And it's a cliché to note that despite all of our technology, we still have a caveman mentality at the core (because it developed first), which is why we may be doomed. When people fought only with fists, no real harm was done, but due to an arms race, we've gone from fists, to clubs to swords to guns to fighter jets to missiles to nuclear weapons. In evolutionary terms, what matters most is what most people do, not what a few do. Now, due to technology, what the individual CAN do (bioterrorism, computer viruses, explosives) is becoming increasingly important, and alarming. It may very well be that selective pressures have changed due to modern civilization, and that #1 is in fact being weeded out by modern society (e.g., prison leads to lower reproductive success). But it'll take a very long time for that to occur- much longer than any civilization has yet endured.

The point of this is to demonstrate that selective pressures aren't and haven't been static in regards to human behavior. Standard adaptationist theory contends that male and female physiology and psychology have been shaped by millennia of natural selection in the hunter/gatherer conditions in which modern humans developed. Adaptationist behavior then is instinctual like other animal behavior. (Human intelligence, though, adds the factor of culture, which also had tremendous effect.) The hunter/gather ancestral environment is supposed to have lasted for hundreds of millennia before being "recently" replaced by rural agrarian communities about 10,000 years ago. Adaptations are supposed to occur gradually, so the bulk of current adaptations probably developed during the hunter/gather phase. But adaptations can occur rapidly, esp. in small populations with dynamic conditions and a high death rate. That is- in shifting dynamic conditions, traits once favored can become disfavored or less favored, and even vice versa. So perhaps current human adaptations are split between the hunter/gatherer environment and the much later modern agrarian society with its different selective pressures; i.e., **ambivalence is built-in**.

According to Ridley, classic "alpha" qualities are physical size, strength, aggressiveness and general toughness- "antisocial" qualities by modern standards, but "leader of the pack" qualities in the ancestral hunter-gather environment. In species like elephant seals in which males have "low parental investment" (don't assist females in raising offspring), choosing such alpha males makes sense even if they provide zero support, because they have the "fittest" (and

*healthiest*) genes. And if they do provide some support, such alpha males will tend to be better hunters ("good providers") and *protectors*.

In species in which males contribute significantly to child rearing, though, "alpha" qualities like aggression and brute strength can be akin to a "bull in a china shop". (E.g., some male seals actually roll over and crush their own offspring!) The more involved that males are in child-rearing, and the longer child-rearing takes, then the more important "wooing" as proof of devotion by the male becomes (like the male bower bird wooing a female by building the best nest or a man showering a women with gifts and romantic poetry) in "winning a female's heart" rather than just winning her by beating up the rest of the males or by having the best tail feathers (peacocks). So the two most obvious concurrent (competing) mating strategies are "win" ("fittest" genes) vs. "woo" (devoted support): another ex. of ambivalence. Historically, though, "win" is the older strategy and therefore the more prevalent.

I saw a Jan 2000 **"20/20"(ABC)** story about a NJ woman, who killed her husband, a physically imposing and monstrous bully, after more than 20 years of vicious abuse- but she claims to still love him! Some psychologists cite "low" self-esteem for this. Wouldn't it be a sick joke instead, if it's an atavistic adaptation for some women to be attracted to macho "bad boys" ("treat them rotten and they love you more"); because they're physically tough (and therefore will tend to father tough children as well); even though such men are also much more likely to be abusive domestic partners? If true, it would be another ex. of natural selection working not for personal happiness, but for reproductive fitness only. (Something personally injurious can still be selected, if it enhances reproductive fitness or if it's "good enough".)

I'm not suggesting victims of domestic abuse "deserve" it or are to blame for it- I'm just citing this as another ex. of concurrency. Even if true in some cases, there are certainly more cases where the big and strong force others to do their will through fear, intimidation and even enslavement; so no female (or male) choice is involved. In most cases, women stay in such relationships out of sheer terror and simple economic necessity- they usually have no choice or alternative, esp. in the 3rd world where women have few rights. And they're many cases where a wife-beater only shows his "true colors" after marriage; for both women and men, marriage is "luck-of-the-draw" (with an arranged marriage being the ultimate gamble). There are many cases, where a woman has to fear for her life, if she tries to leave. Even in the US, the law offers little protection; certainly, the law offers none in the 3rd world. But there does seem to be a minority of women (and men) like in this "20/20" story, who prefer "bad boy" types, who are "no good for them", but they do it anyway. (I've also heard it said that many women want "bad boys", who "deep down" are really "nice guys"; or better yet, become "nice guys" by falling in love with them ("how romantic")-yet another ex. of ambivalence.)

In prehumans, the "fittest" males were initially the physically toughest and strongest, and females received zero male paternal support (like seals and leopards). Early prehuman females then only sought "quality" genes from males, not commitment (and raised offspring alone). Thus began an adaptation that still persists today in humans. However, as group cooperation and hunting, esp. with tools and fire/cooking/meat preservation developed; gradually, the absolute importance of physical toughness declined as intelligence, leadership and political skill also became important. Corresponding to this shift, was the increasingly longer time human children needed to mature (due to larger brains): male paternal support became important. With this "recent" shift, the new alpha males were no longer necessarily the physically toughest, but they did usually make better providers and care-givers. As a reflection of increased mental

flexibility, "high status" (culturally determined) became more important rather than brute physical strength- a new adaptation. Coincident with this trend, as paternal support and care became essential, another new adaptation (of female preference) towards this also developed as previously described. So these are yet more ex.s of ambivalence (due to shifts in selective pressure).

Concurrency is due to mutations, random drift, and also to shifting and competing adaptations, which can coexist dynamically. It also frequently reflects ambivalence: as previously described, some women care more about "alpha" genes than male commitment and support. Other women put emotional commitment (support) at a higher premium than "alpha" genes; the latter adaptation becoming more favored as human children have required more support.

In the animal world, the alpha male is usually the one that can physically dominate and intimidate the other males. And yet, due to cooperation, a gang of "non-alpha" human males can easily team up and dispose of any tyrant alpha male. And yet, human masses will still kow-tow to a single charismatic "alpha-male" figure even if he's a complete lunatic like Hitler, Stalin or Mao Tse Tong. In many ancient cultures (like Japan), people even used to blindly worship their leaders as divinity. Why, is order (even if brutal and oppressive) positively selected because it's better than anarchy? Or is this just an atavistic "wolf-pack" mentality- genetic baggage? Obviously, brute force still has enormous impact in human dealings; so in that sense "alpha" qualities are still strength and intimidation. And yet, even the biggest and strongest of us are physically weak compared to many other animals. And yet, we dominate the planet because of our tool-usage, intellect and ability to cooperate. So are teamwork, intellect and wisdom becoming the "alpha" qualities instead?

Such ambivalence reflects real life: consider the so-called *flight or fight* instinct. In species in which groups cooperate, the individual flight or fight instinct seems to have been supplanted by *fight back or submit*. (E.g., a cowering dog with his tail held flat, whimpering before the alpha dog.) That is, a hierarchy based on status forms in which status is (usually) determined by physical toughness.

There are many instances where being outgoing and aggressive leads to success (or death); there are also many instances where being cautious, shy, timid and prudent leads to safety (or death). No one can say whether courage or fear is the best strategy at all times. Likewise, a big and strong body is obviously advantageous, but so is a smaller, but faster build. No single strategy can succeed all of the time, esp. if everyone else is doing it too. And esp. with greater complexity, concurrency abounds and there's no obvious dominant adaptation then. It all becomes muddled (and contradictory). So it seems that genetic ambivalence is built-in due to shifting adaptationist pressures and the basic ambivalence in life. (Or, of course, it could all be a dumb accident.)

**Cultural Adaptationism: The Fast Track (Mental Flexibility Cont)**

In this section, a little clarification must be made. The previous section rather confusingly lumped all of the different kinds of concurrency (genetic and cultural) together; but a distinction must be made between them. As a consequence of genetic concurrency, genes are distributed throughout a population to varying degrees: some traits are NOT shared despite our genetic commonality. Obvious ex.s of genetic concurrency are different eye/hair/skin colors; allergies; disease immunity; and blood types within the same gene pool. Wright emphasizes in **"The Moral Animal"** that humans

have strong basic instincts like all other animals; but that as a consequence of our socialized brains, we're also "mentally flexible" to a degree. As previously stated, the human mind isn't a "blank-slate": ultimately, the human genome determines the capacity and even the type of human thought possible. But within that context, clearly culture has a tremendous impact in human behavior (relatively speaking).

Mental flexibility gives humans a unique advantage over all other species on this planet. In fact, I would suggest that some concurrent (genetic) adaptations have in part been LEAP-FROGGED by the factor of human culture, which can change several orders of magnitude faster than genetic adaptations. Cultural adaptations are simply more flexible and faster than genetic ones (which are "glacier-like" in comparison); and they allow humans to adjust relatively rapidly in dynamic conditions. Cultural adaptations like clothing and shelter may even impede genetic adaptations by making them unnecessary. It must be emphasized that only cultural adaptations that are already implicit in the human genotype can exist. Also, of course, mental flexibility- the capacity and extent for cultural adaptations in itself- is a genetic adaptation (favored for the same reasons that software is advantageous in computers); and varies within a population.

Dawkins introduced the idea of "memes" in "**The Selfish Gene**"- the concept that ideas can also be "reproduced" (spread) like genes. What follows from this is that human culture must also be selected based on reproductive fitness; that is, a "non-fit" culture and its accompanying practitioners won't be around as much as a more "fit" culture and its practitioners. For ex., a culture, which preached mass suicide (like Jonestown, Guyana) wouldn't last too long! What also follows is that there are some cultural adaptations (traditions): e.g., agriculture, clothing, marriage, diet, religion, medicine, hygiene, language, writing, mathematics and the scientific method; social taboos like divorce and out-of-wedlock birth, etc., which will be positively selected. There IS a reason why agrarian societies have much higher populations than hunter/gatherer ones, and are able to conquer them. ***In general then, civilization has led to much higher reproductive fitness than the hunter-gatherer existence.*** In fact, it's now led to human dominance of the world to the point where our population growth comes at the expense of all other species; because we consume so much of the "stuff of life".

But as in the case of genetic adaptations, no one should think that cultural adaptations are necessarily optimal either. For ex., the Aztec empire I think, managed to survive so long despite the waste of useless human sacrifices that did absolutely nothing to "appease the gods". Or Confucianism is credited with promoting social order in China; but adherence to it has obviously stunted modernization; as well as the Chinese tradition of pictograms instead of an alphabet. Religion is, of course, the most important and influential cultural adaptation, but again, its positives and negatives are debatable. Many customs like idiotic superstitions (e.g., fear of black cats, fear of menstruation); or traditional medical practices like bloodletting are also nonsensical; whereas social customs of marriage, work ethic, education, property, fire, cooking (salting), fishing, fear of leprosy, fear of snakes, etc. may be absolutely vital to reproductive success.

Cultural traditions like religious fasting can even run counter to genetic ones (hunger), but not "too counter", of course. What also follows is the idea of random drift: many cultural differences (like fashion and language) are divergences that just happened to happen. But I think cultural adaptations do exist and they explain why all cultures have some sort of criminal justice system and why some crimes are nearly universal: what's esp. significant is that prison inmates, of

course, have much lower reproductive success than law-abiding citizens. Basically, religion and law enforcement can counter the more savage elements of human nature (murder, rape, robbery, anarchy) to promote civilization.

Also, cultural adaptationism explains why 3rd world cultures with high child mortality rates emphasize marriage and motherhood so much even if it means subjugating (enslaving) women. The goal seems to be for every man (not just the alpha males) who can afford to do so to marry- and to treat women like BABY MACHINES ("barefoot and pregnant"): in order to keep the birth rate high enough to offset the high death rate due to famine, war and plague; and to supply cheap farm labor. As another ex. of concurrency: some women are clearly more maternal and nurturing than others (some women have an overwhelming desire to have children); but some women don't want children. In general, though, females are, of course, more instinctively maternal than males; and the traditional cultural emphasis on motherhood further makes many women feel ashamed for not putting their children first; which is why even in the modern world, many working women feel pressured to stay at home with the kids.

Traditionally, though, regardless of their desire or suitability, nearly all women were forced into early marriage and motherhood anyway (as teens). The Muslim practice of purdah is an extreme ex. of this. Under purdah, women are male property, and jealously guarded (to ensure male paternity of children); and women are valued only as mothers, not as people. Under purdah, women have no choice in marriage and risk mutilation or death for even speaking to another man other than their husband. Now one might wonder, how natural selection could favor a system where wife beating is common and men can murder their wives? Well, as previously stated, if it's an adaptation, then it's an adaptation in the sense murder, war, slavery and bullying are adaptations. And considering how high the death rate has been due to famine, disease, war, childbirth, natural disasters, etc., esp. in the harsh Arabic desert environment- well a lot of anomalies can endure in such a "noisy" process.

One problem with conventional adaptationist theory is all of the talk about genetic adaptations for male and female mate preference. And yet, most sociobiologists ignore the fact that in most of the world today and for centuries past, the standard practice has been arranged marriage. But where's the choice in that for both women and men? Arranged marriage then must be a cultural adaptation that has in part SUPPLANTED the underlying genetic adaptation; because it leads to much higher sustained population growth, and stable family units- essential for society and civilization. Also, arranged marriages to some extent do correspond to the genetic adaptations. The decisions of the matchmakers are often akin to adaptationist theory- that is, parents prefer their daughters to marry high-status males (or at least men who can support a family); and parents prefer young and chaste women for their sons.

It may very well be a genetic adaptation for women to be attracted to high status (usually wealthy) men. But due to mental flexibility, it's also just (practical) common sense to marry for money; esp. in the past when wealth was concentrated among a few. For nearly all of human civilization, the bulk of marriages have had nothing to do with love and compatibility or even physical attraction: when most people were nearly starving to death, love wasn't a factor at all- all that mattered was sustenance. Most women and men gladly married for money, since few want to live a life of hunger and sheer drudgery.

The simple fact is that romantic love has never been a major factor in the vast majority of marriages- even today. Most



marriages have simply been calculated business deals between families. Most people choose spouses on more mundane, practical factors (grub first, then high ideals like "love and compatibility"). So even though it's a glamorized ideal, romantic love is really just a minority concurrent adaptation. Romantic love is too fickle and arbitrary, and too rare. (According to movies and romance novels, romantic love is only for the "beautiful people" anyway.) So it's been supplanted by arranged marriage, a cultural adaptation, because it leads to much higher reproductive success (and a stable social order essential for civilization) than marriage based on romantic love. Let's also admit that many men and women out there aren't considered attractive; as Ann Landers once put it: *"For every 'nice guy' out there, who bitterly complains women prefer 'bad boys', who treat them badly over him; there's a 'nice girl' who complains men overlook her in the pursuit of physical perfection"*; and would otherwise have a very hard time obtaining a mate of their own w/o an arranged marriage. So it must be a cultural adaptation for as many people as possible, who could reasonably afford to do so, to marry and have children (to keep up the population). *And that's because modern civilization obviously wouldn't exist (the population wouldn't be large enough or **diverse** enough), if only alpha males (and alpha females) reproduced.*

Historically, even gay men were compelled to marry and father children. And traditionally, if a man got a woman pregnant, he was supposed to marry her no matter what; and divorce was out of the question. As Wright notes, the real reason divorce used to be near-impossible was to prevent men from abandoning their spouse and children for another woman; esp., high-status men, who are more apt to "fall out of love" with their aging wives and abandon them for younger, better-looking women. And yet, the downside of this "marriage trap" is that it often trapped people in misery.

This also explains why pre-marital sex has traditionally been so taboo- to strongly discourage illegitimate children. The downside of this is that rape and incest victims, who become pregnant, are also shunned and despised; though they're blameless. I mean, a dog once growled and tried to bite me even though I was simply trying to help it. Of course, fear (blind instinct) is an essential adaptation; but why can't both genetic and cultural adaptations be even more flexible? (Who knows, maybe this is an adaptation in progress?)

All of these traditions seem to be cultural adaptations meant to maximize the birth rate ("be fruitful and multiply") while ensuring that children would have *both* parents around to raise them. So in general then, civilization promotes monogamy. The scenario of most males having little reproductive success with a few alpha males fathering all of the children may work in low populations (like hunter/gatherer tribes), but it can't really work in a large society; which is another reason why monogamy for the masses and mini-harems for a few men probably came into play. Agriculture enabled some men to amass large fortunes and mass harems by exploiting the masses. But the vast majority of people have been poor- most men had to struggle just to survive let alone support a wife and their children, which reinforced monogamy. Even dictatorships with seemingly absolute rule, are in fact limited-rule because of the reliance of the leaders on the masses. But even with two parents, child rearing was a struggle, which also explains why family ties (between grandparents, parents, children, siblings and in-laws) were traditionally so strong. And why with modern technology, and our much higher standard of living, family ties have greatly weakened. In the modern world, people's first allegiance is to themselves now, not their family (as in the 3rd world). There was a time when most men took enormous pride in being a "good provider" for their families, and were deeply ashamed, if they "failed" them. Now in the modern world, many men may actually father numerous children with different women out of wedlock; but with modern welfare, they don't have to and (usually don't) stick around to support them. NY Senator Patrick Monrath predicted as much in his famous 1960s study on welfare. Now, single mothers abound in the US.

As living standards and life expectancy improve, then slowly cultural institutions CAN change because they're no longer necessary. Traditions can strongly persist due to simple inertia and habit; but they're still a lot easier and faster to change than genetic traits. [As an ex. of the former: obviously, the traditional bias for boys over girls makes no sense anymore, if it ever did, but so what? The practice can continue as long as the birth rate is non-zero. Overpopulated countries like China and India will be able to practice female abortion and infanticide for decades to come before they'll be forced to change or face a severe population decline. It's theorized that high-status parents should favor boys over girls, because high-status males have much higher reproductive success than girls. And that poor parents should favor girls over boys, because girls can "marry up" (if they're beautiful) whereas a low-status male may never be able to afford to marry. But in China and India, males are now preferred across the entire social stratum- a possibly former "valid" cultural adaptation- that's now run amok.]

So in the 3rd world, if the child mortality rate was lowered due to improved living standards; then such cultures would gradually become more amenable to democratic institutions and to improving the status of women as has happened in the West. If the child mortality rate dropped, then QUALITY of children (i.e., educated children) vs. the QUANTITY of children (having "spare" children in case the others die) would become the goal. And then, the birth and marriage rates- and the intense PRESSURE to marry and have children- would dramatically drop as they have in the modern world due to middle class economic constraints; and the divorce rate would surge. Contrary to popular belief, birth control isn't in itself negatively selected: natural selection works on relative gene frequency, not absolute frequency. Human overpopulation in the 3rd world is a modern fluke of the green revolution and vaccines. In the past, poverty went hand in hand with low population growth, because of famine and disease. Now, in the 20th century, it seems that being poor and living in the 3rd world, leads to higher reproductive success than living in the modern world. But this isn't sustainable, of course...

In fact, the 1994 UN Population Conference in Cairo resolved that improving female status, health, childcare and education are the best means of lowering the birth rate. Simply delaying the age at which girls marry and begin bearing children (by allowing them access to higher education) would have enormous impact. The only problem with this approach is the time and money required to do so. It's certainly the most benign way to "defuse" the 3rd world population bomb; but it may already be too late. Overpopulation will more likely be "solved" the hard way- by famine, plague and war.

Humans then are unique in the animal world for our capacity for culture due to the genetic adaptation of mental flexibility. In fact, considering the extent to which humans are mentally flexible, the blank-slate view of the human mind promulgated by B.F. Skinner (behaviorism) is understandable albeit wrong, of course. The human mind is only relatively flexible to a degree- clearly, there are limits. For ex., much has been written about the breakdown of traditional sex-roles in the modern world. But men and women are biologically different, and there are definite limits to socializing. Traditionally, feminist doctrines have denied biological differences between the sexes and have blamed culture instead for sexism; and for behavioral differences in the sexes like macho behavior. Well, they're wrong- the ultimate cause of those differences are undeniably genetic (Y-chromosome). But culture also undeniably served to reinforce them: I'm sure plenty of men have acted more "macho" than they otherwise would've due to peer pressure (which is the whole point of

military training by the way). Likewise, many women have acted more "feminine" than they otherwise would've due to peer pressure. And certainly, when most jobs relied on brute strength alone, then macho behavior ruled. Now, the modern world is about desk-bound jobs where arm strength is n/a (and where women may even have an advantage); so, of course, attitudes have changed. (**Note: science and technology drive human cultural change.**) So those looking to blame culture for sexism and not genes do have a point here and there.

Wright relates the theory that due to the long time necessary to raise human children, long-term pairings are also positively selected in human relations. At the same time, though, because male sperm is cheap and plentiful, not all, but many males, esp. high- status ones, are often unfaithful- that is, ambivalence is built in. This may very well be the case, but there's an alternate explanation. Again, it should be remembered that evolution is a work in progress. It could also be that monogamy is a genetic adaptation that is still ongoing: as time goes on, men (and women) will become more and more monogamous. It's also possible that the genetic selection for monogamy isn't coming about anymore because human culture stepped in to promote monogamy. Human males might be more instinctively (genetic) monogamous now, if the cultural adaptation for monogamy hadn't stepped in way back whenever. (Heck, even cavemen had culture.) But that's the gist of cultural adaptations; they're much faster and much more flexible than genetic ones.

Finally, a distinction should also be made between cultural adaptations (traditions) and simple learning- a genetic or cultural adaptation isn't necessary for someone to learn something new like how to build a better mousetrap. Culture, though, can impede human learning due to prejudice. (E.g., the general opposition to evolutionary theory by religious people.)

Obviously, people are also mentally flexible to the extent that concurrency (alternate strategies) can exist within the same person. That is, people can practice different strategies, depending upon their social circumstance. For ex., a low-status male may be monogamous, and "take a lot of crap" from others because he feels he has no choice. However, if he somehow achieves power, well then, as they say, "power corrupts". Likewise, a female may become very promiscuous, if she suddenly encounters a multitude of alpha males (e.g., a rock band); or if she becomes dirt-poor, and becomes a prostitute. And, of course, drug and alcohol usage also tend to vary with social circumstance.

The psychologist, Abraham Maslow, theorized that human desires are like a pyramid: 1st comes food/water/shelter; then comes psychological fulfillment..on and on. People always want more it seems, if yuppie consumer habits are an indicator. "**Time**" magazine had a recent story (Oct 2000) about the growing number of US women who'll likely remain single and childless, esp. in urban areas like NYC. Some modern women, who're well educated and financially independent, have impossibly high standards ("too picky") for "Mr. Right". And if "Mr. Right" doesn't come along, then they're content to remain single. (Some become single mothers or even resort to sperm banks.) This is derived from the female desire for quality male genes, but it also follows from Maslow's law (of ever increasing desires and standards). Many men also have unrealistic standards (from seeing so many beautiful women in film, TV and porn) for "Ms. Right". Most men, even low-status ones, only want to marry a beautiful woman, and have contempt for fat and ugly women ("ugly bitches").

Both men and women can be equally superficial in picking mates: most men care about looks the most ("like how big her

tits are"); and most women care about how tall the guy is and how much money he makes- neither care as much about the "person within". But the average man and woman should have lower expectations: i.e., the rest of us should just "settle" (except that our heads are filled with media-inspired fantasies). But as Ridley notes, most plain men and women do eventually settle for a plain spouse. It's a cliché that as women "mature": as their biological clocks begin ticking, they care more about commitment, and start looking for boring (wimpy) "nice guys" to settle down with as opposed to exciting "bad boys". Before, with arranged marriages, people had no choice (and lived harsh, miserable lives- it was either that or die). Now, people expect more and more- another "red queen".

**Modern Love: Why not Free Love Then?**

For most men, the typical male fantasy is sex with hundreds- even thousands of beautiful women. Women, of course, aren't like that; but some feminists have even encouraged promiscuity for women as well to prove the "equality" of the sexes!

This brings up the question of "free love". As stated before, traditional sexual-morality is an unfair double standard: men who sleep around are "studs" and proud of their "conquests"; promiscuous women or even rape victims, though, are "wicked" and "ruined" and draw disdain from both men and women. But as shown in previous sections, the "purpose" of traditional sexual morality is to guarantee male paternity of children and to promote two-parent child rearing. This is so, because before birth control, sex could ALWAYS result in pregnancy. Sex only after marriage guaranteed that a couple had made a sufficient commitment for child rearing. And even when premarital sex occurred, there was a time when getting a woman (except for a prostitute) pregnant was a MAJOR scandal and automatically meant marrying her- a cultural adaptation. Most people lived in small rural communities where everyone knew each other; so there was no avoiding this (esp. the gossip!) as there is in the anonymity of modern cities. [Note: prostitution is only rampant in urban areas.] Let's face it, without strong cultural restraints, many men will abandon a girl they get pregnant- like they often do in cities. Heck, in the ghetto, there are guys who brag about how many different girls (future welfare moms) they've "knocked up".

It must be emphasized that modern sexual morality (premarital sex, single mothers and unmarried couples living together), is in actuality a minority morality. The bulk of humanity still lives in the rural 3rd world- a world in which men murder female relatives for not being sexually "pure". Most 3rd world men only want to marry a virgin. (Most modern men feel that way too even if they don't want to admit it.) This is another reason why premarital sex even between engaged people is traditionally taboo; so if the engagement is broken, then the woman would still be a virgin.

After the invention of the birth control pill in the 1960s, fears of unplanned pregnancy declined and the sexual revolution was on in the modern urban world. So with modern birth control, if premarital sex doesn't result in pregnancy, then what's wrong with it? Certainly, all of the adaptationist justifications become null and void then. What's wrong with teens having sex if they use birth control? (Or with teen girls "giving head" to guys?) What's wrong then with legalized prostitution and casual sex?

Well, even ignoring the issue of sexually transmitted diseases, Wright's "**The Moral Animal**" deals extensively with the

theory of the "Madonna-whore" switch in the male mind. The idea that contempt (even sadism) for sexually promiscuous women (and for women who simply don't appear sexually "modest" enough) may be an adaptation that lets a man in "good conscience" use a woman just for sex without any intention of commitment or support, if she becomes pregnant; it's an adaptation, because even without male paternal investment, illegitimate children may survive anyway.

On the other hand, sexually "pure" and "virtuous" women, esp. if they're beautiful, invoke respect and admiration and are "placed on a pedestal". In fact, men may feel such worshipful devotion for such "angelic" women that they suppress sexual lust for them because it seems demeaning to them. (Wright suggests that in the Victorian ideal, it was *intended* that men feel this way, which is why lengthy, platonic courtships were the convention during the Victorian age.) But in less extreme circumstances, the basic idea is that men can only love (and eagerly marry) a woman they respect and trust to be faithful (vs. a "cheap slut", who could really be pregnant with another man's bastard). Certainly, such worshipful devotion is the way "ideal" fairy-tale romances are supposed to be. (E.g., Disney films like **"Snow White" (1937)** and **"Beauty and the Beast" (1990)** .) And 19th century Gothic novels are replete with this notion: Matthew Lewis' **"The Monk" (1796)**, for ex., depicts the Madonna-whore attitude to the extreme in its titular protagonist.

The Madonna-whore theory further suggests that for men, feelings of sexual lust and genuine emotional attachment, are almost indistinguishable initially. It has been suggested it's an adaptation for some men to feel intense "feelings of love"- really just lust- to more easily seduce women into having early sex by appearing "sincerely" devoted; it's a cliché that men "fall in love" on sight, but for women it takes time. But those feelings are very transitory; and if the woman is "easy", then as "punishment" for that even though he initiated the sex in the first place, the man will gladly have sex with her anyway, but without any intention of commitment because he loses all respect for her! I.e., in order to just use (exploit) a woman for sex, it's necessary to feel contempt for her. Obviously, if a man is truly devoted to a woman, it'd be emotionally difficult for him to philander or to abandon her.

And this theory fits the pattern of one-night stands (men who pick-up women, pledge their undying love to "get laid", and then never call again). I guess there are some Don Juans (usually high-status men who can easily attract women) out there, who spend their entire lives doing this. In one extreme case, I saw a news story about Tim Richmond, a famous racecar driver/womanizer, who pursued a woman for months even though she rejected him repeatedly; showered her with expensive gifts; and finally got her to accept a proposal of marriage. He then had sex with her (infected her with AIDS) and then dumped her. Such womanizing is deception and trickery, but going back to the idea of concurrent strategies, it's fairly benign compared to-

For ex., I think there are some men, who are so sexist, misogynistic and contemptuous of women that they're incapable of love or respect for any woman even if she really is a "Madonna"- remember, adaptations aren't necessarily universal. All they want is sex and they treat women as sex objects with utter contempt and sadism as if they believe all women are "whores" and "bitches". Even if they marry, they're horrifically domineering and abusive- the type of insanely jealous men who beat and terrorize their wives; and murder them, if they try to leave or on the mere suspicion of infidelity. Or there are some men who may pay for dinner on a date, and then expect sex as "payment"; and if they don't get it, become furious and attempt rape. Or there are plenty of men, who'll dump a girl if she doesn't immediately "put out". Or there are men, who'll rape a woman for "leading" them on (like if she invites him into her apt. after a date, but then refuses to have

sex). Or there are men, who'll beat and rape a woman (or disfigure them with sulfuric acid) for rejecting them out of revenge. Or in the extreme minority, there are serial killers who target women and rape and butcher them out of hatred/sadism/fear. Ideally, such men would never have children at all (and would be in prison); but that's not how the real world works.

A major point of this essay is that a lot of traits aren't due to direct adaptations. But if one wants to try, a partial explanation for some of this is an arms race between men and women (seducer vs. seduced) on a number of levels:

At the chromosome level, X and Y-chromosomes vie against each other to be reproduced: the male-female sex ratio of 50/50 then might be due to a stalemate in the arms race between them. Other measures and counter-measures are theorized...

According to classic sociobiology, men want sex with many women w/o necessarily providing support; and there are many species in which males provide little support, if any. In such species, including some primates, females are only sexually attractive to males when they're "in heat" (ovulating). But in humans, women are sexually attractive to men all of the time even when pregnant- a cynical explanation for what keeps men around women (to provide support). And certainly, many wives use sex to exert control over their husbands.

In most animal species, females select alpha males because they have the "fittest" genes. (But also because the alpha males dominate the females as well as the other non-alpha males.) Male support of offspring is minimal. In species in which offspring take a long time to raise, monogamy becomes more "popular" as females begin to select males based on their suitability as a domestic partner. But in some cases, females are relatively promiscuous, and may "trick" a nurturing male into supporting offspring actually fathered by another (more alpha) male. But since natural selection is based on "selfish genes", males have countered by becoming sexually jealous and possessive of women to ensure they aren't cuckolded. However, because men have a near-infinite supply of sperm, from a selfish-gene POV, it pays off for them to mate with as many women as possible even while they insist upon fidelity from their wives. In fact, high-status men, who are preferred by females, are far less likely to be faithful and make suitable domestic partners...and they're far more likely to have higher standards of feminine beauty- another "red queen" situation.

But since women have only a finite number of eggs, and bear the burden of raising children; many women, however, want monogamous devotion from a man before having sex with him (unless he's a top alpha male like a celebrity). So women have adapted by becoming increasingly selective and wary of male advances. To counter that- some men have gotten increasingly better at seduction to the point that some men are extremely charming and seductive and "sincere"- "players"- when all they really want is sex w/o commitment. Another "red queen" situation...

In general, men are judged by their status, women by youth and beauty- another red queen scenario; so increasingly, human males are choosier too. But just like a low-status man will have to settle for a plain woman, a plain woman will have to settle too- can't be too picky either. But obviously, there are women who marry only for money, and will dump their husbands, if a richer man comes along. Just like there are men, who care only about looks, and will abandon their wives, if a younger, better-looking woman comes along.

In an Aug 1997 **"US News"** article, Matt Ridley wrote, "Mike Tyson was made by women just like Pamela Anderson was made by men". He suggests that men are big and strong because female choice bred them that way; but that men have countered by favoring women with large breasts and wide hips. In most other species like birds, ONLY males, not females, are affected by sexual selection. Ridley even suggests that the strong male preference for young and beautiful women is a consequence of monogamy (favored by women); i.e., men want the "best" possible mate with the ideal physique for childbearing, who'll be fertile for as many years as possible, before making a long-term commitment. He notes that for just casual sex, men have much lower standards than for a long-term commitment. But instead, this may simply reflect the extreme importance of female physique and health in successful childbirth: as seen on VH1's "Behind the Music", despite being extremely promiscuous, rock bands, the modern alpha-males, will only invite "hot-looking" girls backstage after concerts (for their orgies). By contrast, males of other species aren't as discriminating as men.

As stated before, if most men had their way, women would be enslaved in harems as sex slaves, and would only be valued as mothers. If this sounds too cynical, then the existence of harems in the ancient world, and the continuing practice of purdah; and the booming sex trade (including the kidnapping and trafficking of an estimated 1 million women annually) must be cited. In such scenarios then, men "win" by dominating and controlling women.

There's such a basic ambivalence in male-female relations: on one hand, you have chivalry ("woman and children first"); on the other hand, you have extreme sexism and sheer contempt- even hatred of women- by domineering men who enslave women as mothers only (purdah). Or if a man is desperate to have sex with a woman, he may act very tender and pledge his undying love for her, and even mean it (for the time being at least). Or he may be sadistic and violent and attempt to rape her. Are we supposed to believe that all of these aforementioned acrimonious "male vs. female strategies" are concurrent adaptations? Or are they all "unintended consequences" of other adaptations?

So perhaps monogamy is a compromise in the arms race between men and women. (I mean, marriage based on romantic love as opposed to an expedient one.) If a couple are in love, then in the short-term at least- long enough to raise children?- both will trust each other to be faithful; and the woman can expect devoted commitment and support from the man. Obviously, both men and women are far more likely to be unfaithful in a loveless, empty marriage. Long-term love between spouses is based on reciprocation- just like parent-child bonding is due to a reciprocal attachment. One can speculate that romantic love between men and women developed (and is still concurrent) after misogyny. (I.e., before monogamy, did males feel contempt for women or merely lust?) Romantic love probably developed as an offshoot of kin-love (for offspring, siblings and parents).

The basic point of all of this is that just because casual sex would no longer result in pregnancy; that doesn't mean that men's attitudes would change. By definition, a genetic adaptation takes a long time to change. So an arg. against premarital sex is that men would be less likely then to respect and marry their sex partners. Also, the marriage is more likely to endure, of course, the more the man respects the woman. For a woman, avoiding premarital or at least early sex is also a way of filtering out the "players"- men who are only after sex w/o any real commitment. And there are plenty of men out there without any intention of marrying (unless "forced" to do so by strong cultural pressure).

Also, as Wright points out, let's admit that (easy access to) sex is the primary reason why men marry. If the sex is "free"

then, there's far less incentive (for the man) to marry and make a commitment. Wright quotes the old adage, "why buy the cow when you can get the milk for free?" And this is why Victorian men were MUCH more eager for marriage than modern men; because they couldn't otherwise have sex w/o resorting to a prostitute. (Hey, I'm sure most guys have lusted for a "dream-girl", who was so "hot", that they'd have done "anything to have her", including marry her.)

Also, of course, sexual boredom is inevitable between two people and is a major factor in divorce (when the passion inevitably fades). But if it happens before marriage, then, of course, marriage is that much less likely; which is why most couples that live together don't get married and eventually break up. Let's admit that once people get married, a major reason they stay together is simple inertia.

Ironically, the low child mortality rate and the high standards of living brought about by modern technology have led to the breakdown of the traditional family decried by conservatives. In the US, marriage and birth rates have dropped (and divorce rates have sharply risen), because the cultural adaptations of early marriage, large families and zero tolerance for illegitimacy- are no longer necessary to sustain the population. Well, some might argue that marriage is an antiquated institution anyway and most marriages are unhappy and miserable anyway (esp.in the past when divorce was near impossible due to the social stigma), so who cares if people don't get married. I might agree too except where children are involved. (Except, of course, in the case of an abusive relationship; in which case, divorce is the best thing for everyone concerned.) Let's admit children are much more likely to grow up in poverty without a father; let's also admit that a good father can have a very positive psychological impact on a child beyond mere material support. Children who have good role models of both sexes- two loving parents- tend to be better "socialized" and "well-adjusted". (E.g., males with good father tend to be less violent; and females with good fathers are less likely to become teen mothers.) As any parent knows, rather than being "little angels", most children are spoiled, sadistic brats, who require a lot of socializing (and conditioning) to become "productive members of society". This is, of course, what our modern high-tech society wants. Basically, the nuclear-family unit (based on the security of marriage) remains the backbone of society.

As stated before, women are usually the limiting factor in sex; but many point out how unfair it is for women to be held solely responsible and condemned for pregnancy out of wedlock. So many will probably fear sexual adaptationist theory because it implies that this is the way "it's meant to be". Ideally, it shouldn't be this way and in fact the old Victorian ideal was that a "real" gentleman should also exert self-control and refrain from sex with a woman- exploitation and "dishonoring" her - until he was certain he loved her. But if one waits that long for a true attachment, then one might as well wait until marriage for sex. Men should be honest with themselves and admit that "feelings of love" are often only lust no matter how intense they are at the moment. It's a common male delusion to believe that having sex with a woman will make him love her more, but the opposite is usually true. And, in practical and moral terms, it's infinitely easier and "guilt-free" for a man to dump a girl after getting to know her and deciding he isn't really interested in a long-term commitment with her, if he DIDN'T have sex with her. No one can accuse him of exploitation then or of being a "player". Also, respect works both ways: women will tend to respect men more, who aren't "only after one thing"- i.e., men who treat women as people, and not as sex objects. This is all good and well in theory, but let's face it- most men's libidos are so strong that they can't "control themselves", which was the whole point of chaperoning.

I guess every alpha male has to decide if his goal is to "get laid" a lot ("to score as much pussy as possible" as the young



folk like to say); or to fall in love with someone compatible and get married sensibly (like in a Jane Austen novel). Certainly, if a man truly respects, loves and cares for a woman, then he can wait until marriage for sex (in fact he'll respect her more for being "virtuous"). And he'll treat her with consideration, and not expect "sex on demand"; otherwise, maybe he is only after one thing. And this is old-fashioned advice that used to be given to girls. However, I saw a recent news story about college student sex-lives in which female students complained about guys who picked them up in bars, but who never called them afterwards; so it appears that some women are naive about the way men can be. And this is due to the modern myth that sex is the same for men and women.

The "evil" of sex isn't in the sexual act itself, but because in males, it can be linked with sadistic, sexist contempt of women- with treating women as subhuman sex objects and chattel instead of as human beings with feelings. (Exploitation is still exploitation even if the exploited consents.) I.e., men are more than capable of pretending or even feeling transient "love" to get sex, so desperate are they. Hell, to be topical one can use the Monica Lewinsky/Bill Clinton sex scandal as an ex. Lewinsky claims she loved Clinton and hence performed sexual favors for him; Clinton, of course, was just using her for sex. Lewinsky is regarded by many as a "slut"; and yet, she didn't have the affair out of lust, but Clinton did! The sad fact is because she's overweight and felt unattractive, she probably felt she had to "put out" to attract men. Lewinsky, though, is at fault too for being a naive, superficial political "groupie"; and for pursuing a married man. (Better to share an alpha male than to settle for a "lowly" one?)

Let's face it, beautiful women are usually treated better than plain or ugly women- and sexual modesty in a woman "works best" if she's beautiful. That is, a beautiful woman will attract many men and she can then hold out for the "best" suitor. But an ugly, but sexually "pure" woman may never attract any decent suitors let alone get married and have children. Similarly, many low-status men have problems attracting woman and so resort to prostitutes or even rape.

Given current human nature, if men were given free reign on sex, then their behavior would probably be akin to that of modern celebrities- crude, boorish egotistical pigs who treat women as sex objects and with contempt; or even worse with violence (e.g., gang-rape and "wilding"). Or consider the treatment of women in cultures where prostitution and child-sex are widespread as in Thailand, the Philippines and Costa Rica...men may lust for prostitutes; or porn models; or their mistresses, but usually, there's no real respect or caring or emotional attachment. It's all about just using the girl for sex or "fucking the bitch's brains out" as gangsta rappers like to put it.

The result would be a society with vastly fewer long-term pairings akin to marriage and lots of children growing up fatherless and a high juvenile crime rate. Wright, in particular, writes about the "calming" (socializing) effect of marriage/ raising children on most men. (The old Victorian ideal was that an "angelic" wife would redeem her husband.) And since, marriage and family are the backbone of society (civilization), many sociologists also decry the declining marriage rate in the US. They talk about the negative social toll on men and women and esp. children who are lonely and unhappy without the security of marriage. (On the other hand, one can argue that anything that reduces population growth, esp. in the "wasteful" West is a good thing...)

At its crudest, marriage is a ceremony in which a man publicly (so it can be enforced by peer pressure and gossip) makes a commitment to a woman in exchange for sex. Marriage also used to be a lifetime commitment w/o the

possibility of divorce. This prevented men, esp. high-status men, from abandoning their wives (and children) and impoverishing them, for younger, more beautiful women. This interpretation implies marriage is for women's benefit. And yet, all too often, marriage can be a trap for women akin to slavery. On the other hand, Wright also makes the point that high-status men would have a monopoly on women in a society w/o monogamous marriage while a whole lot of ordinary, "non-alpha" men would be left out in the cold: overall, monogamy is better for men than it is for women. If King Solomon really did have a thousand wives, then there were 999 ordinary men who didn't get any mate at all! So all men may want to have sex with many women; but the reality is that the common man may be lucky just to get any woman at all. So perhaps monogamy and democracy go hand in hand as Wright suggests.

On the other hand, old-fashioned courtship doesn't necessarily lead to marital bliss either. I'm sure that JFK and Bill Clinton respected their wives; and yet, that hardly kept them faithful to their spouses. Or the Victorian gentleman who was supposed to elevate his "angelic" wife on a pedestal and treat her with worshipful devotion; let's not forget that prostitution and mistresses were rampant during Victorian times. Ideally, marriage is supposed to be a lifetime of devotion and happiness for both partners (which was much easier when people died in their 30s or 40s). In reality, marriage is a practical partnership at best and an intolerable prison for the rest; fairy tale romances are just that.

Hell, I once read a science fiction story in which men don't "need" women anymore because they can gratify themselves with androids programmed for sex "on demand". Most men wouldn't care if they were having sex with a robot instead of a real woman as long as it looked real (some men already have sex with blow-up dolls); and the same may apply to women as well (e.g., Tanith Lee's **"The Silver Metal Lover" (1981)**). Virtual sex is the next obvious step beyond Internet porn; so perhaps technology is leading to the death of love and marriage between the sexes.

**Sex Differences**

Adaptationists have a tendency to describe men (XY) and women (XX) as almost separate species with divergent and competing goals. But in actuality, men and women are nearly genetically identical. That is- all traits are equally distributed throughout both sexes because of Mendel's law of segregation (except for those genes on the Y-chromosome, which doesn't seem to do much beyond sex determination). So it's perfectly possible for a particular woman to have more in common with a particular man than with most other women. I for one have known siblings of the opposite sex, who eerily resemble each other physically (and probably mentally too).

Of course, sex hormones vastly modify the actual expression of some genes; but the point is that contrary to sex stereotypes (e.g., "just like a woman" or "all men are the same"), there's as much variation among women as there is among men. In fact, many traits are equally distributed among people regardless of their sex. For ex., there's as much variation among women in height as there is among men. Now, men are generally taller than women, of course, but there are many men and women of equal height. The shortest people will tend to be female, but even so, there are individual women who are taller than nearly all men; and it's perfectly possible for the tallest person in the world to be a woman. (At one point, the tallest person in the world was a 8'+ Cambodian woman.)

Sex hormones alone don't account for sex differences- pump sex hormones into a glass and nothing (much) will happen.

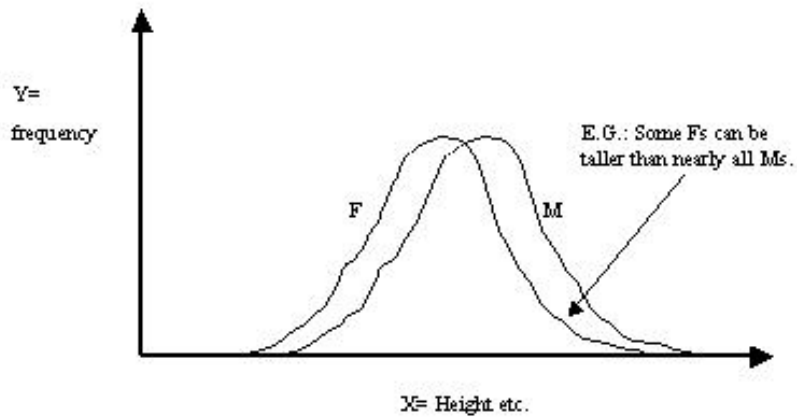
Sex hormones only influence our "chemical soup". A man may have high levels of testosterone but if he lacks other unknown genes that taken together would result in violence then he simply wouldn't be violent regardless of his level of testosterone. And this explains why some people with XX chromosomes can be taller or more violent than most men even with lower testosterone. Much has been made in this essay about "bad boys", but perhaps the only difference between "bad boys" and "bad girls" is the Y-chromosome. For ex., if Adolph Hitler had been born XX instead of XY, I'm sure she'd still have been a psychopath (like Elisabeth Nietzsche, the famous philosopher's die-hard Nazi sister). For many traits, what sex hormones do then is to shift the Gaussian distribution curve between the sexes. That is, the amount of variation is the same among each sex, but the absolute frequency of a quantitative trait like height will be different but with much overlap. For ex., in the case of height, most of the people who are 6' will be male and most of the people who are 5' will be female; but people who are 5'6" might be equally male or female.

The above is important to remember because of recent studies in sex-differences in the brain due to sex hormones. I think the fear is that such studies will unfairly reinforce discrimination based on sex alone instead of judging people as individuals. At this point, the only real generalizations that can be made are that MOST gene expressions like eye/hair color and blood type are equally distributed regardless of sex; but SOME gene expressions in the brain and body- the most obvious being genitalia (breast cancer, prostate cancer, etc.)- are nearly exclusively male or female.

In some instances, men and women differ vastly; but in other ways, they're the same in that some traits are distributed regardless of sex. For ex., men and women are probably equally likely to be dishonest, snobbish, spoiled-rotten, cruel, greedy, vain, impatient, selfish, bigoted, etc. On the other hand, it's obvious that the most violent, competitive, aggressive, rowdy, reckless, sadistic, sexually-obsessed and perverted people will tend to be overwhelmingly male; and that the most overly emotional, talkative, officious, nurturing, flighty, superficial and fashion (and shopping)-obsessed people will tend to be overwhelmingly female. Tendency is really about probability distribution ("bins"). That is, for any designated group, there are plenty of individuals who won't fit the stereotypical trend, but there are plenty more who will. For ex., insurance actuaries know that younger and older drivers tend to be involved in more accidents vs. other age groups. On an INDIVIDUAL level, though, this is useless in predicting who'll actually get into an accident.

This is applicable to a multitude of other things, including adaptations- that is, there will be a distribution in variations in the expression of an adaptation. As previously mentioned, females tend to be less sexually promiscuous than males: the statistical mean of female promiscuity will be much lower than the statistical mean for male promiscuity. But even though this is a widely prevalent adaptation, there can still be a minority of females, who can be very promiscuous- even more so than most males, which may explain nymphomania and female sex addicts. Even if a trait is disfavored by natural selection that doesn't mean it can't persist (in the minority, of course).

The below figure of Gaussian probability distribution is applicable for comparing male vs. female violence or promiscuity or height, etc.



People deal with individuals, not statistics (large groups), so stereotyping (assuming something blindly) can be a major mistake- but we do it anyway. It's been said that the mathematics of probability is simply counter-intuitive to human thinking (because it's too complex). A simple ex. of this human blind spot is the smoking debate: does smoking cause lung cancer. Many die-hard smokers will deny it does; they cite individuals who've smoked their entire lives w/o developing lung cancer. They don't appreciate that smoking doesn't cause cancer directly; rather, it significantly increases one's chances of developing cancer, which *isn't* the same thing. (Also complicating matters is that people vary in their genetic susceptibility to cancer.)

## Honor and Status

People blindly accept most cultural adaptations- traditions- because they grow up with them. Many of societies' mores (the social codes), though, are enforced by conformity (peer pressure).

Status divisions like nobility/peasant; master/slave; men/women; racial segregation and the Hindu caste system are universal. (And have really only begun to change in the modern world with democracy.) In such societies, arrogant egotistical pride ("honor") and "saving face" are all-important; not showing "proper" respect and deference to someone of higher status often meant severe punishment and even death. People like to romanticize the past, but they forget how common dueling was over the most trifle of insults. During segregation in the US, any black man who didn't seem subservient enough risked being lynched by whites (for not "knowing his place"). Or in the 3rd world, recent reports have publicized "honor killings" in which men feel "honor bound" to murder their daughters, sisters and wives for not being sexually "pure".

Wright deals extensively with status and its impact on human dealings. As he points out, people "kow-tow" to the powerful, who can get away with almost anything (RHIP) in part, because the less powerful can't stop them; but also because the powerful get more lenient treatment and deference: because lower-status people "look up to them". The adaptationist theory for this is that the high-status are in a position to help those below, so it pays to "suck up" to your boss; and it's even better if you sincerely feel like doing so! I.e., "if you can't beat them, then you might as well join their entourage"! But in another ex. of human ambivalence, some people admire high-status people ("hero worship"); on the other hand, some are jealous and envious of them, esp. if they're rivals.

Hierarchy ("pecking order") is also observable in many other species like wolves, lions, seals and birds. The adaptationist theory for it is that competition among males results in the male with the "best" genes, dominating mating; the alpha male is also the group leader with the other males forming a hierarchy (chain of command) below him. However, in the modern world, as society has become more equitable due to democracy and modern technology, things have improved; although the high-status (celebrities now instead of royalty) are still worshipped. So the fact that things have improved means some of this must be due to cultural adaptations. I mean, we no longer go around worshipping our leaders as if they're literally divine like they used to in Egypt and Japan. Instead, we have celebrities to fawn and gush over.

As previously described, the adaptationist theory for sexism is that men "want" to control women in harems to ensure male paternity of offspring. But sexism is also due to the fact that men are physically stronger than women (status is classically determined by physical toughness): so "naturally", women tend to rank at the bottom. People need something to feel superior to, so many men "look down" on women.

Status and hierarchy exist because humans are a social species (more so than all other animals). But this is a double-edged sword. Humans do cooperate more than all other species; but humans can also be more violent than all other animals (even sharks) due to (our enhanced) ego, pride and pecking order- the basis for sadistic practices like hazing. Among the Russian military and some US teen gangs, hazing is now so bad that new initiates are often beaten and pummeled in a frenzied orgy (sometimes to death). Far worse than a "pack of wild animals"- a phrase, which is actually

an insult to other animals! In the animal world, most clashes between would-be alpha males consist of more posturing and intimidation than actual violence. A classic image of male aggression must be of two clashing elk with antlers (or two bull elephants with tusks or two growling wolves) locked in non-lethal combat. Likewise, men have duels; but with weapons like swords and pistols, it's simply too easy to kill. Other animals may be more ferocious, but humans are the most violent species in the animal kingdom. With our greater sense of status and pride, it's actually HARDER for us to back down from a conflict. (E.g., warrior "codes of honor"- remnants of which persist in the Yakuza and Mafia notions of "honor".)

We're also unique among animals in that we lie, boast (hype) and deceive (practice hypocrisy) to boost our image and status. Most people want to at least appear "reputable", which is why most criminals (e.g., Nazi war criminals, wife-beaters) completely lie and deny their crimes.

One of the silliest pop-psychology theories of recent times was the idea that "low" self-esteem causes criminal behavior. But as critics quickly noted, gang members (with their "gangsta" attitude) are among the most arrogant, macho and aggressive men imaginable, who strut around like peacocks ("wannabe" alpha males).

Ego and pride may give people the drive to keep going in the face of adversity, but it's a delusion. "Rational thinking" and truth obviously haven't been selected for: all people are incredibly biased- hence human emotion, prejudice and superstition. Historically, people everywhere have wanted to believe in their superiority (e.g., Nazi Germany and Imperial Japan); not because of an objective judgment; but because of an innate drive to do so. (You feel a certain way, and then you twist facts and invent reasons to justify it: only constant failure keeps you grounded in reality.)

**Racial Differences**

The current theory is that all homo sapiens have a common ancestry, i.e., we once shared the same gene pool in Africa. However, subsequent geographic isolation has resulted in distinct racial traits. But because of that common ancestry, most traits are still equally distributed throughout humanity regardless of race. [Note: chimpanzees are supposed to have 98% of genes in common with homo sapiens; among humans even of different races, the difference is supposed to be on the order of 0.1% (out of about 100,000 genes).]

Some traits, though, are undeniably clustered, according to geographic location. However, any member of one race can still share numerous traits (blood type, hair/eye color, immunity, etc.) in common with someone of another race- traits they wouldn't necessarily share with a member of their own race. Evolutionary biologists also emphasize the commonality of behavior among different ethnicities- like male standards of female beauty. Is this due to our shared ancestry; or because the "ideal" female physique is universally advantageous and so is universally favored by natural selection? (No reason both reasons can't be true.)

As stated before, in "**The Bell Curve**", Charles Murray contended that whites are overall more intelligent than blacks due to differences in heredity. Fetal programming and upbringing probably account for all or most of the IQ differences between the races. To be fair to Murray, though, his contention hasn't been disproved yet. [I once read an article by an

anthropologist, who argued that all ethnicities should be equally intelligent overall because intelligence is universally favored by natural selection. That's true, but he forgets that genetic random-drift can't be taken for granted: random-drift CAN cause a shift in the mean of the probability distribution of a trait (like IQ) relative to another population.] However, if such a thing were ever proved to be true, then it's a case where the "truth" would do far more harm than good because no one would be treated as individuals then. Most whites as they have in the past would simply view ALL blacks as inferior even though Murray concedes it'd still be possible for the "smartest person" in the world to be black (albeit less probable).

A major divisive social issue in the US today is affirmative action based on race. IMO, affirmative action was absolutely essential to combat discrimination in the 1960s because of the sheer hatred and hostility most blacks faced from most whites. And let's admit that the reason the % of black poverty is so much higher than white poverty is because of hundreds of years of slavery and extreme racial discrimination; so AA was also viewed as compensation for that. 30+ years later (with a marked decline in blatant discrimination), the problem with affirmative action now is that it plays into racist beliefs of black inferiority. Blacks in elite colleges are regarded as "tokens" and not really deserving of admission even if they're top students. So affirmative action may actually be doing more harm than good now.

Some fear w/o A.A., black college enrollment would plummet- but that fear seems to reflect a view of black inferiority. Rather, I think govt. would do better instead by continuing to combat blatant discrimination, and by focusing on improving education and financial aid in low-income areas. President Clinton's welfare reform was a good first step since traditional welfare actually exacerbated the problem by "encouraging" single-mothers and fatherless homes. If blacks truly aren't "mentally inferior" (and there's no real scientific evidence of that); then eventually, ghetto black academic achievement would improve on its own as it has among middle-class blacks.

Consider the ex. of modern sports where blacks now dominate w/o the benefits of AA despite the history of racial discrimination in professional sports. Let's face it, the stereotype of black mental inferiority won't go away in the US until there's a sizeable population of highly-educated blacks. (And some more black Nobel prize winners and high-tech tycoons wouldn't hurt either.) Just like WWII and Japan's economic success in the 1980s improved the perception of Orientals in the US. [Before WWII, Orientals were considered so inferior to whites that the idea that a Japanese could even become a competent pilot was laughable- until Pearl Harbor.]

Such racial issues are a political minefield and there are still plenty of racists out there, who believe that behavior and intellect are racial traits. Many racists even deny our common ancestry. If they even believe in human evolution, then they believe in distinct- separate, but not equal- races with different origins; e.g., the Christian Identity belief that blacks, Jews and Orientals are subhuman "mud" races, the descendents of Cain.

**On Universal Crime and Hatred**

At the heart of racism is the belief that some ethnicities are more genetically predisposed towards a behavior than other groups. For ex., in the US, many people think crime has a "black face" because of heredity [not because slavery and racial discrimination led to disproportionately higher urban poverty and the breakdown of the family unit among blacks].

Let's face it, the urban poor in the US are primarily black and there are a lot of vicious, sadistic criminals in the ghetto who happen to be black. But I also know that violent crime is common in the 3rd world (the bulk of the world after all) and is perpetuated by people of all kinds of ethnicities. It's not about race or religion, but about being human.

Perhaps the most convincing (but cynical) argument for the "equality" of all races can be made based on the fact that we can all be equally cruel and violent to each other. No one seems to have a monopoly on that. In this century alone, we have WWI, the 1918 Armenian genocide, the 1937 Rape of Nanking, WWII, the Holocaust, 1940s Hindu/Muslim riots, the Korean War, Soviet Union purges, the Chinese Cultural Revolution, the Vietnam War, 1970s Cambodia Killing Fields, Nicaragua, Peru, 1994 Rwanda massacres, Bosnia, Sudan, Algeria, Sierra Leone, Kosovo, etc. The only generalization that can be made about violence and racism is that we're all capable of it. The point being that it's a homo sapien thing, not the providence of any particular ethnicity.

In the US, the "traditional" objects of hatred are blacks and Jews. In fact, anti-Semitism has been described as the "longest hatred"; according to the Old Testament, Jews were persecuted due to religious intolerance even in biblical times. Modern anti-Semitism, though, is based on the later split between Judaism and Christianity. The thing is- most anti-Semites in the US don't understand the history of Christianity nor do they want to (hence Christian Identity): the ironic fact is that Christianity was originally a sect of Judaism, not a separate religion; until the inevitable split due to ideological differences and to Christianity's growing popularity among non-Jews. Jesus Christ and all early Christians were Jews; in fact, one of the debates among early Christians (esp. Apostle Paul) was whether or not, non-Jews should even be converted to Christianity. Christians believe Jesus Christ is the Son of God, the messiah foretold in the Old Testament; Jews deny this and are still technically waiting for the messiah. This denial then of the divinity of Jesus (absolute anathema to Christian fundamentalists then and now) is the original basis for much of the modern hatred of Jews.

For many reasons, Christianity has had much more mass appeal than Judaism and has therefore spread much faster (like a good meme should) among non-Jews and Jews. (Many Jews converted and in fact modern Jews then are the descendents of those Jews who didn't convert to Christianity.) According to the New Testament, the Romans crucified Jesus Christ (although the Jewish crowd did egg it on); but Jews, not Italians, are demonized as "Christ killers"- because Rome later converted to Christianity. ("History is written by the winner".) What's even more absurd is that due to group identification, the past actions of a few would lead to the blanket hatred of so many, for an entire ethnicity.

In the Bible, Jews are described as the chosen people of God and Jesus is called the "king of Jews"; this is only natural since the Bible is a Hebrew work. In the US, though, many anti-Semites also purport to be Christians [the real Nazis (Germans) were pagans], which is hard to do since the Bible favors Jews so much. The neo-Nazi Christian Identity movement reconciles this contradiction by saying that modern Jews aren't really the "chosen people" described in the Bible; they claim that WASPs are the descendents of the lost-tribe of Israel and are therefore the "true" Jews (the "heroes of the Bible") while modern Jews are "fakes"- "the spawn of Satan".

This is absurd- an almost psychotic denial of history! Not only have members of Christian Identity adopted Christianity, the offspring of Judaism, but they've usurped the very ethnic identity of Jews! [Some white supremacists recognize this



contradiction, which is why "Odinism", a Norse-inspired pagan religion, is gaining in popularity in the US hate movement.] Even more bizarre is their predilection for the "fire and brimstone" of the Old Testament, the basis of Judaism. But then again, these are the same people who believe the Holocaust is a hoax perpetuated by Jews (for sympathy). Neo-Nazis HAVE to deny the Holocaust, though, because if the Jews really were that vulnerable, then how could Jews secretly control the media, the banks and the US government as they assert. But who says that people are interested in the truth? Certainly, not natural selection.

The hatred of Jews is due to several factors: 1) All minorities face intolerance due to xenophobia (we're very territorial-like dogs, who bark at passing strangers): simply being a minority (different) strongly annoys the majority. Minorities stick out and can easily become objects of hatred (scapegoats). Religious differences, in particular, are deeply offensive to true believers: kill (or convert) all non-believers! All people are like this it seems; minorities who are persecuted (victims) are just as capable of doing the persecution. I've heard the naive argument that blacks and Jews aren't capable of racism (because they've so often been the victims of it); but as I well know from (humiliating) personal experience, people who are black or Jewish are just as capable of being racist as anyone else: *Victim can become oppressor with surprising ease.*

2) Tradition: hatred of Jews is almost traditional like celebrating a holiday. And this is the primary reason why anti-Semitism persists. People pick up prejudice and stereotypes as easily as weathervanes are swayed by the wind. Propaganda, even if all lies, spreads.

3) Prejudice becomes hatred when it's based on a blind, blanket stereotype conjoined with a degree of paranoia and the need for a scapegoat. Too often this borders on insane delusion. Prejudice leads to an insanity, a self-perpetuating lie. During the Black Plague, for ex., Jews were blamed for the plague, and were driven into Eastern Europe. Dogs and cats were also blamed and killed, which was the completely wrong thing to do, since they reduced the rat population, the real disease vector.

Again, truth has nothing to do with what people believe. For ex., Josef Goebbel's Nazi propaganda proclaimed that Jews could be lurking anywhere in society, ready to prey on hardworking Germans! Even your seemingly innocent neighbors could be Jewish or part-Jewish unbeknownst to you! It's almost a psychotic paranoia of the "invisible enemy"- the insane idea that Jews around the world all know each other and are working together on some vast nefarious conspiracy to secretly control the world and ruin it for the rest of us; but this is a major tenet of the neo-Nazi movement. It's a delusion like egomania or paranoia. Worse, racists tend to become obsessive-compulsive about their object of hatred: it's an all-consuming obsession. But I guess it's easier than accepting how fundamentally unfair and precarious life really is- I suppose that some Nazis even blame Jews for earthquakes and tornadoes! But despite all of our technology, we're at the mercy of the universe and we always will be. Life isn't fair, but for those who can't deal with that, and who need a scapegoat, Jews are the "bogeymen".

Hate groups are most prevalent during economic hardship, because in theory, that's when a scapegoat is most needed; but even during good times, hatred will endure because of ideological obsession. For ex., I've read of two California millionaires who made their fortunes in the computer industry, who began to donate money in 1998 to hate groups in

Idaho.

During the 1980s, when Japan's economy was at its peak, some described the Japanese as the "new Jews" (of course, most Japanese people had no influence and weren't rich, so this was a completely unfair stereotype), because "they had all of the money and controlled the banks". Johnny Carson on his "Tonight Show" monologues, in particular, seemed very concerned about this. However, the Japanese never became hated as much as Jews because of the lack of tradition and because, of course, Orientals physically can't fit the role of the invisible, hidden enemy. But I've seen people when they meet a white person they don't like wonder if that person is Jewish or part-Jewish; or if the bank forecloses their mortgage, they think that a Jew did it; or in Nazi Germany, having even a distant Jewish ancestor meant being sent to a concentration camp.

Hopefully, one would like to think there are limits to prejudice. For ex., if someone took Randy Newman's 1977 hit song, "**Short People**", to the extreme and declared that "short people are the spawn of Satan, and if something goes wrong, it's a short person's fault; and they all know each other and have a world-wide conspiracy against the rest of us" (which is what neo-Nazis say about Jews), no one would believe that about short people, right? :-)

Prejudice can become a blind, blanket, self-perpetuating lie (an insidious cancer of the mind); and yet, it's obviously a major algorithm in the human mind. Ideally, everyone would be treated as individuals w/o the baggage of stereotype; by "**Invisible Man**" (1952), what Ralph Ellison meant is that most whites never really saw him, they only saw a stereotype. The only criteria for being black should be having black skin; but that's not how the world works.

Look at the perception of the Chinese: In some Asian countries like Indonesia, the Chinese minority are viewed as the "Jews of Asia" because the rich and influential in these countries tend to be ethnic Chinese (minorities stick out). And yet, the vast majority of Chinese- hundreds of millions- in rural China are dirt-poor, illiterate peasants. Or the old stereotype of southern blacks was of watermelon-eating simpletons. Hell, what's wrong with watermelon? Can anyone think of any region of the world where people don't have a distinctive diet- no more than anyone else. One might as well proclaim with derision that all white Americans eat hamburgers; but the typical white American doesn't think about that; the difference again is what minorities do stick out. Jews have been accused of running Hollywood (and controlling the media) because a relatively high number (but not a majority) of studio owners happen to be Jewish; but again, that's because minorities stick out. Most of the actors in Hollywood are white, but no one would stereotype all whites as being "actors" based on what goes on in Hollywood- it just wouldn't occur to anyone.

In the US, Jews have been hated more than blacks because Jews have been scapegoats. Blacks, though, have suffered more discrimination and have been despised as "inferior". [One question is why people of darker skin color are universally discriminated against in Africa and India.] As stated before, this stems from human status and pecking order. People see a negative in a few individuals, who belong to another group, and they automatically associate it with their ethnicity even if it has nothing to do with that. This is simple group association as the psychologists say. Another cynical argument for the equality of people is that we all do this. For ex., the OJ Simpson trial was another blow to the image of black men in the US; if OJ was white, though, it wouldn't have damaged the image of white men. Some whites despise all Orientals because of Japanese atrocities in WWII, but they don't despise Germans for the same kinds of atrocities.

Those who try to fight stereotypes would do better to simply acknowledge that there are plenty of greedy, conniving, parsimonious people out there who happen to be Jewish; or there are lots of vicious street thugs, who happen to be black; or there are people out there who fit whatever stereotype. But it's like that for every ethnicity. I don't think one group is worse than any other (no more than anyone else).

Of course, prejudice can work in a "positive" way too: for ex., Orientals have been called the "model minority" in the US. J. Philippe Rushton, author of the controversial **"Race, Evolution and Behavior"(1995)** , even believes Orientals are more intelligent than whites and blacks. This is a bizarre stereotype when one considers the bulk of people in Asia where corruption, racism, discrimination, violence, crime and extreme poverty are the norm. When you have over 1.5 billion people, certainly there will be millions of smart, hardworking and successful people. What people see in the US are often the "cream of the crop" (brain drain) of Asia [better-educated and highly motivated with close-knit families and both parents exerting tremendous pressure to succeed: obviously, kids are far more likely to be studious and hard-working- out of guilt- when they see both of their parents, making enormous sacrifices to support them- something, you don't see with families on welfare]: hence the stereotype. But now that image is being chipped away as the number of Asian criminal gangs increase in the US; hey, a conflicting (reality check) image is emerging here! A similar "positive" stereotype is emerging of South Asians, because of the relatively large numbers of Indians in the US IT industry. Let's not forget, though, that the bulk of South Asians- hundreds of millions of people- are dirt-poor, and illiterate.

Black movie director, Spike Lee, once asked- why poor blacks in the US don't start their own family businesses like Asian immigrants. Well, a partial answer is that such immigrants aren't typical. After all, in Asia, most Asians live in squalor and don't own their own businesses; another major factor, of course, is the breakdown of the black family in the US.

Minorities in any country should be viewed as individuals- treated w/o blanket ethnic prejudice. Just like white Americans view each other as individuals or people in China or India treat each other like individuals- not withstanding that people in these countries have stereotypes of ethnic sub-groups as well. Whites make a clear distinction between American, British, French, German, Polish, nationalities etc. (with their own unique stereotypes); but most Americans make no distinction between Orientals (Japanese, Chinese, Koreans, Vietnamese, etc.)- all they see is "yellow skin". But let's not forget that minorities are equally capable of harboring stereotypes of themselves. For ex., as a US-born Oriental, I think "Asian-Americans" actually have a weird perception- a stereotype- of their fellow Orientals that people in Asia wouldn't have where Orientals are the majority; or am I unfairly stereotyping Asian-Americans? :-)

Some have tried to make an adaptationist explanation for prejudice and racism. Like if people who are closely related are supposed to treat each other better due to kin-selection, then they should be more hostile towards foreigners, since they would, of course, share fewer genes with them. And I suppose xenophobia-suspicion and distrust of strangers- does make adaptationist sense. Also, clearly much of racial prejudice- like feelings of superiority- are derived from the innate need for status and "pecking order". But I think the primary reason for extreme prejudice is happenstance- the human brain's tendency to generalize based on group association (and a low sampling rate). Snap judgments are favored over accuracy, which take too much time; and obviously, some snap stereotypes are very useful- like assuming that touching ALL fire is dangerous (after having been burned once). Recent studies imply the human brain is hardwired to always look

for patterns even when the process is truly random (like the stock market); other animals like rats and pigeons are actually better at responding to random events. Given the fact that people of different ethnicities had little contact with each other until recent centuries, racism is unlikely to be a direct adaptation; it's just another ex. that evolution has no purpose.

Given human nature, "teaching tolerance" (multi-culturalism) isn't the answer- xenophobia just runs too deep in the human psyche. And personally, I think multiculturalism turns a blind eye to other cultures' faults. I disagree with Afro-centric academicians who embrace and condone the violent, hip-hop, gangsta-rap movement as part of "African American" culture. IMO, it shouldn't be considered racist to be wary of young men, wearing hip-hop, gangsta clothes; and it shouldn't be racist to be wary in a bad neighborhood. On the other hand, it is racist to be afraid of a man wearing a suit just because he's black. The only real, long-term cure I think is genetic integration, and social-economic integration in the short-term. And more so than in any other country, this is happening slowly in the US...

One can speculate on all kinds of adaptationist reasons for racism or war or whatever. It's probably pointless to try to explain it. Maybe, the only practical thing to understand about atrocity is that it happens whenever one group has overwhelming absolute power over another. War is only hell when both sides are roughly matched; otherwise, it becomes an orgy to the conqueror and hell on earth for the conquered. It may be pointless to try to explain this. Why not just accept it as a law of nature? (Just as we have a law describing gravity's effects without even really understanding what causes gravity.)

The ugly truth is that the vast majority of people in the world aren't "nice" people; most of the people, who consider themselves to be "good" people aren't. Hell, most of us are basically selfish, lying, conniving and cutthroat- all wannabe alpha males. Even worse, the only reason we can get all cynical, bitter and indignant about this isn't because of our own conduct, but because we perceive others to be at fault, never ourselves. Badcock quotes Nietzsche as saying, "*one's neighbor praises selflessness because he derives advantage from it*". All of us are incredibly biased, and only a naive fool would believe objective truth is favored by natural selection. We all know people, who'll never admit they're in the wrong: to them, what they do or want is always "right", and other people are always "wrong". "Practicing what you preach"- objective self-awareness is near-impossible because of internal bias. In truth, none of us really care about objective justice as what's good for us; or if we do, only grudgingly.

People in the US can look at Bosnia, Kosovo, Rwanda, Algeria, Sudan, Sierra Leone, Indonesia, etc.- violence which makes the late 1990s spate of US school shootings (e.g., Columbine, Co) seem like, well, a "school yard" fight, and get all shocked at the violence; but that's a pose in a way. People in the US are just as capable of that kind of violence. Those who don't think they are either really aren't or are more likely just "posing". (By definition, you can't be consciously aware of what's latent inside of you.) In fact, it's theorized that the subconscious may be an adaptation, which allows people to act "sincere", while harboring ulterior motives by "preventing their right hand from knowing what their left hand is doing" (self-deception). Also, to be fair, violence is primarily a male thing, so almost 50% of the human race is exempted from this tirade. People, who oppose the death penalty, because they "couldn't hurt a fly", are just posing; if "push really came to shove", they'd probably be shoving as hard as anyone else. How many men have committed horrific war crimes- acts of grotesque brutality- and then returned to civilian life, and simply shrugged them off as if another

person had committed them?

Knowing this then is the best argument for our democratic republic. Democracy isn't some gleaming noble institution, but a cynical work of pragmatism based on the notion that no one can be really trusted. Our republican form of government is in fact the most cynical system of government in the world. Royalty may be romanticized today in the US, but the US Constitution is based on the notion that no one individual can really be trusted; so instead, we have divided government and a system of checks and balances (balance of power) meant to prevent any institution of government from obtaining enough power to abuse it. Just like the real purpose of the Electoral College is to protect the electoral process from the stupidity of the masses; remember that Adolph Hitler was actually elected into power. That too may be the secret of how to achieve world peace: not with "love", but by maintaining a balance of power- STALEMATE- everywhere. People used to have wars at the "drop of a hat" for "honor and glory" on the battlefield, but not anymore in the Nuclear Age. And that's because of fear of Mutual Assured Destruction(MAD).

**Conclusion: The Meaning of Life (and Everything Else)**

The primary focus of this essay has been on adaptationism and the theory of evolution, which, of course, challenges fundamental religious beliefs. In fact, perhaps as a substitute for religion, some have adopted a distortion of Darwinism to explain the purpose of life: one depiction of human existence is that we're actually survival machines programmed to perpetuate our genes, according to "selfish gene" pursuits. From this POV, the purpose of life is survival for the sake of continued reproduction- each life then is a carrier, a brief repository of gene pool elements.

Because of this belief, some Darwinists seek to find adaptationist explanations for all aspects of the human physique and behavior. They do so because they believe that all traits must make rational, "selfish gene" sense somehow because that's their whole point; because natural selection wouldn't allow it otherwise. Some people even have a bizarre faith in evolution ("life will find a way") as if life can always be counted on to devise a way somehow (even miraculously) to survive. The SF writer, Robert A. Heinlein, a Social Darwinist, once wrote, "there will always be survivors"; he meant only "survival of the fittest", of course, with the implication that the "non-fit" don't deserve to live. Nazism (blatant power fantasy) was an outgrowth of Social Darwinism with the implication that "natural order" dictates that human society should be patterned on this; that the "unfit", "weak and inferior" should be actively "weeded" out by society. However, it's a fallacy to infer morality from natural law. After all, the law of gravity doesn't mean human society should strive to promote falling down.

This essay has been another attempt to dispel these simplistic notions. Natural selection alone doesn't explain all aspects of ourselves: statistics alone prevent that as previously explained. Adaptationism is a major factor, of course, but not all traits are the result of direct adaptations- and this is increasingly true with greater complexity. Where does one draw the line between direct adaptation, random drift and serendipity (unintended consequences)?

Again, it can't be emphasized enough that technically, genes have no purpose- nor are they "trying" to survive or enhance their reproductive success or do anything for that matter. It's just that the gene pool will obviously TEND to consist of genes that have happened to have done so- by default; i.e., the other genes that happened not to have done

so will obviously not be around in as great numbers, if at all. Life will continue to perpetuate in the ways that it's possible to do so within the laws of nature. The so-called ingenious ways that species "devised" to survive were often the only feasible options left (no miracle was involved)- by default- given the current environment and the previous genetic lineage and the preexistence of requisite traits. But remember, most species- perhaps all species- go extinct eventually.

Evolution is a constant "work in progress": just because a particular species has existed for millions of years doesn't mean that a kind of perfection or optimization has been achieved. Sometimes, a species can exist for millennia IN SPITE of "bad" adaptations. And past reproductive success doesn't predict future success- just look at the dinosaurs. So there's no preordained destiny to evolution. Evolutionary biology provides a context for understanding HOW current behavior modes may've developed and why they persist. However, it doesn't directly explain WHY we are as we are. Saying that men seek power and status for sex and are violent to fight over women; and that women seek high status males; or that genes seek to maximize reproductive fitness is a useful model (stereotype)- a teleological explanation- but it's certainly not the "meaning of life".

The primary focus of natural selection has always been on the "winners" (life); but I think evolution can be extended to encompass non-life as well. In semiconductor physics, electrical current can be defined either as negative charge moving in one direction or as positive charge moving in the opposite direction. Likewise, instead of saying that evolution is all about reproductive fitness, one could just as well say it's about death and extinction- the other side of the coin. After all, death is the most likely outcome of natural selection.

When you get down to it, the only fundamental generalization that makes sense about both life and nonlife is that both aren't really about survival or reproductive fitness or progress or anything for that matter, but ***mere existence***: *life's purpose then isn't to survive- it's exactly the same as the purpose of everything else- to simply exist- as some form of matter and/or energy*. Existence for the sake of existence. From this POV, rather than being "masters of the world", we're actually on "equal" footing with everything else in this universe. (I.e., there's no such thing as "inferior" or "superior".) Human existence has no more cosmic significance than, well, anything else. In that sense, everything's the same, and nothing's really "meant to be". This POV also automatically incorporates adaptationism's limitations. For ex., this essay has attempted to explain behavior that doesn't make gene-centric sense (like parents who murder their own children) as ex.s of adaptationism's statistical limitations or as subtle extreme-case adaptations. But if this POV is taken, then no other explanation is required- it's already taken into account; so it kind of makes "perfect sense" in a perverse sort of way. One doesn't have to get bogged down, devising adaptationist scenarios for everything.

One doesn't have to puzzle why a father may kill his estranged wife and his children before killing himself by resorting to agonized "just-so" stories. Nor does anyone have to devise adaptationist reasons for or find meaning in a million other oddities like abortion, adoption, albinism, alcoholism, art, asthma, autism, auto racing, bad breath, baldness, bestiality, bigotry, birth control, boredom, bowling, boxing, bungee-cord jumping, cancer, child molesters, cricket, cults, curiosity, dancing, diabetes, dictatorships, domestic abuse, Down's syndrome, dowry, drug addiction, eyebrows, finger snapping, gambling, genius, genocide, golf, headaches, honor killings, house plants, humor, hymen, hype, hypnosis, hypocrisy, laughter, literature, love, lying, manic-depressive disorder, mathematics, money, mountain climbing, Munchausens, murder, music, narcolepsy, Nazism, necrophilia, obsessive-compulsive disorder, painting, paranoia, pets, pornography,

profanity, purdah, racism, rape, religion, road rage, roller-coasters, sadism, serial killers, singing, sleep, smiling, snoring, sperm banks, stuttering, suicide, TV, Tourette's Syndrome, xenophobia, war, wife swapping, writing, yawning, whatever.

And one doesn't have to wonder why natural disasters that kill thousands of innocents happen and "why bad things happen to good people". If you ask why, well, WHY NOT? Anything goes. The joke is on us all then. I'm well aware that this is a form of nihilism, but maybe its time has come. Really, why should any of us worry so much about the seven or eight decades of life we'll have at most when an eternity of oblivion is our one true destiny? If there's no afterlife, and death is followed by eternal oblivion, then what's so bad about that? Some say only the "weak" commit suicide, but maybe, the truly smart people are the ones who just kill themselves and get it over with. Why should death be feared or avoided? (Well, obviously, an aversion to death is an adaptation.) In fact, one could argue suicide is a good thing. It may be bad for reproductive fitness and for society, but why should people give a damn about that? Why should people struggle and suffer- when they can have quiet oblivion instead? I'm not advocating this, but it is a "valid" POV. In a way, nihilism represents the ultimate freedom...

I once saw a book in a bookstore that describes evolution as an entropic (increasing disorder) process. The general concept of entropy has come to be synonymous with the general decline of things, so this makes intuitive sense. From an energy POV, our greatest energy potential is as embryos: living is an inevitable progression towards death (and in the process, we consume so much). In fact, all of human progress and the ever increasing amount of energy our high-tech civilization consumes might be seen as promoting entropy. Perhaps all of existence is simply an expression of entropy and we're the means (agents of entropy) by which the universe expends its energy; so this may be an equivalent view.

This POV also explains what religion can't: the basic fundamental unfairness of life and why there's no "justice" in the universe. Why no one gets what they "deserve"- things just happen to both good and bad people alike. Religion flounders over stuff like that. Religious people may cite the book of "Job", but even so, their basic belief is that if they pray and they're god-fearing people, then they'll be protected and rewarded by God. It's simply superstition and even when bad things happen anyway, they fall back on "god works in mysterious ways" or that the "afterlife will be better". I'm sure it's occurred to them that they're just kidding themselves; but perhaps it's easier to believe that than the nihilist alternative.

And who can really blame them? It is a bleak point of view. Irregardless, we all want to believe that life should be fair; or that we have a destiny of some sort or that there should be some guarantees. Who can really embrace the notion that life isn't quite a random accident, but that for all practical purposes, it might as well have been? Who wants to believe that all of us can die at any time and that anything (esp. all of the horrific possibilities out there) can happen? Who wants to believe that at any time, a new plague or a meteorite from outer space could wipe out humanity; and that it could happen as meaninglessly as an anthill being stepped on by someone walking aimlessly down a road. If god exists, then it means we have some kind of protection. If not, then anything can happen. Is it any wonder then that people fall back on religion; or belief in UFOs or New Age spiritualism or celebrity worship or television shows or gambling or alcohol or drugs or Nazism or all of the other hundred forms of escapism out there? Atheists may feel contempt for religious people; but they fall back on something too.

Pope John Paul II recently adopted the revisionist view of evolution as one of the "mysterious ways" by which god works; i.e., the Catholic Church now accepts natural selection in principle because of the overwhelming scientific evidence just as they eventually accepted Galileo's theories. But they still assert god's subtle, divine guidance behind it all (a purpose in conferred "unto" evolution by god). Avowed atheists like Richard Dawkins, though, contend that we can be explained without resorting to divine guidance: blind, stumbling natural selection alone can account for us. Well, Dawkins is right, but technically, the theory of evolution doesn't disprove the existence of god; although at least according to Dawkins, it does show that divine guidance is unnecessary. Irregardless, creationists deny all of evolutionary theory- not out of intellectual stupidity, but because they simply don't want to believe.

But the real threat to religion isn't in the idea that humans may be descended from apes- that's no big deal. The real threat to religion is from the more recent theory of evolutionary psychology. I mean, an adaptationist explanation for eyelids as protection for the eyes is one thing; but accepting that human nature and morality are adaptations too threatens the very foundation of religion. One can't read the Bible or the Koran with all of its bizarre rules (cultural adaptations) on sexual morality, and not find them to be almost a crude parody of evolutionary psychology. Adaptationist theory, esp. on sexual morality or TIT FOR TAT, I think, clearly implies that our concepts of good and evil are arbitrary- they're not universal absolutes handed down to us by some father-figure god. Consider how much of our morality revolves around sex. And yet, most of that sexual morality is based on selfish-gene adaptations "meant" to promote population growth (for civilization); and to guarantee male paternity of children in order to promote two-parent child rearing. Where's the absolute good and evil in all of that? Where's the absolute good and evil in TIT FOR TAT? Evolutionary psychology then makes a mockery of human morality and religion. As far as I'm concerned, it's the fatal deathblow to religion...it "torpedoes" it. (Not that I think that religious belief is necessarily in decline: consider a recent survey that most Americans still believe in angels.)

A recent essay by Ronald Bailey discusses how some conservative intellectuals like Robert Bork are now attacking evolutionary theory possibly not because they dispute its scientific truth (in private); but because they believe that strong religious belief is necessary for society's well-being: "no society can long endure that thinks its lives are meaningless". Wright acknowledges this problem too in "**The Moral Animal**" and then goes on as a proponent of secular humanism (utilitarianism) instead- the idea of maximizing happiness among as many people as possible (like in Aldous Huxley's "**Brave New World**" (1932)? :-); not because of divine ordinance, but because we should all want that. This is something, of course, most people would agree to; but Wright also acknowledges that there are no absolute reasons one can give to do so- people must choose to do so. I mean, if some schizoid nihilist out there wants to kill everyone else; or some neo-Nazi/Christian Identity racists want to start a "racial holy war" and exterminate all non-whites; well, what absolute rationale against that can anyone really offer? Who says that the objective truth must be believed or that people have to act "rationally"? Certainly, not natural selection, which has allowed all kinds of delusions to persist (with "nothing bad will ever happen to me" being the most common- because otherwise, there'd be no new ventures! :-) I mean, existence really is all arbitrary and deranged: our lives and everything else that goes on in this universe are just the universe's way of killing time, so anything goes.

As asserted by Isaac Asimov, I think the Bible is simply Hebrew mythology. The only difference between it and Greek mythology is that the former is still taken seriously. In fact, the Old Testament and the Koran at times even seem like grotesque parodies of evolutionary psychology to me (e.g., Numbers 31). As far as I'm concerned, if god exists, then it'd



be like Olaf Stapledon's "**Star Maker**" (1937)- incredibly remote and totally indifferent (and irrelevant) to our existence. It wouldn't care about us as a species let alone as individuals. Technically then, I'm an agnostic- but I've felt like an atheist sometimes out of cynicism. There was a time when I blamed religion, particularly religious fundamentalism, for a lot of the intolerance and violence in the world (like in the Middle East). And, of course, I saw that a lot of the most religious people are nothing but self-righteous, sanctimonious hypocrites. And I used to naively think that a refutation of religion would make humanity more rational and less violent. But now I understand that religion is just a human tool and it shouldn't be held responsible for its negatives (just like a knife shouldn't be blamed, if it's used to commit a murder). Overall, I now actually think religion inspires people to act better, particularly in charity work. Religion does inspire violence, but so does everything else it seems (like soccer matches for British fans!) :-)

Besides, morality becomes relative and arbitrary without the belief in (and fear of) an absolute Good/Evil dictated to us by an Angry Vengeful God; with relative morality instead, "anything goes". Religion may be a lie, but perhaps it's an essential lie. Religion has been described as the "opiate of the masses" (something to keep people in line with threats of hellfire and eternal damnation); but it's probably an essential cultural adaptation to boot. Religious zealots cite the Bible or the Koran with fervor because they believe it to be the word of God- the rest of us know it's just human fiction (fantasy). But obviously, religious rules like the Ten Commandments, which help keep the masses in line, lack conviction- few will take them seriously- unless one really believes them to have divine origin.

Bailey's essay talks about "different kinds of truth"- how some intellectuals believe that only a few (i.e., the "intellectual elite") can "handle the truth" about religion. Darwin himself was an atheist by the end of his life, but he also thought religion held the social order together for the masses. Some sociologists think that as religious belief in the US has declined, a kind of aimless malaise brought on by moral relativism, and cynicism threatens to take over society. That increasingly, nothing is taken seriously anymore- *too much self-awareness is a bad thing?*

It IS harder to take life seriously at all without religion. Likewise, it's arguable that combating social ills like drug addiction, prostitution, and the spread of AIDS (by encouraging monogamy), say, might be easier by making it a moral, religious issue rather than just a public-health concern (religious fervor provides more emotional incentive). For ex., in a famous series of debates in 1858 with Senator Stephan Douglas, Abraham Lincoln opposed the spread of slavery in the US simply because it was "wrong"; instead of deferring to the "pragmatic" popular sovereignty favored by Douglas. But simple "right and wrong" are the first things to go with moral relativism...

So maybe then ("for the good of society"), these conservatives are right? Perhaps then, Islam, the fastest growing religion, has greater "fitness" than Darwinism, and will win out in the end over secular humanism, because it provides more potent motivation for the masses. Or perhaps Islamic nations will face the same decline in religious belief as they modernize. (Or perhaps instead of religion, what we *really* need are new frontiers "to conquer"- like outer space? According to some science fiction writers, the 20th century with all of its technical marvels has also seen the end of exploration- the end of adventure and escape for the masses.)

This essay has been written by a guy who's had a fairly easy and sheltered life. I've grown up a member of the elite, upper-middle suburban class in the US. I've never known real hunger or suffering or violence or crime. Intellectually, I'm

aware that most of human history is about suffering whether it be WWI, WWII, the Korean War, the Vietnam War; or the 1918 influenza pandemic in just this century alone. Intellectually, I know the world doesn't make sense; but I don't feel that way. I expect- almost feel it's my right- to have a long, safe and prosperous life. But I feel that way because I'm a naive, delusional, smug, yuppie fool.

Because the real world is one of constant violence and uncertainty. It's a world where other men will kill you for just looking at them funny or bumping into them by accident; or run you down for the fun of it; or beat the \*blank\* out of you for being different. It's a world where in truth- hate, injustice, crime, violence and suffering are the NORM- not the exception. It's a world where there's probably no real difference in motive between street gang violence and militarized war between nations. That's the way it is for the bulk of humanity today in the 3rd World. People who believe "violence never solves anything" are naive, foolish simpletons. Violence is and has been the end-all of most human affairs- "might does make right".

The real challenge of the 21st century won't be in building the infrastructure of the Information Superhighway like some idiot technocrats would have us believe, but in finding enough food and drinking water for everyone; dealing with: environmental degradation (e.g., global warming), unemployment, AIDS (and other new plagues), the proliferation of weapons of mass destruction; and finding an alternative energy source to oil. What's driving these problems is human overpopulation- I guess we're too "fit" for our own good. Realistically, the future is anything but bright. Today, a small minority of people in the modern world have achieved a kind of paradise, but that may be a blip in history. So this essay has just been a long-winded way of saying I really don't know what to believe in anymore.

**References and Links**

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#### **Links of Interest:**

[Books: Amazon.com](#)

[The SF Site](#)

[Fantastic Fiction: a SF directory](#)

[World of Richard Dawkins](#)

[Robert Wright's Non-zero Site](#)

[dmoz.org Evolutionary Psychology links](#)

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