

Introduction to Evolutionary Psychology

1. Welcome to this first of four video lectures on Evolutionary Psychology. As we saw in the Enlightenment and Romanticism, modern print literacy splits thought into a dichotomy between objective science that seeks for causes to *explain* human behavior and a subjective “humanism” that seeks to *understand* human behavior as the free expression of interior meaning and goals.
2. As a scientific approach evolutionary psychology (1) adopts the third-person orientation of the detached scientific observer. It studies the human species in the same way as evolutionary biologists study any other biological species. (2) It focuses its attention on species wide, universal patterns of behavior found across all human cultures throughout human history. (3) It explains such behavior as the product (4) of genes which trigger the (5) production ultimately of hormones and neurotransmitters that in turn (6) cause human behavior
3. Evolutionary Psychology frames its explanations in the context of the “ancestral environment” within which the human species evolved-- that of small hunter-gatherer bands on the African savannah. While hominid species date back several million years, homo sapiens left the African savannah only 100,000 years ago, and only evolved out of a hunter-gatherer lifestyle 12,000 years ago. (1) Now 12,000 years may seem like a long time, but it is hardly time enough for biological evolution to work over. Thus evolutionary psychology will seek to explain universal characteristics of human behavior by exploring how such behaviors, desires and feelings gave hunter gatherers a selective advantage.
4. That is, evolutionary psychologists will explain the evolution of these instinctual traits in terms of how (1) a genetic mutation might have (2) triggered behavior that improved the odds of propagating the genes of their carriers to subsequent generations. (3) To the extent that those with the mutated gene enabled more of their offspring to live long enough to reproduce offspring of their own etc, (4) a random genetic mutation would spread throughout the species until it became the new normal.
5. This approach to evolutionary theory is called “Neo-Darwinian”. Neo-Darwinism shifts the object of study from the (1) organism to the (2) gene. Darwin sought to explain evolution in terms of the (3) survival of the fittest. Evolutionary psychology explains

evolution in terms of (4) optimizing the propagation and spread of genes. For example when a human becomes too old to reproduce, their continued existence may actually be a burden on their offspring. Thus, what evolution optimizes is not what makes individuals survive the longest, but what makes their genes spread the most through their species, and their species to spread through their ecosystem. (5) Not survival of the fittest, but optimizing genetic propagation is the coin of the realm.

6. Now a genetical mutation is usually a genetic defect. But occasionally (1) a mutation does happen to confer an evolutionary advantage. Advantages can be behavior that leads to:
 - a. (2) A greater likelihood of living long enough to reproduce
 - b. (3) Being more successful in attracting mates
 - c. (4) Producing more and healthier offspring that are more likely to live long enough to reproduce and/or have greater success in finding mates and so producing more offspring of their own.
7. In assessing the plausibility of evolutionary psychology, it is important to keep in mind (1) that evolutionary psychologists do not argue that optimizing genetic propagation is *what* humans *think* when they act. Thoughts may motivate us and emotions do move us, but how humans as a species tend to think and feel is itself a product of our species' genetic programming.
 - a. (2) A related issue is the relationship between what evolutionary biology identifies as our human nature and what we cherish as our moral ideals and what we hold sacred. Identifying a behavior as "natural" does not mean it is ethical.
(3) Human nature has evolved to optimize genetic propagation, not to optimize fairness, or respect, or even happiness for the individual. The result is that what we may feel or instinctively think at first glance is the right thing to do, may not be what we judge to be the moral once we step back and critically reflect over it.
(4) In fact far from providing us with a moral code, evolutionary psychology can explain why we are often tempted to violate our moral code. It can flag when we are apt to be tempted to do the wrong thing; as well as when and under what circumstances we are likely to give into temptation. When we are apt to

rationalize or excuse our behavior. Or when and where we are apt to be morally blind, that is, when we are apt to act immorally with a clear conscience.

- b. (5) Further yet evolutionary psychology can explain why and under what circumstances we are prone to make mistakes in our thinking. For human reasoning is just another evolved trait, designed through evolution to optimize genetic propagation. Our normal patterns of thought and belief are not ultimately oriented to truth, or even to pragmatic effectiveness but to success in propagating offspring.
 - i. (6) This is why science is hard and takes discipline. It is not our natural way of thinking. (what scientists call “common sense” or “folk knowledge” in contrast to scientific knowledge)
 - ii. (7) Indeed evolution is like Descartes’ demon who systematically distorts our thinking from scientific truth to beliefs that best promotes the spread of our genes. As we saw with Socrates and the axial revolution, (8) to think truthfully is to think critically; it is to question instinctive and mimetic patterns of thought.
 - iii. (9) in effect we do live in a matrix or cave, one created by evolution.
- 8. A good example of such thought distortions can be seen in phobias. What do humans find instinctively frightening, things we do not need to learn to be afraid of? Evolutionary psychology will seek to explain these instinctive fears and desires by looking at the role they play in our ancestral hunter-gatherer existence on the African savannah.
 - a. (1) Snakes, (2) spiders, (3) mice. Especially among women. Why? Because these are threats to children in high grass of the African Savannah. Their bites are either poisonous or apt to carry disease. Kids who have an instinctive fear of snakes or spiders are more likely to survive to reproduce than kids whose instinct is to play with them. So too mothers who remain vigilant and quickly pick up and pull away their kids at the sight of a snake or a spider are more likely to have their kid survive to reproduce. On the other hand squirrels do not live in the African savannah. (4) Rats are scary, (5) squirrels are cute, though both are rodents, equally likely to carry disease.

- b. Or electric wall sockets. (6) We have not lived with electric lights long enough for humans to have evolved an instinctive fear of wall sockets. We need to baby-proof electric wall sockets.
- 9. On the other hand, what do humans find instinctively pleasing, things we do not need to learn to enjoy? For example, why do we instinctively crave (1) fat and (2) sugar? Fat is rare in a hunter-gatherer's diet. However we need it to store energy. Those who opportunistically ate as much fat as they could whenever it was available would be more likely to survive lean times. Sugar on the other hand is a source of instant energy. Also, in nature sweet fruits and berries are rarely poisonous. Sour and bitter berries however are more likely to be. Thus humans evolved to like sweet foods and hate sour and bitter foods.
- 10. Now today these cravings are no longer adaptive. But since people like fat and sweet, our food technology has evolved to produce lots of it, far more than is healthy for us. But on the African savannah, we would never find enough sweet fruit and berries to eat to become fat.
- 11. Or think landscapes. Why do we find open vistas serene? It's safe, we can see both predator and potential prey from a distance, in time to respond accordingly. So we make parks that signal safety and opportunity: short grasslands with scattered trees, some water, like a pond or a brook, and lots of flowers.
 - a. Why water? Before we knew how to make vessels to carry water, while we were hunters and gatherers, we needed to have a source of drinkable water nearby, particularly when we would stop and relax. Plants and animals need water too. A water source can also signal a food source.
 - b. (1) But why the attraction to flowers? They signal future food, vegetables, berries, fruit. They also signal nearby honey, a source of dense, concentrated sugar.
- 12. Evolutionary biology also uses the optimization of genetic propagation to explain the gendered division of labor in the human species. Why is it that males do the hunting and females the gathering, the cooking and raising of offspring?
 - a. (1) First, humans are born prematurely, while effectively still fetuses. To have a big brain, humans have to be born while their head is still small enough, and supple enough to be born without women being too wide. But that means human

babies are born helpless and vulnerable. They cannot feed themselves, they cannot even move themselves. It will take months before a baby can eat anything but her mother's milk. And babies will continue to require near constant attention and supervision for years. Thus women raise kids.

13. And "women's work" will be work that can be done while keeping an eye on their kids, work that can be quickly interrupted and resumed, work like cooking and sewing, washing and teaching. Or work where you can carry your kid or take them along, like gathering or collecting water.
14. Why do males do the hunting? Hunting is risky. Females are more valuable than males, for a group can only have as many offspring as there are women to bear them. A few males can impregnate any number of females. And since it's mothers who care for infants, a child who loses her mother is more likely to die than a child who loses their father. thus risky, life-threatening activities are "men's work".
15. These different gender roles in reproduction, hunting, and the raising of offspring lead to different optimal strategies for each gender in finding a desirable mate.
 - a. (1) For males, it is about quantity. To impregnate as many females as one can get away with. (2) For male investment in conception is minimal. All it takes is a couple of minutes to impregnate a female. (3) If one needs to be choosy, males select for indicators of youth, fertility, ease in childbirth and ability to provide abundant milk for nursing
 - b. (4) For females on the other hand, it's all about quality. (5) For females, getting pregnant is a nine month commitment followed by three years of nursing. (6) While nursing females are less fertile to avoid multiple children needing nursing at the same time. Not that three year olds can now fend for themselves. (7) Humans become able to take care of themselves at around puberty, the age of adulthood before literacy and the need for education. (8) A female must be selective in her choice of mate, looking for indicators of being a good provider and a faithful companion in feeding and raising their offspring.
16. Thus males have an incentive to be sexually opportunistic while females have an incentive to learn the character of their potential mates. Before the days of punishing sexual harassment on college campuses, a survey bore this out. A student researcher

would approach random students of the opposing gender and ask them (1) if the subject would like to have sex with the researcher. When it was a female researcher asking male students, (2) 75% said yes. When it was a male researcher asking female students, (3) 100% said no. Most were even upset to be offered the opportunity.

- a. (4) Male sexual arousal is visually cued. (5) Cultural standards of feminine beauty are correlated with visual cues for youth, fertility, ease in childbirth and the ability to provide plentiful milk for nursing. Or big breasts, narrow waist (accentuating hips) red cheeks and big eyes. Males are so visually cued in fact that even an image of a naked female can arouse even though impregnation is impossible. (6) The image does not even need to be that good or realistic.
 - b. On the other hand, (7) females are verbally cued to character and resources. Who is apt to be the best and most faithful provider when you are burdened with caring for small children? (8) To learn who would make a good mate, females are going to want to talk, to spend time with their prospective candidate, to get a read on their status, intelligence and wealth. After all, they are making a big commitment. The stakes are so much higher. The invention of the birth control pill inaugurated a sexual revolution in the sixties. Hooking up is not as risky as it used to be.
 - c. What is the equivalent to pornography for women? (9) Romance novels with strong high status men sweeping you off your feet. So too soap operas and telenovelas especially about really complicated relationships and reputations to assess. It engages their attention.
17. So if this is how the competition for mates goes, how can each gender game it to their advantage? When and where should you be skeptical of your suitor? Given what girls are looking for, (1) guys have a strong incentive to exaggerate their intelligence, loyalty, status and wealth. So don't take how guys talk about themselves at face value—particularly concerning how important they are or how smart they are or how much money they have.
- a. (2) In fact they will sell their hype better if they believe it themselves. Thus even when you know they are being sincere, you might take their estimation of themselves with a grain of salt. Or all those gifts and free dinners may not be a reliable measure of their true wealth.

- b. (3) Girls on the other hand are going to promote their physical appearance. Don't take how good they look at face value. And don't take your appearing smarter or stronger than them at face value either. Having you look smart and strong around them makes them more appealing to you. No boy wants to be beaten by a girl.
18. This mating dynamic played out in spades in an early Fox reality show in 2000 entitled "Who Wants to Marry a Multi-Millionaire?" A thirty-something millionaire had approached Fox with a deal (1) to promise to marry the winner of a game show in which 50 female contestants, one from every state, would compete for his hand. The game involved a few different events, but of course it culminated in a swimsuit competition.
- a. (2) The result, not surprisingly was (3) a marriage that did not last the honeymoon cruise they were sent on. The winning bride said the next morning was like waking up from a drinking binge.
 - b. (4) And later the multi-millionaire was discovered to have been even more deeply in debt. In the end, he was broke.
 - c. The show though was a huge hit for Fox. But the network was so shamed in the press that despite the sky high ratings they never did it again.
19. At least until someone came up with "the Bachelor"
20. Evolutionary psychology argues that monogamy evolved among our remote hominid ancestors as a (1) successful compromise for both genders. Males get a female to impregnate and raise their genes. A females get a reliable provider for theirs. But it is a compromise, (2) suboptimal for both and so each gender is still tempted to cheat. For men, (3) to have more kids, by impregnating more women, for women (4) to get more resources to raise their kids. Again none of this is conscious. Its just that those who do cheat in these ways tend to do better in spreading their genes...
- a. To prevent cheating, both genders punish those who get caught. Now the punishment must be severe enough to discourage, but not so severe as to harm your own prospects at spreading your genes. (5) The different costs of cheating for each gender leads to cultural "double standards"
 - b. (6) The consequences of a husband cheating for the wife is that she is going to have to share his resources with the "other woman". (7) But the greater threat would be if he were to abandon her and her children. Before women were able to

make money for themselves, they could rarely afford for their husband to leave them. (8) Thus emotional betrayal is more of a threat than the sexual infidelity itself. A wife may be more likely to forgive sexual infidelity, especially if the husband swears he does not love the other woman, that it was done in a moment of weakness, that it won't ever happen again. Even better if he paid for it to have sex with a prostitute whom he does not know at all. And again, he will be more persuasive if he believes his own story like if, when he is caught, he feels overwhelmed with guilt. The risk of abandonment also rises with age for the female, especially from younger women who can bear more future children and more safely. Not surprisingly, male midlife crises coincide with female menopause.

- c. (9) On the other hand the consequences of female cheating are catastrophic for the male looking to spread his genes. He may be raising someone else's genes altogether. (10) Thus husbands tend to punish infidelity more severely. They are more likely to abandon a cheating mate. In fact, they may kill their wife and her lover. (11) Even today most murdered women are killed by their partners.

21. Women also tend to be judged more harshly for sexual promiscuity before marriage than males. ‘

- i. (1) Girls who are sexually active are more likely to be shamed. But boys who “score”? (2) If anything they may be admired. (3) Or given a pass. “Boys will be boys”, but who ever says “girls will be girls”?
- ii. (4) So too boys have a genetic incentive to seduce but not to marry those they succeed in seducing. After, all they have already proven that they are “easy” to seduce.
- iii. (5) This double standard in traditional society is known as the “Madonna-whore” dichotomy. Boys will try to seduce girls, but they will want to marry a virgin.

22. So much for how evolutionary psychology explains human sexual behavior in terms of strategies that optimize genetic propagation for each gender. In the next video lecture we will explore how the logic of human cooperation and competition is also explained in terms of strategies for best disseminating one's genes in subsequent generations.