And the resulting deflation, especially when overlaid by the cultural baggage we have talked about, that is, with self-hatred, disgust, guilt, and shame, may prove dangerous for anyone in the vicinity. The law, however, prefers to let defenseless young women bear the brunt of this, as of so many other exploitations, so that it can go on pretending that it does not happen.[73]

CHAPTER THIRTEEN.

Evolution and Desire

Evolutionary psychology is a relative newcomer to the literature on lust. The aim of the evolutionary psychologist is to identify universal constants of human psychology, and then to propose and test the theory that they are evolutionary adaptations. An adaptation is an "inherited and reliably developing characteristic that came into existence through natural selection because it helped to solve a problem of survival or reproduction during the period of its evolution."[74] It exists in the form it does because it has solved a specific problem of survival or reproduction recurrently over evolutionary history. It stands its owner in slightly better stead in life, and as a result those who have it gradually outbreed those who do not. Adaptations should be distinguished from their by-

products, which are not directly selected for under evolutionary pressure, and there may be accidents or "noise" in the system: psychological mechanisms that have no connection at all with evolutionary success. According to the standard textbook, an adapted psychological mechanism should have the following list of characteristics. It can be inherited, and

1. It is designed to take in only a narrow slice of information.
2. It tells the organism the particular adaptive problem it is facing. No consciousness or awareness of the problem is necessary, but the information generates a response from the organism.
3. The response is transformed through decision rules into output.
4. The output can be physiological activity, information to other psychological mechanisms, or manifest behavior.
5. The output is directed to solution of a particular evolutionary problem.

So, for example, foods that are good for us, or were good for us throughout generations of evolution, taste nice, and ones that are not do not taste so nice. This is no accident: any creatures in whom the opposite is true fare badly. It is plausible to say that the disgust

we feel for bodily waste or excretions is such a mechanism. Our nose or other organs signal that something potentially harmful is about, we shrink away from it, and this solves the problem of keeping us from contamination or risk to health. The sickness and sensitivity to different foods women often feel early in pregnancy probably has a health function. It diminishes the chance of the woman ingesting toxic or mildly toxic substances, at just the time that the fetus is forming organs that might be adversely affected by such substances. It is plausible to say that this is why the mechanism exists.[75] The examples nicely illustrate the second condition above. The *organism* is "told" of the good taste or the toxicity, but the *person* may be quite unaware of it. All she has to do is to like the taste, dislike the smell, or feel sick. She does not have to know why. A similar reaction is the well-known specific aversion to a particular food consequent upon getting an illness such as influenza shortly after eating it. The illness may have nothing to do with the food, but nature does not take the chance. It imprints the aversion, just in case.

Although sickness is essentially a state that makes one averse to certain food or all foods, what the person actually does is then up to her. She may despise herself for feeling weak and defiantly try to eat the food anyhow. But nature may prove too strong, and the defiance may end in a trip to the bathroom. Horace's tag remains in force: *Naturam expellas furca, tamen usque recurret,* "you can expel nature with a pitchfork, but she always returns."

Evolutionary psychology has been more controversial than it needs to be, raising specters of "genetic determinism," or of the mind as a bundle of "modules" that leave us helpless as they function away as they have been adapted to do. Evolutionary psychologists indignantly reject the fear, arguing that the mechanisms they talk of need not be rigid, inflexible routines, such as "instincts" were taken to be, but can be highly context sensitive, and in any case may generate only inputs to further decision-making processes, as in the woman who defiantly tries to ignore her morning sickness.

Nevertheless, there are problems in the air. Consider male aggression, a common target of evolutionary explanation. Whatever else it is, male aggression is highly context sensitive. As evolutionary psychologist Stephen Pinker notes, in a few generations bloodthirsty Europe has given way to a notably peaceful climate.[76] This has to be a cultural achievement, since evolution has had too little time to work, even if, as does not seem very likely, the more boisterous Europeans were either generating fewer children, or providing them with fewer resources to grow to maturity, than any peaceable minority. A familiar cultural comparison is that Canada has around one-quarter the homicide rate of the United States. So any "aggression" mechanism must be flexible or context sensitive, giving different upshots in different environments. It would have to be pictured in terms of

a conditional trigger: if the environment is thus and so, get aggressive; otherwise, back off. This is not in itself an objection, for after all animals, too, can have routines that are in the same way conditional. A routine might take the shape: if the competitor is bigger than you, back off; otherwise, get aggressive.

Described like this, increasing sensitivity carries a cost to the evolutionary story. The more various the conditions under which different responses are generated, the less likely it is that evolution has thrown up environmental pressure for each part of the mechanism to develop. There has been insufficient time for human beings to adapt biologically to all the different environments to which we adapt culturally. Let me explain. There is no adaptive mechanism specifically for learning English, since a tendency to learn English is not heritable, and English itself has been around for too short a time for generations of children who learn English to flourish more than those who do not. For the same reason, there has been no time for a more complex heritable disposition: "If surrounded by English speakers, learn English, and if surrounded by French, learn French." But there may have been time for something universal to become an adaptation, and it will be an adaptation that delivers the context sensitivity without having had to prove its mettle in each different context. This would be something like: imitate the language of those around you. That works to get the baby's

language up and running, English in England and French in France.[77]

Similarly, a complex psychological response delicately tuned to different contexts will not have been able to prove its mettle in each context. As in the language-learning case, it might better be thought of as the result of a general instruction: imitate the levels of violence around you. That may be nearer the truth, for the imitative nature of babies and children is empirically very well attested. But as it stands it is certainly too simple, for although we do not know of babies that grow up in purely English surroundings yet start to speak French, we do know that other imitative habits are less determinate. Peaceable people can grow surrounded by violence; roses grow on dunghills.

These subtleties matter, because they affect any assessment of the significance of alleged results of evolutionary psychology. If the simple instruction to be aggressive is scripted in the genes, then we will have to resign ourselves to designing social structures around the datum of aggression. But if what is scripted is the instruction to imitate the levels of aggression around you, we can aim for a more optimistic outcome. Bring about socially peaceful conditions, and you may bring about peaceable people. If the sensitivity to context is yet greater, then we will need different solutions again. Different hypotheses are all consistent with an evolutionary approach, but it would take a delicate view of human

life to decide which ones are nearer the truth. This means that it is unwise to use evolutionary psychology to pursue an overt or hidden agenda of designing political setups, proclaiming limits on what is humanly possible.

Since mating and reproduction are so important to human beings, they have been natural subjects for evolutionary psychology, sometimes to the outrage of feminists, who see the enterprise as a conservative ploy designed (or adapted) to validate a broadly patriarchal status quo. We all know the standard script. Sexual selection by females is very widespread in nature, as Darwin noted, and humans are no exception. Because women's minimum biological investment in reproduction is much greater than that of men, women need to be choosy about offering their favors. So women are modest and selective and need a whole lot of wooing. Men, on the other hand, may be reproductively successful by fertilizing whomsoever they can. They spread it around, for, as it is said, women need wooing, but men just need a place. Women are at their best reproductively in their late teens, being more likely to conceive on any given occasion, and also having a longer breeding career in front of them, than older women. So men fancy hot young bodies with the right signs of health, such as a neat waist-to-hip ratio, glowing skins, and good teeth. Women, on the other hand, need to be assured of support during pregnancy and child rearing, so they fancy slightly older, successful males

who can offer them the necessary resources and to whom they then cling like leeches. An "unconscious genetic calculus" thus rules our tastes and proclivities. It's just tough, especially for women in later life, where the alpha male has so much better chance of lusty pleasures than his matronly wife.

It is a good story, especially for alpha male, high status, adequately wealthy evolutionary psychologists well beyond their teenage years. But it runs into complexity and counterexamples. It would not, for instance predict, Helena's devout doting, doting in idolatry, on the "spotted and inconstant" Demetrius.[78] Helena, like other teenage daughters of whom one hears tell, is out of line on each of three counts. Spots are not good signs of fitness, inconstancy suggests there may be a problem about this boy as a reliable provider of resources, and Demetrius is very young and therefore of relatively low status.

The standard story even meets trouble from human shape. By contrast with chimpanzees, gorillas contentedly stay pretty faithful to one another, and as a result the male equipment is tiny—there is no need to invest a lot of energy making more sperm and a better delivery system if there is no competition. So it is plausible that the relative size of penis or testicles in the male is an index of the need to swamp competition, and hence an index of female promiscuity. Human males have large penises by primate standards, and the relative size of their testicles comes

somewhere in between chimpanzees and gorillas. These are indications that males are built for sperm competition, designed to swamp their competitors' teeming residues. But you would not need to swamp these residues unless they were there, which in turn means that women find sexual fidelity more of a problem than the standard script has it. If the woman, having discovered the best male resource she can, clings to him like a leech, the male does not need to invest a lot of energy overtaking other males' deposits. But the biology does not bear this out. However little men like it, without a lot of acculturation women may more closely resemble chimpanzees than household nuns.

There is actually very little about adaptation in the standard story. There is no close empirical thought about social conditions in the Pleistocene or on the savannah. Rather, the worst features of noncooperative, fiercely competitive late capitalism are simply projected back, implying the same different mortality rates for rich and poor as we find in the most brutal economic environments today. In other words, it is supposed that there was no equivalent to socialized medicine, welfare, or community child care in those ancient times. The inference is that we are like this now, men and women both, so we were probably like it then, and the ones who were not like this lost out in the reproductive race.

Philosophers tried to explain human traits by thinking about their function long before evolutionary psychologists, and some-

times the explanations compete. Here is an example. In a marvelous section of the *Treatise of Human Nature,* Hume set himself to explain the modesty and reserve that, he thought, were characteristic of women rather than the more forward men. He wrote:

> Whoever considers the length and feebleness of human infancy, with the concern which both sexes naturally have for their offspring, will easily perceive, that there must be an union of male and female for the education of the young, and that this union must be of considerable duration. But in order to induce the men to impose on themselves this restraint, and undergo cheerfully all the fatigues and expenses to which it subjects them, they must believe that the children are their own. . . . since in the copulation of the sexes, the principle of generation goes from the man to the woman, an error may easily take place on the side of the former, tho' be utterly impossible with regard to the latter. From this trivial and anatomical observation is deriv'd that vast difference betwixt the education and duties of the two sexes.[79]

The trivial and anatomical observation is that women always know which are their own children, but men may not be sure.

Hume did not need to know about the size of primate testicles to take it for granted that women are lustful like men

and prone to temptation. And he notices that this sets a cultural problem. A crude solution is to institute punishments, including damage to reputation, for female infidelity. But that only helps to a limited extent:

> All human creatures, especially of the female sex, are apt to overlook remote motives in favour of any present temptation: The temptation is here the strongest imaginable: Its approaches are insensible and seducing: And a woman easily finds, or flatters herself she shall find, certain means of securing her reputation, and preventing all the pernicious consequences of her pleasures.

What needs to be done is for women to build a habit of modest reluctance to permit male advances (Hume supposes that the alternative, of building a habit of modest reluctance in males to make such advances, is simply impracticable). But how is that to be achieved? A philosopher contemplating the problem might think it insoluble:

> For what means, wou'd he say, of persuading mankind, that the transgressions of conjugal duty are more infamous than any other kind of injustice, when 'tis evident they are more excusable, upon account of the greatness of the temptation? And what possibility of giving a backwardness to the approaches of a

> pleasure, to which nature has inspir'd so strong a propensity; and a propensity that 'tis absolutely necessary in the end to comply with, for the support of the species?

But all is not lost, since culture can do what an individual could not:

> As difficulties, which seem unsurmountable in theory, are easily got over in practice. Those, who have an interest in the fidelity of women, naturally disapprove of their infidelity, and all the approaches to it. Those, who have no interest, are carried along with the stream. Education takes possession of the ductile minds of the fair sex in their infancy.

The difference between Hume's genealogy of modesty and an evolutionary approach is interesting. An evolutionary psychologist might suggest that female modesty and reserve was "selected for," since immodest females would be less able to attract alpha males and to bring up children by commandeering their resources, and therefore would leave fewer descendants than their demure sisters. Or, it might suggest that female modesty is in fact a by-product of female sexual selectivity. The woman is on the lookout for the best mate she can get, so she shuns everyone until she is reasonably confident she has found him. Hume gives the alternative cultural explanation. Which should we prefer?

It might seem a close call, but there is good reason to think that Hume has some part of the picture right. In many and various ways, girls are educated into sexual reserve. Consider that many of the most wounding things young girls call each other imply sexual laxity: slag, bitch, whore, tart. . . . None of this would be necessary if evolution had designed the psychology for us, any more than we need to put cultural pressure on each other to grow hair or see colors. When nature has done it for us, moralists can go home. We also see some relaxing of the insistence on feminine reserve, and indeed of feminine reserve itself, in countries where the social and economic disadvantage of women has been addressed, and where women have control over their own fertility. These developments confirm the message of those giveaway testicle sizes and suggest that Hume is right. It takes culture to enforce those awkward duties of chastity, for females as much as males. Hume also predicts that in a social system in which transmission of property through family lines mattered less, the trivial anatomical difference would assume less importance.

It is obvious enough that many people's sexual proclivities have little to do with any conscious desire to reproduce. We have to distinguish the evolutionary rationale for our desire from its overt nature. Lust does not aim at reproduction, but at a good lay. Lots of sex, perhaps most of it, is explicitly not directed at reproduction. People enthusiastically go in for masturbation,

homosexuality, elderly sex, protected sex, and oral sex, just to start the list. They are not thinking in terms of genetic investment and competition, or returns on capital expenditure. We are governed by desire, and by Saint Augustine's standards our pleasures are horrendously wayward. Evolutionary psychology has not helped us understand this. A "module" for taking sexual pleasure with members of the same sex would die out after one generation, and the others are not much better.

Evolutionary explanations are also likely to leave us with a deflated sense of our own freedom, making us into puppets of our selfish genes, in Richard Dawkins's famous metaphor. Schopenhauer wrote before Darwin, but what he calls the will of the species is strikingly similar to the "unconscious calculus" of evolution. Schopenhauer thought that with sex we make ourselves ridiculous. But nature has a purpose in so using us. "What is at stake" he says, "is nothing less than the composition of the next generation":

> The high importance of the matter, is not a question of *individual* weal or woe, as in all other matters, but of the existence and special constitution of the human race in times to come; therefore the will of the individual appears at an enhanced power as the will of the species.[80]

Nature makes fools of us. We are puppets of our hormones and genetic programs. But nature repays us with pleasure. The balance ends up just about good enough—who would want it to tip some other way? All we can say is that nature has done the best she could. She generated lust, and left it up to the way we relate to the world—the luck of the draw applied to the chemical or cultural environments in which we grow—to direct its serpentine paths.