Chapter 12
Free Will, Compatibilism, and the Human Nature Wars: Should We Be Worried?

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12.1 Introduction

The 'human nature wars' are the controversies over sociobiology and its successor schools of thought – Evolutionary Psychology, biopsychology and the like. A recurring theme in these wars is the fear that characteristic claims of these schools of thought imply that we have no free will, or at least less free will than we might otherwise think we had. It is clear that, in many people's minds, sociobiology and its related schools have negative implications for free will, although it is not always clear whether this means that those implications negate free will entirely or merely mean that we have less than we might have thought. However, even if only the latter is the case, it is still *prima facie* a worry, since – assuming that it is a good thing to have free will – any news that we have less than we might have thought is bad news.

Standardly, the claim that sociobiology and related schools have negative implications for free will is based on the claim that those schools of thought have a commitment to genetic determinism. Rebuttals of this claim frequently take the form of denying that they have any such commitment, or of arguing that this commitment has no negative implications for free will. Richard Dawkins (1982, Chapter 2) employs both forms of rebuttal. He argues that genetic determinism is incompatible with a proper understanding of genetics, such as is perfectly well understood and endorsed by sociobiologists and their friends. But he also argues that, in any event, genetic determinism would be no more detrimental to free will than the opposing view that traits are shaped by the environment. Janet Radcliffe-Richards (2000, Chapter 6) employs the second form of rebuttal, using compatibilist arguments such as are familiar from previous philosophers. In the present paper I will argue that

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neither of these forms of rebuttal are adequate when it comes to what is perhaps the most important (and certainly the most highly publicised) successor school of thought to sociobiology. This is evolutionary psychology, or to adopt David Buller's (2005a, b) usage: Evolutionary Psychology.

In Buller's usage, 'evolutionary psychology' is a field of inquiry, but 'Evolutionary Psychology' is a paradigm. A field of inquiry is a subject-matter that is studied; a paradigm is a set of agreed-upon theoretical assumptions that are used when we study it. How we explain observed facts is limited by the paradigm we are working in. For example, astronomy is a field of inquiry, but *Copernican* astronomy is a paradigm. Similarly, evolutionary psychology includes any programme of research into how evolution has shaped human psychology, but Evolutionary Psychology is the specific type of research programme that has among its notable advocates Leda Cosmides, John Tooby, Steven Pinker, David Buss and others. (For introductory accounts, see Cosmides and Tooby 1997, Pinker 1997, Buss 2008.) A central theoretical assumption that is distinctive of Evolutionary Psychology is the *massive modularity thesis* about the mind. This will be explained in more detail later but, in brief, it is a view of the mind as fundamentally a "Swiss Army Knife" – that is, as consisting of many special-purpose mechanisms that were "designed" by evolution to solve specific problems. As I will show, the massive modularity thesis plays a central role in Evolutionary Psychologists' accounts of human motivation and action. I will argue that it is because of this, rather than because of genetic determinism, that worries about Evolutionary Psychology having negative consequences for free will are justified. This means that other evolutionary schools of thought about human nature may not have these negative consequences. I will not here take up the issue of whether they do or not; instead I will concentrate on Evolutionary Psychology only. In order to determine whether my argument applies to other schools of thought, it would need to be worked out what – if any – account of human motivation those schools subscribe to.

12.2 Variants of the Worry

Before Evolutionary Psychology came on the scene, the worry about free will was articulated in responses to sociobiology, but (as will be seen) it was addressed in a very broad way to any theory that claims that human behaviour is underpinned by evolved mechanisms. In any event, much the same worry has been expressed specifically about Evolutionary Psychology, in very much the same terms and very often by the same people. The arguments of the present paper concern Evolutionary Psychology. However, both the accusations of denying free will and the defences against those accusations have been inherited from the debates around sociobiology. It should be noted that the worry is that *if* sociobiology and its related schools' claims are true *then* we have less free will than we might have thought. This would be an undesirable situation whether their claims are true are not. Many of the same critics who point out the (alleged) negative implications for free will also believe

that the relevant claims of sociobiology and its related schools are false. But it would of course also be possible to believe that they are true, and believe that the negative implications are true in consequence. So we can think of this worry as existing in two variants:

Variant 1: 'We're doomed!'
I.e. The relevant claims, the ones that have negative implications for free will, are true, and this is bad news.

Variant 2: 'It's irresponsible to say that!'
I.e. the relevant claims are false, or are at least unsubstantiated, so those who make them are spreading their tidings unjustifiably, which is liable to have bad consequences.

Why, though, should we think that if sociobiology or its related schools have these negative implications for free will, then that is something to be unhappy about? It can, I think, quite easily be shown to be plausible that *either* actually having less free will than you might have thought *or* falsely believing that that's the case, are bad. Admittedly there have been some – from the ancient Stoics, to Lao-Tzu, to Susan Blackmore (1999) – who have thought that believing in free will leads to unhappiness. However, I will not address these points of view in this paper. I will look briefly at some reasons for thinking that having less free will, or falsely believing one has less free will, are bad, with a view to determining whether those who are accused of denying free will deny it in the relevant way.

I will begin with reasons for thinking that if we *actually* have less free will than we might have thought, that is bad. These reasons, if they have relevance for the human nature wars, will *prima facie* have relevance via the 'we're doomed!' version of the free will worry.

12.2.1 Responsibility

Historically, the issue of whether we have free will has most frequently been linked to the issue of whether people can be held responsible for their actions. Classic examples of this include Hume's and Kant's discussions of free will, as well as those of J.J.C. Smart (1961) and Harry Frankfurt (1969). The basic thought here is that if people do not have free will then it makes no sense to hold them morally responsible for any actions, whether good or bad. Indeed, it has often been thought that the very idea of *morally* good or bad actions would make no sense if we did not have free will. Smart denied free will and argued that we ought to abandon the practice of morally praising or blaming people or their actions, although he thought that we could still praise or 'dispraise' them in non-moral ways, akin to rating an apple highly for its good flavour. This would imply that many of people's normal moral attitudes make no sense. Kant argued that our moral judgements necessarily presuppose free will, and consequently that we must presume that we have free will, at least when we are wearing our moral hat. But if we really do not have free will, then there is a fundamental

cognitive dissonance between our normal moral attitudes and a correct scientific view of the world. We would, then, have either to abandon our normal moral attitudes or to live in a state of cognitive dissonance. It might perhaps be thought that living with cognitive dissonance is an acceptable price to pay if it's necessary for preserving our normal moral attitudes. But if we live in a state of cognitive dissonance then we believe some things that are false, and, *prima facie*, that is less satisfactory than preserving our normal moral attitudes without cognitive dissonance. Moreover, and pertinently to the matter at hand, Evolutionary Psychologists often cite 'conceptual integration' as an advantage of their view, as against for example "the bold claims of autonomy made by the for the social sciences, accompanied by the institutionalised neglect of neighboring disciplines" (Cosmides, Tooby and Barkow 1992, p. 13, note 1). Moreover still, it is often claimed that evolutionary insights into human nature have important implications for ethics. This is one of the main messages of Edward O. Wilson's book *Consilience* (1998), for example. But this cannot be the case if conflicts between scientific findings and moral attitudes can just be ignored.

The same points apply *mutatis mutandis* if we in fact have less free will than we might have thought, rather than no free will. That would mean that *sometimes* people are not morally responsible, or deserving of moral praise or blame, when our normal moral attitudes would dictate that they are. It would mean that *sometimes* there is a cognitive dissonance between our normal moral attitudes and correct science, and so on.

12.2.2 Fatalism

Although the term 'fatalism' often has a more technical use in philosophy[1], I will here use it in the more everyday sense of the inexorability of fate. Some philosophers, for example Hume, have argued that determinism (or what Hume calls 'necessity') is not only compatible with moral responsibility but required by it. For Hume, this is because actions that are not determined are uncaused, and hence cannot be said to be any reflection of a person's character. Thus, he concludes, a person could not be morally responsible for actions that were undetermined. However, even if Hume's argument is successful, there may be other reasons why it would be bad not to have free will. To see why this is at least *prima facie* the case, imagine that you became persuaded by scientific or philosophical reasoning that people had no free will. Imagine, that is, being presented with reasons for denying free will that are

[1] Some philosophical arguments for fatalism appeal not to determinism but to the logical point that if it's true that I will do X on day Y then it always has been true that I will do X on day Y (e.g. Taylor 1962). It may be possible to bypass such arguments if one is willing to embrace the view that there are no truths about future events – i.e. that statements about a future event are neither true nor false, and only become true or false when the relevant time arrives. William James seems to have embraced this view. Be that as it may, I will leave this issue aside in the present paper.

so persuasive that you see no other option than to accept that we do not have free will. What would your feelings be? Certainly, you might be unhappy at discovering that your normal moral attitudes of praising and blaming, whether yourself or others, made no sense. But further to this, you might feel that you have no control over your own life or choices. The worry here is that, even though you might not want to X, you are fated to do so. This may go via the route of the thought: 'even though I don't want to X now, I may be fated to change, to want to X in the future'. For example, young people sometimes worry that, as they grow older, they will come to embrace their parents' values even though they reject those values now. Related to this is the worry that certain bad behaviours are inevitable. It may be believed, for example, that it is inevitable that criminals will re-offend. (This may, of course, also be thought to have implications for whether people are responsible for their actions – at least by anyone who does not find Hume's claim about moral responsibility requiring determinism convincing.)

Also related to this is the thought that certain programmes of social reform are futile, an issue that often comes up in the debates around sociobiology and related schools. It is often believed that proponents of these schools are saying that certain behaviours are 'programmed' into people's genes. Moreover, it is often believed that they are claiming this of certain *undesirable* behaviours – e.g. male chauvinist behaviour, going to war or forming social hierarchies. (See for example the first quotation from Rose in the next subsection.) This is in turn commonly taken to imply that attempts to eradicate these undesirable behaviours by education or other social-engineering means are doomed to fail. For example, in a critique of Wilson's *Sociobiology* by Richard Lewontin, Stephen Jay Gould and others, Wilson is accused of presenting "yet another defense of the status quo as an inevitable consequence of 'human nature'" (Allen et al. 1975). Interesting though this last issue is, it is not strictly speaking about free will. Rather, it is about whether certain programmes of social reform have any chance of success. So I will leave it aside here.

Once again, I take it to be clear that, if any of these accusations was true, that would be bad. Moreover, if – as the people who raise these worries usually think – they are false, but sociobiologists and related schools claim them nevertheless, that would also be bad. Most obviously, it would unnecessarily distress people to falsely tell them that their lives are fated to go certain ways whether they want them to or not. Further, there is the worry that to falsely tell people this would encourage people to falsely believe that they're not responsible for certain bad behaviours, and give them false excuses. And finally, telling people falsely that certain programmes of social reform are futile, would discourage people from following such programmes.

12.2.3 Examples

The worries I have just outlined can be illustrated by the following quotations. The first three are deserving of our attention in part because they appear in the relevant chapters by both Dawkins and Radcliffe-Richards, and in general these quotations can

be taken as representative of critiques of sociobiology and Evolutionary Psychology. In his review of Edward O. Wilson's *On Human Nature*, Stephen Rose writes:

> … for [Edward O.] Wilson human males have a genetic tendency towards polygyny, females towards constancy (don't blame your mates for sleeping around, ladies, it's not their fault they are genetically programmed). (Rose 1978, quoted in Dawkins 1982, p. 10)

Rose is here taking up the issue of responsibility. He is claiming that, according to Wilson, men are determined, because of their genes, to sleep around, and that this implies that they should not be blamed for doing so. Since Rose believes that this claim that Wilson (allegedly) makes is false, his worry is of the 'it's irresponsible to say that' variety.

In his discussion of the issue, Dawkins offers the following anecdote:

> A young woman asked the lecturer, a prominent 'sociobiologist', whether there was any evidence for genetic sex differences in human psychology. I hardly heard the answer, so astonished was I by the emotion with which the question was put. The woman seemed to set great store by the answer and was almost in tears. After a moment of genuine and innocent bafflement the explanation hit me. Something or somebody, certainly not the eminent sociobiologist himself, had misled her into thinking that genetic determination is for keeps; she seriously believed that a 'yes' answer to her question would, if correct, condemn her as a female individual to a life of feminine pursuits, chained to the nursery and the kitchen sink. (Dawkins 1982, p. 11)

Assuming that Dawkins' interpretation of the woman's tone of voice is correct, she apparently believes that if there are genetic sex differences in psychology, then she is fated to be a meek and subservient housewife, even though she doesn't want to be. Whether her worry is of the 'we're doomed' or the 'irresponsible' variety depends on whether she thinks the genetic determinism that her worry rests on is true.

In a similar vein is this quote from Stephen Jay Gould:

> If we are programmed to be what we are, then these traits are ineluctable. We may, at best, channel them, but we cannot change them either by will, education, or culture. (Gould 1978, p. 238)

Gould's claim here is very sweeping. He does not actually believe that we are 'programmed' to be what we are, so his worries are of the 'it's irresponsible to say that' variety. They also seem to be concerned with the issue of fatalism, since he refers to the impossibility of changing traits. Since he says that they can't be changed "by will", he seems to be saying that (sociobiologists' claims imply that) we as individuals are fated. But he also says that they can't be changed by education or culture, so he seems to be also saying that (those claims imply that) certain programmes of social reform are futile.

Although the quotations from Rose and Gould above relate to sociobiology, worries about free will have been raised by the same people in relation to Evolutionary Psychology. For example, in a more recent book devoted to criticisms of Evolutionary Psychology, Steven Rose asks: "Where does this strange free will come from in a genetically and evolutionarily determined universe?" (Rose in Rose and Rose 2001, p. 262). Indeed, many of the authors in that book, though it is explicitly described in the sub-title as "Arguments Against Evolutionary Psychology", devote much time

to criticising Edward O. Wilson, so indicating that they think that any criticisms that they have made of sociobiology in the past apply equally to Evolutionary Psychology.

The worry that Evolutionary Psychologists are giving excuses to bad people is greatly in evidence in some of the responses to Randy Thornhill and Craig Palmer's book *A Natural History of Rape* (2000). Because Thornhill and Palmer give an evolutionary explanation for rape, some critics conclude that they are giving excuses to rapists. For example:

> I can imagine that Thornhill's phone has been ringing off the hook with attorneys defending men accused of rape, asking him to be an expert witness for the defense. (Kimmel 2003, p. 232)

But both Dawkins and Radcliffe-Richards tell us of these worries in order to suggest that they are unfounded. Next, I will show how they set out to do this.

12.3 Dawkins' and Radcliffe-Richards' Rebuttals

Rather than saying: 'The news is bad but don't shoot the messenger', the defenders of sociobiology and related schools have usually defended themselves by arguing that their claims do not lead to the conclusion that we are any less free. In his most extended discussion of this, Dawkins (1982, Chapter 2), pursues two lines of argument: (1) He argues that genetic determinism is a straw man – i.e., that neither he nor anybody else thinks that environment plays no role in determining how an organism turns out; (2) he says *tu quoque* to his opponents – i.e. he argues that a trait that is a product of culture, upbringing, etc. is no less determined than one that is a product of genes, and consequently that his opponents' view is no less determinist than his own.

Dawkins argues for the first point by showing that we need to distinguish between genetic *selectionism* and genetic *determinism*. The former is the claim that, insofar as any traits of an organism are products of natural selection, they will be such as to promote the replication of the organism's genes. Thus, for example, genetic selectionism involves the rejection of group selection, and the endorsement of the claim that sexually reproducing organisms, insofar as their behaviour is a product of natural selection, are more likely to make sacrifices for kin than for non-kin, in the pattern predicted by Hamilton's rule (Hamilton 1964). These claims leave it completely open just which behaviours, or any other traits, are products of natural selection, and how important other factors, such as constraint and drift, are in trait-formation (a point carefully emphasised by Sterelny and Kitcher in their 1988 defence of genetic selectionism). But genetic determinism, by contrast, seems to be the view that, given that an organism possesses such-and-such a gene, it is inevitable that it will develop such-and-such a trait. It is a little difficult to precisely characterise this view, because no way of stating it comes remotely close to any view that anybody has ever held. Everybody from Genetics 101 upwards knows that the expression of

a gene depends on environmental factors, and it is difficult to see how anybody could have thought that anybody thought otherwise.[2]

Of the *tu quoque* argument, it can hardly be said that it defuses the worry about giving excuses to ne'er-do-wells, or that it alleviates any distress one might feel on being told that one is not free. At best, it spreads the blame for giving people the excuse, and for causing the distress, around a bit. Moreover, one might want to believe that at least some of one's actions are determined *neither* by one's genes nor by one's environment, so that any scientific claim that encroaches on this from either the biological or the sociological direction is bad news.

The strategy that is likely to occur to any philosopher is to appeal to a compatibilist argument regarding free will. In brief, it is to show that whether an action is determined by prior causes or not has no bearing on whether or not it is free. This strategy has been pursued by Janet Radcliffe-Richards in *Human Nature after Darwin* (2000). The aim of Radcliffe-Richards' book overall is to defuse many of the worries people commonly have about the claims of sociobiology and related schools, including, as she makes explicit, Evolutionary Psychology – worries about politically reactionary or quietist implications, for example. Knowing that one of these worries is that we are being claimed to be 'blameless puppets', she argues that this worry arises because of misunderstandings of what free will actually is. In arguing this, she uses standard arguments for compatibilism, such as are familiar from classic compatibilist accounts (e.g. Ryle 1949, Chapter III; Ayer 1954; Frankfurt 1969).Very briefly, compatibilists argue that free will is possible even if our actions are determined. They say that, when we are unfree, it is because of some specific circumstance, which might be, for example, being in prison, being subject to some psychological compulsion, etc., and they argue that anyone who thinks that determinism entails that free will is impossible is treating being determined by cause as if it were the same as one of those specific circumstances.

Radcliffe-Richards' type of response is specifically directed against the claim that a significant genetic component in determining behaviour means that we have no, or less, free will. Her argument consists of two strands: (1) she sets out to show that what the classical free will theorist wants – acts that are not determined, and are free – is incoherent, and hence cannot be had in any case; (2) she then sets out to show that an act can be determined and yet be free. She employs two time-honoured strategies for showing the first: (i) Hume's 'other fork': the argument that an event that is not determined is random, but a random event is not a free act; (ii) the argument that nothing can be the cause of itself: the classical free will theorist wants human actions to be *neither* determined by prior causes *nor* random, but this,

[2] Admittedly, Evolutionary Psychologists often claim that evolved cognitive mechanisms can be relied on to develop in a wide variety of different environments by virtue of being guarded against environmental vicissitudes that might disrupt development. The mechanisms by which they are so guarded are never specified beyond vague expressions such as 'feedback-driven compensation' (Tooby and Cosmides 1992, p. 81). I will leave this issue aside in the present paper. For a sceptical view on this claim of Evolutionary Psychologists', see Garvey 2005.

compatibilists hold, makes no sense. Since something cannot be the cause of itself, human actions, like any other event, must be either caused by something else or not caused at all, i.e. random. The strength of these two arguments is their extreme generality. They do not depend on particular scientific claims – not even very general claims such as that the world consists of matter in motion or that everything has a cause. But all that they show is that the classical free-will theorist is making demands that cannot be met; by themselves they do nothing to reassure us that we have free will. It is the second strand of the compatibilist argument that interests me here. (Strictly speaking, the first strand could just as easily be part of an argument for denying free will as for compatibilism, so only the second strand should be called 'the compatibilist argument' – which is what I will do from here on.)

The basic thrust of the compatibilist argument is to show that the hard determinist, in saying that we're not free because we're determined, is misunderstanding what it is to be free. This is sometimes cast as a misunderstanding about how we use the *word* 'free', but this is not the place to debate the merits of 'ordinary language philosophy' versus 'robust metaphysics'. For present purposes I am assuming that the compatibilist argument works, and that it proves something about the real nature of freedom, not just about the way we use words. Compatibilists often present their arguments as *reassurances* that any type of freedom 'worth wanting' is perfectly possible even if all our actions are determined (e.g. Dennett 1984). The hard determinist, it is alleged, conflates two very different circumstances in which one might say: 'I'm not free because …' On the one hand, the hard determinist would have us say 'I'm not free because my actions are determined by prior causes'. On the other hand, there are specific circumstances in which we might say 'I'm not free to do *x* because …' But, the compatibilist urges, if the *only* reason I can be said to be not free is because my actions are determined, then there is no reasonable cause for concern: I am not unfree in any sense that I should be worried about.

12.4 Why This Does Not Get Rid of the Problem

It is not the aim of the present paper to argue either for or against compatibilism. Rather, I want to determine whether, *if* compatabilism is true, the worries about Evolutionary Psychology's implications for free will are misguided. I will argue that compatibilism does not successfully defuse these worries. This is because, it will be argued, compatibilist arguments, even if successful, only show that it is possible to have free will in deterministic scenarios, not that we have free will in every deterministic scenario. If compatibilism is true, then the mere fact of being determined by prior causes does not make an action unfree. However, it does not follow from this that all actions are free. It may be that there are specific circumstances in which actions are not free, and all compatiblist accounts allow for this. Moreover, it could, consistently with compatibilism being true, be that a great many or even all of our actions fail to be free because of some general fact other than the fact of being determined. It could then, again consistently with compatibilism being true, be that

Evolutionary Psychology makes some general claims about human beings which implies that we are not free, or at least significantly less free than we might otherwise have thought.

12.4.1 Circumstances in Which We're Not Free, Even on a Compatibilist Account

There are various versions of compatibilism. All have in common that actions can be free even if determined, but all also allow that some actions are not free. Radcliffe-Richards' argument only shows that we can be free even if determined, and it doesn't follow from that that we are in general free. Still less does it follow that even if what Evolutionary Psychologists say is true we are are still as free as we thought. This is because all compatibilist theories allow that there are some circumstances where our actions are not free, or at least are less free than we would like.

The simplest version of compatibilism holds that we are free as long as we are moved by our own desires and not by anything else. Hume gave the classic formulation of this:

> By liberty, then, we can only mean *a power of acting or not acting, according to the determinations of the will*; this is, if we choose to remain at rest, we may; if we choose to move, we also may. (*Enquiry Concerning Human Understanding*, Section VIII, part I)

Thus, on this account, a person can be free even if their actions are caused by their desires, and those desires have prior causes, and even if the chain of causes goes all the way back to the beginning of time. In other words, even if their actions are fully determined by prior causes, a person can still be free. Most compatibilist accounts would require that one's actions be *caused* by one's desires in order for one to be free. That is, it would not be considered sufficient that they be merely *in accordance with* one's desires. This rules out cases where one was forced to do something that happened to be what one wanted to do. However, they allow that, even if those desires are in turn caused by something else, and the chain goes back to the beginning of time, one can still be free.

However, many people, whether compatibilists or not, think that this is insufficient for free will. The problem is that there are many cases where it looks as though one's actions *are* caused by one's desires, but it also looks as though one is not free. Among such cases are those where one is driven to act by *addictions* or *psychological compulsions*. For example, a person who is addicted to smoking may feel that they are *compelled* to smoke, and that their freedom of choice is reduced by this addiction. Similarly, a person who has OCD may feel compelled to count the paving-stones. The very name of the disorder – obsessive *compulsive* disorder – suggests that its sufferers are compelled by it to do things, and the testimonies of sufferers from OCD themselves indicate that they experience it in that way. Similarly again, a person may experience a *phobia* as a reduction of their freedom: an agoraphobic may be *unable* to leave the house, or at least find it very difficult to do so.

However, in these cases, it is not entirely clear that the person is being prevented from doing what they want. We might say that the smoker and the paving-stone counter *are* doing what they want to do, and that the agoraphobic is avoiding doing what she doesn't want to do. Yet the intuition that addictions, compulsions and phobias reduce one's freedom seems to be a strong one. There are two possible ways to accommodate this intuition. (1) One approach is to look more closely at what is happening in such cases, and argue that despite appearances the person is not actually acting on their own desires. Thus, the simple compatibilist definition of freedom is preserved, and the cases are interpreted to show that they do not fit it. (2) The other approach is to modify the definition itself, so that not all situations where one is acting on one's desires count as situations where one is free. But both approaches share the intuition that addictions, compulsions and phobias reduce one's free will; they merely differ on *why* this is so. I will look at a number of different answers to the question of why these conditions reduce one's freedom. What I aim to show is that, whichever of these answers one accepts, the mandatorily-arising desires which are said by Evolutionary Psychologists to be part of our legacy from evolution, reduce people's freedom for exactly the same reason, at least *prima facie*.

(1) One approach to explaining why addictions, etc., reduce one's freedom is to argue that, when one succumbs to an addiction, one is not doing what one wants, despite appearances. For example, (1a) one might describe cases such as a person addicted to smoking, or compelled to count the paving-stones, as situations where it is impossible for that person to have all the things she wants. For example, she wants to smoke, but doesn't want to incur the health risks. There may be some problems with this approach, however, for it is possible for a person to be completely indifferent to all the drawbacks of smoking and yet still be addicted.

(1b) An alternative possibility might be that, although the person wants to smoke, at the same time she wants to not want to smoke. Her desire to not want to smoke is a *higher order* desire, and it is this that she is unable, or finds it hard to, fulfil, because of her addiction. Anybody who has tried to give up smoking or any other addiction will be familiar enough with this. However, although it may be a correct description of some cases, it suffers from essentially the same problem as (1a). A person who has no such higher order desire – who is perfectly happy with wanting to smoke – might yet still be addicted. I will say more about higher-order desires a little later.

(1c) We might accommodate cases where the addicted person has no conflicting desires by arguing that the addicted person is doing what she wants, but that her wanting to do it is not what's causing her to do it. For example, a person may enjoy drinking, like the taste, enjoy the social accompaniments and even enjoy the sensation of being drunk, and any or all of these may be the reason that the person drinks. On the other hand, the reason that the person drinks may be that she is an alcoholic. It may be that, for example, she might change her mind about the pleasantness of the taste of drink, about the desirability of pub company, and so on, and not find any reasons for wanting to drink left, but still drink. If this were the case, it would be reasonable to conclude that, before the person changed her mind, her drinking was not caused by those reasons, and conclude from this that she is an alcoholic. So her drinking, we might as well say, coincided with what she wanted to do, but was no more a free act than if someone

held a gun to my head and made me sign an agreement to do something I wanted to do anyway. Although this may again be the correct description of some cases, it does not cover all of them, because an addiction may itself *produce* a desire. So, even if a person has no other desire either to drink or not to drink, she may, just because she is an alcoholic, want to drink and be caused to drink by that wanting.

(2) On the other hand, rather than trying to see addicted persons as not really driven by desires, one might instead say that their desires are what's causing them to do the thing, but that there is something amiss with their desires. This would require modifying the simple compatibilist definition of freedom, so that more is required, to be free, than just being caused to act by one's desires. The desires themselves have to be of the right kind.

We need to say a bit more about higher-order desires. If having difficulty satisfying a higher-order desire counts as a restriction on freedom, then the term 'higher-order desire' may be plausibly extended to cover desires that are *hypothetical*. That is, it may cover what, all things considered according to my own judgement, I *would* want. The part about '*my own* judgement' is important, because we don't want to confine the term 'free' to only actions that arise out of desires that are right according to some impersonal objective rational standard of which I'm unaware or which I would positively reject. But the part about '*would* want', rather than positively do want, is important too. For many actions may arise out of desires that have no actual higher-order desires attached to them at all. An obvious example is eating because I'm hungry. The sum total of my attitudes towards eating may be: I'm hungry, so I want to eat. But, presumably, eating is also what I would want to do, taking all my desires into consideration (e.g. I don't want to die). On the other hand, the sum total of an alcoholic's attitudes towards drinking may be: I want more drink. Moreover, the alcoholic may even want to drink for other reasons as well – as mentioned above. But even if all the person's attitudes about drinking are 'pro-attitudes', and one of those attitudes – the desire to drink itself – is what's causing the person to drink, the person can still be an alcoholic. We need some way to mark the difference between this and eating because one is hungry, or any number of other acts done out of unreflected-upon desires that are perfectly harmless. I suggest that the relevant difference is that some unreflected-on desires would be what we would still decide was best, or at least not harmful, were we to reflect on them.

But there is, I think, a deeper reason behind this – which is, that we would like to think that, were we to reflect and change our minds about the desirability of doing something, we would be able to act, or refrain from acting, as we saw best without being faced with obstacles from our own desires. Because of this, the fact that one is restricted stems from the fact that something would make it more difficult to do as one wanted, even if it isn't actually preventing one from doing anything that one wants to do now. Even in the case of the happy alcoholic who wants to drink because of the taste, the pub company, etc., her freedom to refrain from drinking is restricted because she *would* find it hard to refrain from drinking if she were to change her mind about the taste, the desirability of pub company and so forth. But, similarly, a person who is locked in is restricted in her freedom to leave the house, even if she doesn't want to, because she *would* find it hard to leave were she to change her

mind. So any freedom worth wanting has to involve being free from obstacles to doing something that I want, even if this wanting is only hypothetical, and whether those obstacles are external or internal. For reasons given above, the relevant hypothetical desires should not be thought of merely as what an abstract person of perfect judgement would want to do; in the final analysis, they should be thought of as what the individual person is liable to find herself wanting to do.

The upshot of this, then, is that one can be restricted in one's freedom to do something even if one doesn't want to do that thing. And conversely, one can be restricted in one's freedom to refrain from doing something, even if one wants to do that thing and has no actual desires that conflict with it. The key point is that, on any reasonable account, a person's freedom to X seems to be reduced to the degree that (1) that person would find it difficult to X if she wanted to, and (2) that person is liable to find herself wanting to X. And, *mutatis mutandis*, a person's freedom to refrain from X-ing is reduced to the degree that that person would find it difficult to, etc.

It may not be immediately obvious why the second condition is needed. One might think that, if it is difficult for me to X, then that is sufficient for my freedom to X to count as being reduced. However, the second condition needs to be added to avoid counting as restrictions on freedom things that pretty clearly aren't. This can be seen if we once again consider hunger. Clearly, most of us would find it difficult to refrain from eating even if we wanted to, because we would get hungry. But we don't usually consider this a restriction on our freedom. The same goes for the desire to sleep, the desire to urinate, and so forth. One might be tempted to write such desires off as 'normal', and hence not possible to count as addictions, and hence not as restrictions on freedom. However, it is clearly a *non sequitur* to go from 'this is not an addiction' to 'this is not a restriction on freedom'. Moreover, we at least owe the hard determinist the courtesy of allowing it to be *possible* that even perfectly normal circumstances can count as restrictions on freedom. That is, we shouldn't claim it as an *a priori* truth that what's normal can't be a restriction on freedom. In any event, the term 'normal' is notoriously slippery, carrying with it a danger of slipping between 'statistically average' and something like 'normative' or 'healthy'. Desires that are not statistically average do not just for that reason count as restrictions on freedom – otherwise we would have to count homosexual desires or very specialist tastes in music as restrictions on freedom. Further still, there might be *specific situations* where even desires that are 'normal' – in the senses of *both* statistically average and healthy – count as restrictions on freedom. A person might, for reasons that are very central to her world-view and ideals, decide to go on hunger strike, in which case hunger might be best thought of as a restriction on her freedom. Such things have been known to happen. Still, for most of us the desire to eat is not a restriction on our freedom, and I suggest that this is because it is unlikely that it is going to conflict with another desire. To repeat what I said above, even if we don't often consciously think about it, most of us want to stay alive, so the desire to eat is a desire to do something that we would be perfectly happy to do if we thought about it. So it is not sufficient for something to be a restriction on freedom, that it would make it hard to do something if we wanted to: the *degree to which we are liable* to actually want to do that thing is also a factor.

Note that I say 'to the degree that' and not '*only* to the degree that'. I do not wish to rule out other ways in which freedom may be considered to be reduced. Nonetheless, I believe this captures the reason that we have a strong intuition that addictions, compulsions and phobias reduce people's freedom. It need not be impossible for a person to avoid acting on a psychological compulsion, but it is difficult for them, and that difficulty is to the degree that the compulsion is strong. Neither need a psychological compulsion be in conflict with a person's desires, but it is liable to be so. And it is to the degree that it is liable to be in conflict with other desires that it constitutes a reduction of freedom. The desire to eat does not usually reduce freedom, but others, such as the addict's desire to smoke, more often do. This is *not* because the former is normal and 'natural' while the latter isn't, but because the desire to eat doesn't usually make it hard to fulfil other desires, whereas the desire to smoke often does.[3]

12.4.2 Evolutionary Psychology's Account of Motivation

In this section I will argue that, because of Evolutionary Psychologists' commitment to the massive modularity thesis, there is strong *prima facie* reason to think that, on their account, many perfectly normal human impulses to act are similar to addictions, phobias and so forth. Specifically, their view implies that those normal human impulses possess the very features of addiction and phobias that make them, on any reasonable compatibilist account, count as restrictions on free will. This is not affected by the fact that Evolutionary Psychologists do not subscribe to genetic determinism. It is their commitment to the massive modularity thesis, and not any genetic determinism, that leads to their views having *prima facie* negative implications for free will.

The massive modularity thesis is an absolutely central distinctive feature of Evolutionary Psychology. The latter's major proponents – Leda Cosmides, John Tooby, David Buss, Steven Pinker, Donald Symons, and others – all explicitly endorse the massive modularity thesis, and employ it with great frequency in their psychological theories. As I will argue, this fact by itself has *prima facie* implications for how Evolutionary Psychologists will view human motivation. Moreover, some Evolutionary Psychologists explicitly tell a story about human motivation along these lines. It is this view of motivation, I will argue, that justifies the worries that critics of Evolutionary Psychology have about it having negative implications for free will.

The massive modularity thesis is the thesis that the mind consists wholly or largely of special-purpose, dedicated, cognitive mechanisms; no even approximate

[3] A possible objection to this pair of conditions (which was actually raised to me by both Alex Neill and one of the referees for this volume) is the following: it might occur that, for some reason, I want to grow wings and fly, and on my account the fact that I can't would then count as a restriction on my freedom. In response to this I say: (1) it is not news to anyone that we are unable to grow wings, whereas the point at issue here is whether Evolutionary Psychology, if true, gives us grounds for thinking that we have less free will *than we would otherwise think we had*; (2) it is in any event unclear whether we can be said to *want* to grow wings, rather than that we *wish* we could.

number is specified, but we are to take it that there are a great many of them. For Evolutionary Psychologists, this thesis is explicitly grounded in adaptationist arguments, to the effect that adaptations are solutions to specific problems that arise at specific places and times (in the case of our cognitive modules, the relevant environment of evolutionary adaptedness is the Stone Age), and to the effect that decoupling of function is advantageous. So, strictly speaking, these arguments only have force insofar as our cognitive architecture consists of adaptations, allowing for much cognitive architecture that neither consists of adaptations nor is modular. But Evolutionary Psychologists typically believe that most of our architecture does consist of adaptations, and hence that it is modular.

One of the key features of cognitive modules is that their operation is *mandatory*. Jerry Fodor explains this with simple examples:

> You can't help hearing the utterance of a sentence (in a language you know) as an utterance of a sentence, and you can't help seeing a visual array as consisting of objects distributed in three-dimensional space. Similarly, mutatis mutandis, for the other perceptual modes: you can't, for instance, help feeling what you run your fingers over as the surface of an object. (Fodor 1983, pp. 52-53)

A consequence of this is that cognitive processes that are modular take place even in spite of other information that the mind might have. This can be illustrated with optical illusions. The Müller-Lyer lines, despite being the same length, *appear* to be different lengths, as a result of the arrows on the ends pointing in different directions Even when one has measured the lines and seen that they are the same, the optical illusion doesn't go away. This suggests that whatever part of the mind processes visual input does not receive all the information that is available to other parts of the mind. The knowledge that the lines are the same length does not seem to get through to the visual-processing mechanism – it still 'thinks' that they are different lengths. Evolutionary Psychologists would add to this story that it is because evolution hasn't prepared us for this trick that the Müller-Lyer lines appear to be different lengths in the first place. There presumably weren't any Müller-Lyer lines around in the Stone Age.

It is relatively uncontroversial that sense-perception and language comprehension are underpinned by cognitive modules. But Evolutionary Psychologists claim that a whole host of other things are as well. They claim that evolution has bequeathed us a host of automatic responses to situations, which are to be understood as responses that would have been fitness-enhancing for Stone Age humans.

> [O]ur minds consist of a large number of circuits that are *functionally specialized*. For example, we have some neural circuits whose design is specialized for vision. All they do is help you see. The design of other neural circuits is specialized for hearing. All they do is detect changes in air pressure, and extract information from it. They do not participate in vision, vomiting, vanity, vengeance, or anything else. Still other neural circuits are specialized for sexual attraction – i.e., they govern what you find sexually arousing, what you regard as beautiful, who you'd like to date, and so on. (Cosmides and Tooby 1997, p. 7. ; emphasis in original)

> [T]he reasoning circuits and learning circuits discussed above have the following five properties: (1) they are complexly structured for solving a specific type of adaptive problem,

> (2) they reliably develop in all normal human beings, (3) they develop without any conscious effort and in the absence of any formal instruction, (4) they are applied without any conscious awareness of their underlying logic, and (5) they are distinct from more general abilities to process information or behave intelligently. (Ibid., p. 9)

Evolutionary Psychologists often explicitly say that their commitment to the massive modularity thesis distinguishes their school of psychology from other evolution-based ones. For example, Donald Symons (1992) distinguishes Evolutionary Psychology from something which he calls "Darwinian Social Science". On Symons' account, the latter is committed to the idea that evolution has bequeathed us a general desire to survive or to reproduce. According to "Darwinian Social Science", this general desire causes us to have more specific desires, such as the desire to eat or to have sex. However, Symons and other Evolutionary Psychologists argue that evolution could not possibly have produced such a general desire. Rather, they argue, natural selection would favour special-purpose cognitive mechanisms that produce specific responses to specific conditions – for example, finding a certain food tasty or finding a certain person attractive. The fact that we possess these responses is explained by their contribution to our ancestors' survival and reproduction – *not* by any desire that we have to survive or reproduce.

Based on this, Evolutionary Psychologists have a standard template for explaining human psychological traits. It goes like this: (1) There is some problem that Stone Age humans had to solve in order to maximise their chances of surviving and reproducing – e.g. the problem of deciding who to mate with; (2) they did not solve this problem by conscious reasoning; instead, natural selection produced cognitive mechanisms that were dedicated to solving it – e.g. the cognitive mechanisms that cause us to find certain individuals sexually attractive; (3) those cognitive mechanisms operate non-consciously and mandatorily – e.g. we do not consciously calculate how beneficial to our genes it would be to mate with a certain person; rather, we simply find certain people sexually attractive, and we have no control over that fact; (4) those cognitive mechanisms are adapted to conditions in the Stone Age; they need not be fitness-enhancing in present-day conditions.

As an example of this template in action, consider Symons' account of humans' desire to eat sweet foods. Eating as much sugar-containing food as one could get would be a good strategy in an environment where there wasn't very much of it around, but it would be a very poor strategy today. Even Evolutionary Psychologists hold that we don't have to act on these automatic responses: the responses are desires, not actions. But they emphasise that the responses themselves are things we have no control over:

> Human behavior is flexible, of course, but this flexibility is of means, not ends, and the basic experiential goals that motivate human behavior are both inflexible and specific. For example, assume that we, along with many other primates, possess a specialized gustatory mechanism underpinning the sensation of sweetness. This mechanism was shaped by natural selection in ancestral populations because a sugar-producing fruit is most nutritious when its sugar content is highest, hence individuals who detected and liked sugar produced, on average, more progeny than did individuals who could not detect sugar or who actually preferred the taste of green or overripe or rotten fruit. Since human behavior is so flexible, we have been able to develop virtually an infinite number of ways of obtaining sugar; but the goal of eating sugar remains the same – to experience the sensation of sweetness.

> In modern industrial societies, where refined sugar is abundantly available, the human sweet tooth may be dysfunctional, but sugar still tastes sweet, and the goal of experiencing sweetness still motivates behavior. That's how we're made. We can decide to avoid refined sugar, but we can't decide to experience a sensation other than sweetness when sugar is on our tongues. …
>
> In summary, although human behavior is uniquely flexible, the goal of this behavior is the achievement of specific experiences – such as sweetness, being warm, and having high status. (Symons 1992, pp. 138-139)

So the claim is that, not just the sensation of sweetness, but the desire to eat sweet things arises mandatorily, just as the perception of a visual array as a three-dimensional object does. Note that Symons says that, even though human behaviour is flexible, the sweet taste of sugar and the goal of obtaining it remain unchanged. To go back to the particular example mentioned by Rose, the analogous claim is not that men can't help philandering, but that the temptation to philander arises mandatorily. Still, we might say, nobody is claiming that we are *compelled* to act on such temptations, so they do not count as restrictions of our freedom. Things are not quite that simple, however.

The worry that they might be restrictions on freedom arises from the Evolutionary Psychologists' claim that our cognitive modules are an inheritance from the Stone Age, and hence are likely to be adaptations to life in the Stone Age. But what was adaptive in the Stone Age need not be adaptive now, and nor need it coincide with what we want now. The desires to eat, drink and sleep would not normally count as restrictions on freedom, however mandatory they might be, because eating, drinking and sleeping are all still things that, all things considered according to our own judgement, we *would* want to do. But the same may not be true of all the things that it was good for our Stone Age ancestors to do. Eating as much sweet food as possible was something that promoted the well-being of Stone Age humans, and so was something that, all things considered according to their own judgement, they would want to do. Even if they didn't *know* that ripe fruit was more nutritious, they didn't know of any reason why eating it would be a bad thing (and, *ex hypothesi*, there usually wasn't any such reason). But nowadays a person, faced with a far greater amount of sugary foods, is reducing her fitness by pursuing the same strategy, acting on the same mandatorily-arising desires. That would not in itself make it a restriction on freedom, but there is the further fact that we now *know* that too much sweet food is bad for you. Hence, we are *liable* to not want to eat so much of it. Evolutionary Psychology implies that we have automatic responses to situations that are fundamentally inappropriate to those situations, even if we have information that would enable us to respond more appropriately, and even if we *want* to respond more appropriately. Since the automatic responses are said to be desires, not actions, we are not prevented from making the appropriate response – that is the straw man of genetic determinism. But if the evolved responses really are as mandatory as the Evolutionary Psychologists claim, then they are going to make it difficult to do things that we are liable to want to, and to refrain from doing things that we want to refrain from doing. Hence, it looks like they are restrictions on our freedom.

As a consequence of this, it also looks as though both the worries about responsibility and those about fatalism have some justification when it comes to Evolutionary Psychology. Addictions are generally taken to reduce responsibility. One may be

held responsible for *becoming* addicted, and hence for what one does when addicted, but that wouldn't make one responsible for inborn addiction-like tendencies, which is what the mandatorily-arising desires hypothesised by Evolutionary Psychologists appear to be. So what about Rose's worry – that an excuse is being given to philandering men? Since Evolutionary Psychologists see sexual desires as products of natural selection, and hence as based on modular cognitive architecture that kicks in automatically, it looks as though they are just as mandatory as the experience of sweet. Indeed, although Evolutionary Psychology aspires to being a complete theory of the underlying architecture of the human mind, the differences between the mating strategies of men and women are their number one favourite subject. They allege that it made sense for men in the Stone Age to be promiscuous, and for women to be highly selective, and that these strategies are embedded in preferences that are hardwired into the human mind. So, *prima facie*, it looks as though they are saying that men are perpetually tempted to philander. This suggests, in turn, that it is hard for men to refrain from philandering, even if they want to refrain. So it looks as though Evolutionary Psychologists are claiming that men's freedom is reduced in this regard. And it also looks as though what they are saying is that these desires are out of our control. Thus, they seem to be suggesting that no matter how much a man might not want to philander, the desire to philander will arise. This desire will in turn reduce men's ability to avoid philandering, the extent to which it reduces it depending on how strong the desire is. Hence we are all, on Evolutionary Psychology's picture, in a position analogous to that of the young person who is fated to embrace her parents' values even if she does not want to.

12.5 Conclusion: Evolutionary Psychology's Get-out Clause

Alert readers will have noticed that I have said 'looks like' and '*prima facie*' quite a lot. I have only been arguing that there is at least a plausible case that can be made that central claims of Evolutionary Psychology have negative implications for free will. Evolutionary Psychologists sometimes show an awareness of this problem, and gesture towards a solution by claiming that we have the ability to override the motivations generated by our evolved cognitive mechanisms. Some are fond of pointing out that *of course* they don't believe that it is inevitable that we will behave in the ways that our evolved cognitive architecture is designed to make us behave. Steven Pinker cheerfully points out that, although he is a healthy, high status male, he has yet to produce any offspring: "I am happy to be that way, and if my genes don't like it, they can go jump in the lake" he declares (Pinker 1997, p. 52). Similarly, Radcliffe-Richards says:

> Occasionally, of course, an emotion is so overpowering that a person is no longer capable of control, but that is a situation we count as mental disorder or illness, or, when temporary, a state of diminished responsibility. If evolutionary psychologists claimed that genetically ingrained emotions were typically of this kind – a kind that constituted mental illness – that would, of course, be enough to prove that evolutionary psychology was nonsense. But … evolutionary psychology makes no such claim. The claims of evolutionary psychology are about the *origins* of human dispositions, not about how strong they are. (Radcliffe-Richards 2000, p.115; emphasis in original)

She is thus denying the similarity that I am claiming exists between addictions, etc., and the mandatory desires that Evolutionary Psychology postulates. As a brief aside, it should be pointed out that Evolutionary Psychology does *not* just make claims about the origins of dispositions, but also about what dispositions we are likely to have and what form they take (cognitive modules). But the big problem is that it is not clear *how* they think we come to be able to override our evolved desires. Hence, it is not clear how, on their account, those desires are relevantly different from those of an addict or a person with OCD. It is a central pillar of their view that that all or nearly all of the underlying architecture of the human mind is modular. (For a sceptical view on this, see Fodor 2000.) But then, it is not clear just how the automatic responses get overridden. I am not here expressing scepticism about the claim that they *are* overridden, but pointing out that it is not clear what the mechanisms *by means of which* they are overridden are supposed to be. Unless we know this, we don't know just how easy or difficult the automatic desires are to override. If they are *very* easy to override, they don't count as reductions of freedom at all, and so we have nothing to worry about. But since the Evolutionary Psychologists have given us nothing that would supply an answer to the question of how difficult it is, we don't know to what extent – if any – they are giving excuses to ne'er-do-wells. Nor do we know just how hard it is for ourselves to escape biological destinies that might not appeal to us. Consequently, we don't know just how worried we should be.

This is one reason why we need a clearer account of what exactly Evolutionary Psychologists are claiming about motivation than has so far been given in the literature. They often say that we can override those desires that we have inherited from our Stone Age ancestors, but they give no account of how we are able to do this. It *is* possible, and indeed *prima facie* not all that difficult, for men to resist the temptation to philander. But Evolutionary Psychologists claim that their theories provide a causal account that explains why behaviours of this kind exist. More generally, they see their theories as providing insight into the causes of large swathes of human behaviour. If that's the case, then they owe us an account of why people behave in ways that are different from the ways their cognitive modules are 'designed' to make them behave. Evolutionary Psychologists might claim that we are self-deceived about how easy it is to override them; for example, they might claim that a lot more philandering goes on than we think, and that that is because of the difficulty of resisting the promptings of our evolved modules. If that is the case, then Evolutionary Psychologists can indeed claim to have uncovered significant causal factors in human behaviour. But equally, if that is the case, and to the extent that that is the case, they bring us bad news about free will. They cannot have things both ways. As things stand, *either* they have an account of motivation that has negative consequences for free will, *or* they have a seriously incomplete account of motivation, and hence of the mind generally.[4,5]

[4] It will be noticed that I have said nothing about whether any other scientific account of psychology is likely to lead to similar problems for free will. This is because I am concerned here with the issue of whether, specifically, Evolutionary Psychology raises *distinctive* problems for it. As I hope to have shown, Evolutionary Psychology's distinctive combination of modularity with the claim that the mind is fundamentally adapted to Stone Age conditions, means that it does.

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