# Do evolutionary debunking arguments rest on a mistake about evolutionary explanations?

*Abstract*:

Many philosophers accept the *Debunking Thesis*, according to which facts about natural selection provide debunking explanations for certain of our moral beliefs. I argue that philosophers who accept the *Debunking Thesis* beg important questions in the philosophy of biology. They assume that past selection can explain why you or I hold certain of the moral beliefs we do. A position advanced by many prominent philosophers of biology implies this assumption is false. According to the *Negative View*, natural selection cannot explain the traits of individuals. Hence, facts about past selection cannot provide debunking explanations for any of our moral beliefs. The aim of this paper is to explore the conflict between the *Debunking Thesis* and the *Negative View*. (9,187 words)

## 1. Introduction

Evidence suggests that human morality has evolved under natural selection. However, our best understanding of the evolutionary process indicates that there has been no selection for true moral beliefs. Many philosophers feel that evolutionary explanations in moral psychology are therefore *debunking*.[1] More exactly, they accept what I shall call the *Debunking Thesis*: that facts about natural selection provide debunking explanations for certain of our moral beliefs.

I argue that philosophers who accept the *Debunking Thesis* beg important questions in the philosophy of biology. In particular, they assume that past selection may explain why you or I hold certain of the moral beliefs that we do. A position accepted by many

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[1] Crisp (2006), de Lazari-Radek & Singer (2012), Huemer (2008), Joyce (2000, 2001, 2006), Parfit (2011), Rosenberg (2011), Ruse (1986), Singer (1981, 2005, 2006). Kahane (2011) and Street (2006, 2008, 2011) hedge this conclusion: evolutionary explanations are debunking iff we assume some form of meta-ethical realism.

prominent philosophers of biology implies that this assumption is false: although natural selection explains many important evolutionary trends, it cannot explain the traits of individuals; instead, the traits of individuals are to be explained by inheritance, development, and other proximate factors.[2] Following tradition, I call this the *Negative View*. The *Negative View* entails that facts about past selection *cannot* form part of discrediting explanations for any of my moral beliefs, nor those of any other human being.

The aim of this paper is to explore the conflict between the *Debunking Thesis* and the *Negative View*. Section 2 will explain what those who accept the *Debunking Thesis* believe, and why they believe it. Section 3 will offer a similar treatment of the *Negative View*. I will then consider how those who accept the *Debunking Thesis* might respond to the conflict between the *Negative View* and the *Debunking Thesis*. I examine whether they might do well to look for counterexamples to the *Negative View* (section 4) or to recast their arguments so as to beg no questions in the philosophy of biology (section 5). I argue that either approach faces significant problems. Finally, in section 6, I suggest that a better response may be to retain our commitment to the idea that evolutionary considerations can debunk our moral beliefs, but give up the claim that these considerations have to do with natural selection. Instead, I suggest, evolutionary debunking arguments would do well to emphasize the explanatory significance of phylogeny.

## 2. Evolutionary debunking arguments in ethics

Many contemporary philosophers believe, as stated, that our moral beliefs can be debunked by the provision of information about the selection pressures affecting the evolution of

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[2] Pust (2001, 2004), Sober (1984, 1995), Walsh (1998), Walsh, Lewens, & Ariew (2002). In some respect, this claim is also endorsed by Lewens (2001) and Matthen (1999, 2002, 2004); see sections 3 and 4 for further discussion.

morality. In assessing this claim, the first thing we need to do is become a little clearer on what it means. We can start by asking what it is for a belief to be *debunked.*

It is common to understand the notion of debunking using the idiom of *defeat,* introduced by John Pollock (1970, 1986). Thus, I will assume that a belief is debunked by virtue of being subject to a *defeater,* where a defeater is a condition that provides a *prima facie* reason to withhold belief from some proposition that one would otherwise have been justified in believing. For example, if Expert 1 tells me ⌜$p$⌝, but later Expert 2 tells me ⌜$\neg p$⌝, the latter constitutes a defeater. The testimony of the second expert cancels my pre-existing justification for believing the first expert's testimony by providing an equally strong reason to believe to the contrary. A defeater of this kind is called *rebutting.* If Expert 1 tells me ⌜$p$⌝, but I then learn that her utterance was the result of momentary psychosis, this also constitutes a defeater. Learning that her utterance is due to mental illness cancels my pre-existing justification for trusting Expert 1's testimony by providing evidence that the causal factors relevant to my acquisition of the belief and/or the evidence on which it is based are in some sense discrediting. A defeater of this kind is called *undercutting.*

Philosophers agree that if evolutionary considerations provide defeaters for our moral beliefs, these are undercutting defeaters, rather than rebutting defeaters.[3] Evolutionary considerations do not speak directly to the truth or falsity of our moral beliefs. Instead, they are supposed to indicate that the causal factors relevant to the acquisition of certain of our moral beliefs are discrediting.

The proponents of evolutionary debunking arguments rely on the premise that certain elements of our moral psychology are the product of natural selection. They vary in their assumptions about which elements of our moral psychology represent adaptations. Rarely do they assume that particular moral beliefs with determinate contents have been the object of selection. For example, Richard Joyce (2001, 2006) assumes that selection explains

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[3] See, e.g., Joyce (2006), Kahane (2011).

why we are disposed to apply moral concepts to features of the world. According to Joyce, "Natural selection has provided us with a tendency to invest the world with values" (2001: 136). However, Joyce remains agnostic as to what extent, if any, selection has played a role in determining which features of the world are classified with which moral concepts. By contrast, Sharon Street (2006, 2008, 2011) assumes that natural selection has played an important role in determining the content of our ethical beliefs, albeit indirectly. Street believes that selection accounts for certain basic evaluative tendencies that we have inherited; these primitive evaluative dispositions, in turn, bias our ethical beliefs in certain directions.

The role of natural selection in the evolution of morality is supposed to be discrediting because it appears that there has been no selection for psychological structures that would incline us to adopt true moral beliefs. In other words, the advantages conferred by those elements of our moral psychology that have evolved by selection are independent of any assumptions regarding the truth or falsity of any corresponding moral beliefs. Street (2008) illustrates the general principle as follows: "the best explanation of why we tend to value our survival is not that it's independently true that our survival is valuable … but rather, much more simply, that creatures who valued their survival tended to do what promoted it, and therefore left more descendants." (209) To put the point in more anthropomorphic terms: in designing the human moral sense, natural selection didn't aim for truth or reliability.

Philosophers who accept the *Debunking Thesis* are not agreed as to exactly which epistemic principles allow us to conclude that the failure of natural selection to select for true moral beliefs is defeating. Some believe that this information can be used in combination with Ockham's Razor to undermine belief in moral facts.[4] Others suppose that this information can be used to show that we would hold certain of our moral beliefs even if

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[4] Joyce (2006), Ruse (1986). Cf. Gibbard (1990).

they were false, and this provides a reason for us to abandon these beliefs.[5] Street (2006, 2008, 2011) appeals to the suggestion that it would have to have been an extraordinary coincidence if the basic evaluative tendencies favoured by selection tend in the direction of the objective truth.[6]

There are other sources of diversity. Philosophers who accept the *Debunking Thesis* disagree about the extent of the required revisions in our moral outlook: some believe that only a proper subset of our moral beliefs must be revised;[7] some believe that everything must go.[8] They may also disagree about whether the truth of the *Debunking Thesis* hinges on particular meta-ethical assumptions. Some believe that the *Debunking Thesis* is true iff meta-ethical objectivism is the best account of the truth-conditions of our moral beliefs;[9] others deny this.[10]

Underlying this diversity is the common belief that natural selection explains certain moral beliefs that we hold, and that it does so in a discrediting fashion. Those who accept the *Debunking Thesis* must assume that natural selection is in principle able to explain why you or I have the concept of moral obligation, or why we have a disposition to value our survival, or something along those lines. This implies that natural selection explains the traits of individuals. This assumption may appear innocent. It may be thought to be a cornerstone of the Darwinian view of evolution. In fact, it is subject to powerful objections.

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[5] Joyce (2001), Ruse (1986), Parfit (2011). Cf. Nozick (1981, 342-348).

[6] See also Huemer (2008), Rosenberg (2011). For further discussion of Street's view, see section 6.

[7] Crisp (2006), Huemer (2008), Singer (2005), Parfit (2011).

[8] Joyce (2006), Kahane (2011), Rosenberg (2011), Ruse (1986).

[9] Kahane (2011), Street (2006).

[10] Joyce (forthcoming).

## 3. The *Negative View*

Like the claim that our moral beliefs can be debunked by information about the evolution of morality, the claim that natural selection does not explain the traits of individuals requires some initial clarification. In particular, it is important to be clear on what it does *not* imply. This will help to show why the *Negative View* does not conflict with the Darwinian view of nature.

Firstly, the *Negative View* leaves open and is often asserted in conjunction with the claim that selection explains the frequencies with which traits occur in populations. An analogy proposed to Elliot Sober (1984) helps to clarify the point. Suppose that no child is admitted to a certain room unless they can read at a third grade level. Various children are examined: some are accepted, others are rejected. The selection procedure will explain why all of the children in the room read at a third grade level. However, it will not explain, of any particular child in the room, why she has this level of reading proficiency. Similarly, according to the *Negative View*, natural selection does not explain why any particular individual within a given population exhibits some trait, though it often explains why some percentage of the population exhibits the trait in question.

Secondly, the *Negative View* is distinct from the view that natural selection cannot explain the origin of traits.[11] Some have thought that traits originate by mutation and are then merely sieved by selection; traits never arise *because of* selection.[12] The *Negative View* does not commit us to this picture. The picture is not plausible, in any case, when we consider traits such as echolocation or bipedal motion. Complex adaptations such as these depend on many subtle changes in the genome: these traits could not have arisen except through the gradual retention and spread of innumerable minor modifications arising

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[11] These positions are sometimes run together: *e.g.*, by Martinez & Moya (2011) and Neander (1988, 1995a, 1995b). Forber (2005) is careful to distinguish these questions, as are Razeto-Barry & Frick (2011).

[12] See Cummins (1975).

independently of one another. Their retention and spread must be explained by selection, and thus selection explains the origin of traits such as these.[13] The *Negative View* is compatible with this. The *Negative View* allows that natural selection explains why there exist organisms that have some trait $T$, as opposed to there being no organisms that exhibit this trait. The *Negative View* merely denies that there exists any particular organism such that past selection explains why it has $T$, as opposed to lacking $T$.

Once the *Negative View* is properly clarified in this way, it appears much less surprising or revisionary. It cannot easily be dismissed. We can add further plausibility to the *Negative View* by thinking critically about the suggestion that what you or I value may be explained by facts about past selection pressures. Street (2011) says: "we probably value many of the things we do … because valuing such things tended to enhance reproductive success in the environment of our ancestors." (12) As we'll now see, it is *prima facie* difficult to understand how this could be the case.[14]

The suggestion we are to consider is that what you or I value depends in some way on the rate at which ancestral hominids reproduced. Imagine, then, two ancestral hominids, $A$ and $B$, who exist at some point in the Pleistocene epoch. $A$ is my ancestor. Like me, she has an innate predisposition to form the belief that she must reciprocate benefits; I have inherited this predisposition from her. $B$ lacks this predisposition. Due to certain conditions that determine the fitness-consequences associated with the trait of reciprocity, $A$ is fitter than $B$, and so $A$ contributes more offspring to the subsequent generation. These offspring, we'll assume, inherit her predisposition to believe that benefits should be reciprocated. In what way could my present disposition to adopt this belief depend on the greater reproductive success of $A$ in this context?

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[13] See Dawkins (1986), Forber (2005), Neander (1995a).

[14] My reasoning in the following draws on a similar discussion in Sober (1995).

It is easy to see how $A$'s reproductive success may explain why the belief that benefits should be reciprocated increases in frequency over time. It is also easy to see that if $A$ had had fewer children, then I might never have come to exist, because the lineage which leads from $A$ to me would not have occurred. This shows that $A$'s reproductive success may explain why I exist, as opposed to being non-existent. The relevant explanandum, however, is not my existence, but my having a certain innate predisposition to believe that benefits should be reciprocated. I might conceivably have existed without this disposition. It remains unclear how this state of affairs might have come about as a result of $A$ having greater or fewer children. So it is unclear in what sense my possession of this trait depends on $A$'s reproductive success.[15]

Similar points apply with respect to the reproductive success of $B$. $B$ might have had more children or fewer. In so doing, she might have altered the frequency with which (un)belief in reciprocity occurs in subsequent generations. However, it is *prima facie* obscure how she might thereby have produced a world in which I exist without my innate predisposition to value reciprocity. How could the existence of a greater or lesser number of her descendants have altered me in this way?

One possibility, suggested by Karen Neander (1988) and developed in greater detail by Mohan Matthen (1999), is that selection might determine an organism's traits by affecting the frequency with which certain alleles occur in the ancestral gene pool from which the organism must inherit its genotype. Because the organism's genome must be drawn from this pool, one might think that the relative frequency with which a certain allele

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[15] Someone might think that since $o$'s existence is necessary for $o$ to have $T$, explaining $o$'s existence partially explains why $o$ has $T$, and so selection for $T$ can explain why $o$ has $T$ if it can explain why $o$ exists. But in that case, whenever natural selection explains an organism's existence, it would explain all of its properties. Thus, in our example, selection for the trait of reciprocity would explain why I wear blue jeans or once owned a bike with a red frame. This, I take it, is absurd.

occurs determines the probability of inheriting it: the rarer the gene, the lower the probability. Thus, if a certain allele is driven to fixation in prior generations, this may explain why I exhibit a certain corresponding trait: by driving individuals carrying alternative alleles from the population, selection ensured that I would inherit this allele, rather than its extinct competitors. Stated differently: if selection against alternative alleles had not been as strong, one of my ancestors might have been a carrier of some alternative allele, and consequently my genotype and phenotype might have been different.

Whilst superficially plausible, it is well known that this line of reasoning runs into problems because it contradicts *Origins Essentialism*, as defended by Kripke (1980). [16] The reasoning in the previous paragraph assumed that I might have had a different genotype if one of my ancestors had mated instead with an individual carrying an allele that was in actuality rendered extinct by selection. According to *Origins Essentialism*, each of us could not have been born to different parents. It is equally true that our parents could not have been born to different parents, and so forth. On this view, my ancestry constitutes an essential property of me. It is therefore false that I might have had a different genotype had one of my ancestors mated with a someone else – someone carrying an allele that was in actuality rendered extinct by selection. Had that occurred, I would not exist, because the particular lineage of couplings from which I originate would not have existed.

Joel Pust (2001, 2004) has seized on this point to argue that *Origins Essentialism* suffices to establish the *Negative View*. Selection is limited to determining the rate at which individuals of certain types contribute descendants to successive generations. Selection determines, in effect, which lineages exist and which do not. According to *Origins Essentialism*, my lineage is an essential property of me. Thus, if natural selection is limited to determining which lineages exist, the only thing about me that would appear to be explained by past selection is my existence.

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[16] See Matthen (1999), Pust (2001).

Matthen (1999, 2002, 2003), in turn, has argued that *Origins Essentialism* is too metaphysical to be of relevance to our understanding of contemporary biology. Matthen claims that explanations in population genetics should be interpreted as referring to individuals understood merely as *receptacles for genes*. Genetic receptacles of this kind, he suggests, should be understood such that they could have existed with a different genotype if certain prior individuals had mated differently; the assumption that they must be individuated in terms of their ancestry goes beyond anything required by the theory of evolution. Thus, to the extent that *Origins Essentialism* is true of a certain class of individuals, Matthen suggests, these simply fall outside the ontology of population genetics. Objections have been lodged against this interpretation by Pust (2004) and by Tim Lewens (2001). However, for our purposes Matthen's view is strictly irrelevant, so long as we assume that *Origins Essentialism* applies to you and me. Our interest is in whether facts about past selection explain why you or I hold certain moral beliefs, and how we should react to this. The explanatory significance of natural selection for the traits of a different class of entities is quite irrelevant.

This completes my overview of the case for the *Negative View*. It is far from being the final word.[17] What I hope to have shown is that the *Negative View* is not as implausible as it might first have seemed: it has a number of considerations in its favour. Thus, any conflict between the *Debunking Thesis* and the *Negative View* deserves to be taken seriously.

The existence of such a conflict should be clear enough. The *Debunking Thesis* states that facts about the selection pressures affecting the evolution of morality provide discrediting explanations for certain of our moral beliefs. According to the *Negative View*, past selection pressures do *not* explain our moral beliefs. If the *Negative View* is true, the

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[17] Nanay (2005, 2010) provides a recent argument against the *Negative View*. For replies, see Helgeson (2013), Stegmann (2010a, 2010b). Birch (2012) argues that the *Negative View* is ruled out if we adopt a criterion of explanatory relevance proposed by Strevens (2008: 174-177).

explanation that we should accept for why you or I believe what we do about right and wrong should be same whether we suppose that beliefs of this kind were selectively advantageous because they were true or for some other reason. Since adopting the view that there was no selection for true moral beliefs makes no difference to the explanation of our moral beliefs, it is mysterious how it could make any difference to our reasons for revising these beliefs, assuming that any such reasons would have to come in the form of evidence about their discreditable causal origins. The causal origins should be thought the same whatever we believe about the nature of selection.

Thus, if selection does not explain the traits of individuals, it appears mistaken to give up any of our moral beliefs on the assumption that facts about past selection pressures constitute or imply the presence of undercutting defeaters for those beliefs. Given that the *Negative View* is *prima facie* plausible, how might proponents of the *Debunking Thesis* address this conflict?

### 4. Denying the *Negative View*

The most obvious response would be to reject the *Negative View*. Reasons would have to be found for doing so, but reasons of that kind are to be had. Whereas I have rehearsed a number of considerations that I believe confer significant plausibility on the *Negative View*, I believe that it is only *very nearly* true: there are certain clear counterexamples. However, these counterexamples to the *Negative View* ultimately provide little comfort to proponents of the *Debunking Thesis*.

As Tim Lewens (2001) has noted, there are some traits whose acquisition can be explained by prior selection for organisms possessing those traits: namely, traits whose development depends on the prior frequency with which they occur within a population. If an organism, $o$, acquires a certain trait, $T$, in the course of ordinary development only if $n\%$ of the population already exhibit $T$, selection for $T$ could explain why $o$ has $T$ by explaining

why more than *n*% of the population exhibit *T*, as everyone grants that it may. In this way, selection for a trait may explain why certain individuals exhibit that trait. Thus, the *Negative View* is false in some cases involving traits whose development is sensitive to their prior distribution in the population.[18]

Is this any comfort to those who hold the *Debunking Thesis*? Well, it means, of course, that the *Debunking Thesis* may be true for moral beliefs whose adoption is contingent on their prior distribution within the population. The most obvious cases of this kind would be beliefs that we adopt simply because we follow the majority. The least plausible candidates, I think, would be moral beliefs with an innate basis. Innate behaviours, I assume, are not learned and their ontogeny is canalized against environmental variability: within normal parameters, they develop come what may.[19] Of all traits, innate characteristics are thus least likely to depend for their ontogeny on particular features of the developmental environment like those we have been discussing. Somewhat paradoxically, it is when a trait is innate that its possession by some particular organism is least likely to be explained by selection.

The view that evolutionary considerations may give us reasons to revise our ethical beliefs iff we hold those beliefs due to their popularity was a view put forward in the 1980s by Derek Parfit (1984). Parfit claimed that the discovery of an evolutionary explanation for some ethical belief is, in and of itself, no reason to revise our view. However, evolutionary considerations may serve to undercut someone whose confidence in some ethical proposition hinges on the fact that everyone accepts it. Since the fact that everyone accepts the proposition can be explained by natural selection without reference to its truth or falsity, its popularity provides no evidence that the proposition is true, and thus should not serve as a

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[18] See McLoone (2013) for a suggested revision of the *Negative View* that avoids counterexamples of this kind.

[19] Ariew (1996, 1999), Samuels (2002, 2004), Sober (1998), Stich (1975).

basis for adopting the belief in question.[20]

It has been characteristic of the new breed of philosophers working on evolutionary debunking arguments to want to go beyond this claim. They want to say that if some evaluative belief has an evolutionary explanation, this fact is *not* of itself neutral with respect to the justificatory status of the belief in question. Thus, Kahane (2011) says of Parfit (1984) that he "makes it seem as if evolutionary explanations only undermine the epistemic significance of wide agreement. But this is too weak." (110) Parfit (2011) has since changed his view and now accepts the *Debunking Thesis*. In light of our discussion, we may worry that this is a mistake.

The fact that innate beliefs are the least plausible candidates for debunking by reference to facts about natural selection creates its own problems for those who accept the *Debunking Thesis*. Proponents of the *Debunking Thesis* typically rely on claims about innateness to establish a presumptive case that certain elements of our moral psychology can be outfitted with evolutionary explanations. For example, a key component in Joyce's (2006) debunking argument is evidence that human children everywhere readily acquire the ability to distinguish between moral and conventional norms;[21] Joyce treats this as evidence that moral concepts are innate.[22] Kahane claims that evolutionary debunking arguments "commit us to claims about innateness – not necessarily of the evaluative beliefs themselves, but of strong dispositions that push people in their direction." (112) If I am right, evidence of innateness is in fact one of the best means by which to guard a belief against being debunked by appeal to facts about past selection pressures.

This problem could be overcome, of course, if those who accept the *Debunking Thesis*

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[20] For a similar view, see Singer (1981).

[21] See Nucci (2001), Turiel (1983, 2006).

[22] This contradicts the view of the developmental psychologists responsible for the research discussed by Joyce. See, in particular, Nucci (2001: 13).

gave up their focus on innate features of our moral psychology. They would be advised to do so in any case. There is no necessary connection between adaptation and innateness. Many innate traits, such as autistic spectrum disorder, are not adaptations. Similarly, many adaptations are not innate. Street (2006) claims that "for evolution by natural selection to take place with respect to a given trait, the trait in question must be genetically heritable." (118) This is not so. Selection occurs when the members of a population vary in ways that lead some to survive and reproduce at greater rates than others, provided that those traits which lead to increased reproductive success are reliably transmitted across generations. The exact mechanism by which favoured traits are transmitted is not specified by the definition of natural selection, and Darwin famously had a poor understanding of the mechanism of biological inheritance. Thus, traits which are transmitted across generations as a matter of social learning can in principle evolve by selection and constitute adaptations.

As this shows, there is no necessary distinction between evolution and culture. A trait that is selected for and constitutes an element of cultural inheritance will be an adaptation, but certainly not an innate trait. Notably, recent work on the evolution of social norms and prosocial behaviour in human groups emphasizes culture as integral to the evolution of morality.[23]

This movement is bound up with the renaissance in explanations appealing to selection across groups as a significant force in the evolution of moral norms and associated behaviours.[24] The importance of culture to group selection derives from the fact that selection requires variation. Group selection is strongest when variation across groups is

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[23] See Bowles & Gintis (2011), Henrich & Henrich (2007), Richerson & Boyd (2005), Sober & Wilson (1998). More exactly, the emphasis is on *gene-culture co-evolution*, which involves reciprocal interactions between cultural and genetic inheritance, as in the acquisition of lactase persistence by dairying peoples in Europe and Africa.

[24] On which, see Wilson & Wilson (2007).

high and variation within groups is low. One of the reasons that biologists have been prone to dismiss group selection as an evolutionary force is that stable genetic differences between animal groups are typically slight and easily offset by migration and exogamy.[25] When we introduce culture into our picture, this problem lessens. A system of cultural inheritance can render members of the same group more similar in their behaviour than their genetic commonalities would suggest and amplify the behavioural differences between genetically similar groups. The ability of cultural systems to suppress intragroup differences derives from the fact that acquisition of cultural traits *is* often sensitive to their prior distribution within the population. In particular, cultural transmission is governed by a *conformist bias*: individuals tend to imitate the most common behaviour observed within the population.[26] Conformist bias helps renders cultural traits stable against the force of migration, with new arrivals tending to adopt the behaviour of the majority.

Emphasizing the role of culture in human evolution has thus allowed contemporary researchers to resurrect Darwin's (1879/2004) original suggestion that morality has evolved under natural selection "although a high standard of morality gives but a slight or no advantage to each individual man" since "an advancement in the standard of morality and an increase in the number of well-endowed men will certainly give an immense advantage to one tribe over another." (157-158) Contemporary research on cultural group selection appears to have gone largely unnoticed by moral philosophers who work on evolutionary debunking arguments. They now have an added reason to take notice. As I've argued, traits whose acquisition depends on their prior distribution within the population seem the best candidates when it comes to the potential of selection to explain the traits of individuals. Beliefs and behaviours that we acquire from others as a matter of cultural transmission, in turn, are arguably the best candidates for traits of that kind. Thus,

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[25] See Maynard Smith (1964), Williams (1966).

[26] Henrich & Boyd (1998).

evolutionary debunking arguments that emphasize the role of truth-indifferent selection pressures would seem to be most likely to succeed when focused on moral beliefs that represent elements of cultural inheritance.

The picture at which we have ended up here is very different from the position typically advanced by those who endorse evolutionary debunking arguments in ethics. We have arrived at a position where innateness seems to provide a strong defence against the kind of debunking arguments with which we are familiar, since innate traits are least likely to be explained by selection. This is a surprising and counterintuitive result, especially given the emphasis on innateness that has characterised discussion of these arguments. It may seem *too* counterintuitive that innateness should have any kind of protective quality such as this. We might think it wise, therefore, to consider whether there is some way to preserve the idea that evolutionary considerations can play a role in providing undercutting defeaters for certain of our moral beliefs without doing such violence to our expectations.

## 5. Doing without the *Debunking Thesis*

An alternative response to the clash between the *Debunking Thesis* and the *Negative View* would be to explore whether the evolutionary debunking arguments currently available can be made to work even if we give up any suggestion that facts about natural selection explain why we believe what we do about right and wrong.

Consider Street's argument. Street claims that it would have to have been an extraordinary coincidence if the basic evaluative tendencies favoured by selection tend in the direction of the truth, given that there has been no selection for truth-conducive evaluative dispositions. More exactly, she claims that this would have to have been an extraordinary coincidence if the evaluative truths are mind-independent. We cannot reasonably expect that such a coincidence has occurred, she maintains. Thus, we acquire a defeater for any ethical belief underwritten by an evaluative disposition that has evolved by

selection, unless we revise our meta-ethical view so as to reject ethical realism.

Central to Street's argument is the supposed implausibility of believing that natural selection has coincidentally favoured the evolution of objectively true moral beliefs. Any coincidence here involves facts about selection pressures and facts about what morality objectively requires. It might appear, then, that questions about the ability of selection to explain what we believe are superfluous. Whether the relevant selection pressures are assumed to explain our beliefs would arguably do nothing to make the coincidence between what was selectively advantageous and what was objectively true to believe any less extraordinary. Therefore, one might think, we cannot reasonably suppose that such a coincidence has occurred, regardless of what we believe about the capacity of selection to explain our moral beliefs. Sketched in these terms, any conflict between Street's argument and the *Negative View* may seem merely apparent.

I believe that the conflict is more than merely apparent. I grant that our stand on the *Negative View* does nothing to mitigate our sense of surprise at the suggestion that although selection has favoured various moral beliefs without regard to their truth or falsity, these nonetheless reliably happen to be (objectively) true. However, it seems to me more difficult to sustain the claim that we cannot reasonably believe that such a coincidence occurred if we also assume that the relevant selection pressures do not explain why we believe what we do about right and wrong.

There is, after all, no general ban on believing in very surprising coincidences, provided that we have some evidence for their occurrence. For example, there are uncanny resemblances between the sinking of the *RMS Titanic* in 1912 and a fictional ship-wreck described in Morgan Robertson's 1898 novella *The Wreck of the Titan*. Robertson's *Titan* is an ocean liner that strikes an iceberg on an April night, moving at 25 knots, and sinks 400 nautical miles from the coast of Newfoundland. The *Titanic* struck an iceberg on April 14th, moving 22.5 knots, and sank 400 nautical miles from Newfoundland. These coincidences are

astonishing, but I don't think you would be unwarranted in accepting my testimony that they are real.[27]

Consider, then, the case of natural selection and moral facts. Unless she means to beg the question against the realist, Street must grant the assumption that we are *ex ante* justified in treating various moral propositions as objectively true. Information about the evolution of morality is then supposed to cancel out this justification. By learning about the selection pressures relevant to the evolution of morality, we are supposed to gain evidence that it would have required an improbable coincidence if the moral propositions whose acceptance was favoured by selection turn out also to be the moral propositions that are true as a matter of objective fact. Why should we then not conclude that such an improbable coincidence occurred? We start off justified in accepting that certain propositions are objectively true and then acquire evidence that natural selection favoured beliefs with those contents, albeit for reasons unconnected from their truth. Why is the proper response here not to combine these pieces of information and conclude that an astonishing coincidence occurred?[28]

It is natural to feel that this move is unacceptable insofar as we think that the beliefs that have evolved by selection *are our own*. If we suppose that our beliefs are themselves the products of selection, then it may appear misguided to rely on these beliefs to certify that selection – against all odds – favoured the evolution of true moral beliefs. Consider an analogy: it seems obviously misguided to try to quell our suspicions about the reliability of a witness by asking the witness whether she is reliable.[29] Just as we cannot rely on her

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[27] I omit any supporting references to help test your intuitions on this point.

[28] For further development of this line of response to Street, see Setiya (2012).

[29] Some philosophers (e.g., Bergmann 2006, Pryor 2004), believe it can be permissible to use bootstrapping reasoning to certify the reliability of a given method of belief-formation provided one has no antecedent reason to doubt the reliability of the method. So far as I am aware, no one defends the view that bootstrapping

testimony to overturn our doubts about the reliability of the witness, so we might think we cannot rely on beliefs and intuitions about morality that arise from natural selection to quell any doubts about whether selection happened to reliably pick out objectively true moral beliefs arising from the (supposed) realization that this outcome was *ex ante* improbable. Street (2008) offers more or less exactly this reply in response to an argument by David Copp (2008).

The reasoning sketched in the previous paragraph requires, however, that our moral beliefs result from selection. If they do not, the charge of illicit bootstrapping appears difficult to sustain. There is nothing untoward, after all, in certifying the reliability of a process by reference to some independent criterion. For example, I can rely on my perceptual experiences to verify that yours are reliable: I can check that you are not hallucinating by asking if you see the table that I see and the books I see and so forth. Similarly, we might think that there should be nothing untoward in relying on our *ex ante* justified moral beliefs to verify the reliability of selection if our moral beliefs are not the product of selection. Thus, a conflict with the *Negative View* appears to emerge after all. The charge that we cannot reasonably suppose that a coincidence of the requisite kind occurred does not appear to hold up unless the coincidence involves selection pressures that also explain why we believe what we believe about right and wrong.

Here is a different proposal for how we might redraft the debunking arguments currently on offer so as to beg no questions against the *Negative View*. Granting that selection doesn't explain our moral beliefs, there must nonetheless be *some* explanation for why we believe what we do about right and wrong: an explanation in terms of inheritance, development, and other proximate factors. We might suppose that the debunking arguments currently available can be refashioned so as to appeal instead to explanatory factors of this

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reasoning is acceptable in a case like that described here. Thus, Bergmann says: "You can't sensibly come to trust a doubted witness on the basis of that very witness's testimony on his own behalf." (180)

kind. In this vein, Street (2006) claims that the challenge posed by facts about natural selection "is not distinctly Darwinian" (155). Any explanation of our evaluative judgments will generate the same kind of problem, she claims, since any sufficiently complete explanation of our moral judgments will fail to accord explanatory significance to facts about right and wrong.

In discussion, I have been surprised at how often this point is raised as an objection against my argument. I am happy to concede that if we look beyond natural selection we may be able to construct debunking explanations that require us to revise some or all our moral beliefs; I outline a promising explanation of that kind in the next section. At the same time, I don't believe we can simply assume that any adequate explanation will be debunking, as Street does. As this stand, Street's suggestion that any explanation of our moral beliefs will do simply begs the question against the large number of philosophers who argue (with considerable skill) that moral facts can figure in the explanation of our moral beliefs.[30]

To show that there exists a cogent debunking argument targeting some or all of our moral beliefs, I believe we have to get our hands dirty and describe a discrediting explanation in concrete detail. Whether that explanation turns out to be debunking in light of the kind of epistemic principles that figure in familiar evolutionary debunking arguments is also, I believe, an open question: one that has be to be decided by looking at the particulars - and by independent assessment of the plausibility of these epistemic principles.[31]

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[30] For example, Brink (1989), Cuneo (2006), Majors (2003), Oddie (2005), Sturgeon (1985, 1986, 2006), Wedgwood (2007), Wright (1992).

[31] For an argument that familiar evolutionary debunking arguments rest on bad epistemology, see White (2010).

## 6. Another way: explanation by phylogeny

I believe we can retain our commitment to the idea that evolutionary considerations can debunk our moral beliefs, though we should give up the claim that these considerations have to do with natural selection. This section will offer some cursory suggestions as to how we might proceed along this path.

Natural selection is obviously not the only factor to which we can appeal in explaining evolutionary patterns of change and stability. Nor are those who accept the *Debunking Thesis* under any illusions about this. Kahane (2011) warns against assuming that debunking arguments must presuppose any form of strong adaptationism.[32] If certain moral beliefs are explained not by selection but by other evolutionary processes, this, he claims, is grist to the debunker's mill: "If some evaluative disposition is explained not by adaptation but by the even *more* random evolutionary mechanisms of genetic drift or exaptation, this would make things *worse,* not better" (111-112). However, neither drift nor exaptation will help to avoid our problem concerning the explanatory scope of selection. Exaptation is just a special case of adaptation. Drift merely involves differential reproductive success that fails to track underlying differences in fitness, and so cannot plausibly explain anything that could not in principle be explained by adaptation: if we are worried about our ability to explain the moral beliefs of contemporary human beings by reference to non-random differential survival and reproduction, adding an element of randomness will surely do nothing to help.

There exists a different kind of evolutionary explanation that has greater promise as a basis for debunking arguments. What I have in mind is an explanation in terms of *phylogeny* or *phylogenetic inheritance.* Explanations in terms of phylogeny are essentially explanations by inheritance 'writ large': one seeks to explain the traits of organisms by adverting to their evolutionary inheritance, by placing them on the so-called 'tree of life'. So

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[32] See also Street (2006: 113-114).

far as I am aware, there is no one who challenges the capacity of inheritance to explain the traits of individuals, and so there should be no one who challenges the view that considerations of phylogeny can explain the traits of individuals.

Here is my favourite example of this kind of explanation, which I borrow (perhaps unsurprisingly) from Stephen Jay Gould (1994). Consider the horizontal tail-flukes of whales. These are, in one respect, an obvious adaptation for swimming. But why have whales evolved flukes that are horizontal, and not vertical, like the caudal fins of fish? It is implausible that whales inhabit special ocean environments in which horizontal flukes confer some advantage over the vertical alternative. The answer lies instead in cetacean phylogeny. Whales are descended from terrestrial mammals in the *Artiodactyla* order that ran on land by flexing their spinal columns in the vertical plane. When the ancestors of whales returned to the seas, their inherited body-plan necessitated the evolution of horizontal flukes that could be waved up and down to propel the animal forward. Thus, constraints imposed by phylogenetic inheritance explain the horizontal tails of whales.

It is not implausible that certain elements of human morality are like this. In fact, we appear to find this suggestion in the very first publication to address the evolutionary origins of morality from a Darwinian perspective: Darwin's *Descent of Man*. In seeking to explain the "moral sense" as arising through the gradual modification under natural selection of traits shared with other species, Darwin (1879/2004) posits that "any animal whatever, endowed with well-marked social instincts, would inevitably acquire a moral sense or conscience, as soon as its intellectual powers had become as well developed, or nearly as well developed, as in man." (120-121) He claims that the social instincts which undergird the moral sense are "retained from an extremely remote period" (132) having originated with our "early ape-like progenitors." (133)[33] Since the moral sense is founded on inherited social instincts, we should not expect, Darwin claims, that any social animal whose

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[33] For recent supporting evidence, see de Waal (1996, 2006).

intellectual faculties are similar to those of human beings would acquire exactly the same moral beliefs. Like the orientation of the tail fin in aquatic vertebrates, the moral outlook of an organism will reflect idiosyncrasies of its phylogeny. "If, for instance, … men were reared under precisely the same conditions as hive-bees, there can hardly be a doubt that our unmarried females would, like the worker-bees, think it a sacred duty to kill their brothers, and mothers would strive to kill their fertile daughters; and no one would think of interfering." (122) Suggestions of this kind do not die with Darwin. In the same vein, Michael Ruse and E. O. Wilson (1986) claim that "ethical premises are the peculiar products of genetic history … No abstract moral principles exist outside the particular nature of individual species" (186).

It is difficult to avoid the sense that claims of this kind challenge our moral beliefs, and certainly if we mean to claim objective truth for these beliefs. Whether that impression is *ultima facie* defensible cannot be settled here. I merely want to emphasize that claims of this kind appear to offer a route by which to build debunking arguments that beg no questions against the *Negative View*. Such arguments would emphasize contingencies of phylogeny rather than selection as the problematic explanatory factors when it comes to our evolved moral beliefs. As such, they could not plausibly be accused of resting on mistaken assumptions about the explanatory scope of selection.

### 7. Conclusion

I have argued that those who accept the *Debunking Thesis* beg important questions in the philosophy of biology. If we do not wish to give up altogether on the idea that evolutionary considerations can provide reasons for us to revise our moral beliefs – including any innate moral beliefs – the best response is to give up the emphasis on selection that has characterized recent debates. Instead, we should attempt to build debunking arguments that focus on the role of phylogenetic inheritance in explaining our moral outlook. Whether

debunking arguments that emphasize the discrediting influence of phyletic contingencies are ultimately successful is an open question.[34] In that respect, however, they appear better off than the debunking arguments proposed so far.


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[34] See Mogensen (2014) for a detailed development of this kind of argument.

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