



Regular Article

Robin Attfield*

Reasons for Resisting Darwinism, and Why They Should Not Be Credited

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Abstract: Plantinga argues that Darwinism implies that we cannot help adopting our apparently reflective beliefs, and that this is a reason for rejecting Darwinism. I argue that similar arguments apparently apply to the beliefs crucial to deliberation, meaningful work, meaningful relationships, meaningful communication and creativity. But these arguments apply to deterministic versions of Darwinism only. Cogent non-deterministic versions have been propounded by Popper, Rose, Lewontin, Ward and Miller (those of Ward and Miller being theistic versions). These versions are presented, as is Midgley's account of how evolution has endowed us with a mix of desires that prepare the way for choice. Plantinga-type arguments pose no problem for such non-deterministic Darwinisms.

Keywords: Alvin Plantinga, deterministic Darwinism, deliberation, meaningful work, meaningful relationships, human communication, creativity, Karl Popper, non-deterministic Darwinism, Mary Midgley's account of evolution, theistic evolution

1 Plantinga's argument

For many there are reasons to be found for resisting Darwinism on the basis of the literal veracity of the first two chapters of Genesis. However, Alvin Plantinga, who may well be among those who sympathize with such reasons, supplies an independent reason in the form of a general argument, set out in his book *Warrant and Proper Function* (1993); and he could reasonably be regarded as standing on stronger ground in doing so, and as wielding a stronger argument than fundamentalists usually present.

Plantinga's argument can be summarized as follows: Darwinism implies that our apparently rational beliefs are all to be explained by factors and forces such as the need to survive and reproduce, and that on this basis even our most considered beliefs need not be true or defensible, and could easily be deceptive or delusive; on the same basis, we can have no idea whether we should accept or reject these beliefs.¹ Plantinga well replies to the objections that he considers. Thus to the objection that our very survival shows of itself that our beliefs must be true and defensible, he replies that there are indefinitely many belief–desire systems that can underpin adaptive behaviour supportive of survival, but where the relevant beliefs are not for the most part true.² He thus reaches the conclusion that, granted Darwinism, none of our apparently trustworthy beliefs are actually defensible or trustworthy.

This argument, it could be added, implies that, granted Darwinism, human reasoning and reflection are unreliable. If we can add the plausible premise that we cannot doubt that at least some of our apparently

¹ Plantinga, *Warrant and Proper Function*, 216–37.

² *Ibid.*, 227.

* **Corresponding author: Robin Attfield**, Cardiff University, Cardiff, United Kingdom of Great Britain and Northern Ireland, e-mail: AttfieldR@cardiff.ac.uk

trustworthy beliefs are true and well-grounded, then, given this reasoning, we are actually obliged to reject Darwinism.

Having discussed Plantinga's argument previously,³ I intend to show here how it can be strengthened by arguing that by parity many further standard human powers and capacities turn out, granted Darwinism, to be unreliable or even illusory. I also hope to show how this enlarged argument, just like Plantinga's, holds good for one kind of interpretation of Darwinism only, but not for other, more cogent, interpretations.

2 Some parallel arguments

Plantinga's argument can be found to generate a number of parallel arguments concerning human powers and capacities. Take deliberation, the counterpart for practical reasoning to reflection in theoretical reasoning. Deliberation involves reaching considered beliefs about what we should do, amounting in many cases to decisions to act in that manner. Granted Plantinga's premise about the explicability of apparently rational beliefs by factors and forces beyond the agent's control, it appears to follow that the beliefs and decisions that are reached through deliberation are just as unjustified and untrustworthy as the beliefs resulting from reflection, for they could come to be held as a result of the same kinds of factors and forces.

This conclusion could also be used in an argument against Darwinism. For if it is additionally granted that some of our beliefs about what to do are true and well-grounded, and can be known to be such, then we are obliged to reject Darwinism for this deliberation-related reason too. Deliberation is often considered the faculty in which our freedom is most apparent, and if Darwinism implies that this freedom is illusory, and at the same time the truth and well-groundedness of some of our beliefs resulting from deliberation is beyond doubt, then this too is a reason for rejecting Darwinism.

For a parallel but different argument, consider meaningful work. A necessary condition of meaningful work (as I have argued elsewhere) involves the agent following autonomously adopted standards.^{4,5,6} But this in turn involves the agent adhering to defensible beliefs about the appropriateness of these standards. So if Plantinga's premise is adjusted to cover the explicability, granted Darwinism, of adherence to apparently defensible beliefs about standards by reference to factors and forces beyond the agent's control, then it appears to follow that apparently defensible beliefs concerning standards of meaningful work are also indefensible, and thus that, granted Darwinism, there is no such thing as meaningful work.

Once again this argument too can be turned against Darwinism. For if it is granted that meaningful work is sometimes attained and performed in practice, then, granted that its occurrence turns on defensible and trustworthy beliefs being held about standards, and that Darwinism implies that no such beliefs are defensible or trustworthy, then (once again) Darwinism must be rejected. For otherwise there could be no meaningful work, and (we are currently supposing) there is.

Meaningful relationships, moreover, are subject to similar treatment, and to a further parallel argument. For meaningful relationships involve one or both of the parties adhering to defensible beliefs about the trustworthiness and fidelity of the other party. So, granted a similar version of Plantinga's premise, further adjusted to concern one party's beliefs about the other party's trustworthiness and fidelity, or related attitudes and dispositions, being wholly explicable in terms of factors and forces beyond the relevant agent's control, then it appears to follow that, granted Darwinism, the conditions for the existence of meaningful relationships are not satisfied, any more than those of the existence of meaningful work.

³ Attfield, "Darwin's Doubt, Non-Deterministic Darwinism and the Cognitive Science of Religion," 465–483.

⁴ Attfield, "Work and the Human Essence," 141–50.

⁵ Attfield, "Meaningful Work and Full Employment," 41–8.

⁶ Attfield, *Value, Obligation and Meta-Ethics*, 57–9.

Further, if meaningful relations really exist, and if we cannot doubt that they do, then Darwinism has to be rejected. For our conviction that meaningful relationships exist is on all accounts more secure and more immune from doubt than our acceptance of Darwinism.

Besides, the reality of human communication is arguably vulnerable to the same considerations. For interpersonal communication to be viable, each party needs to hold defensible beliefs about the communicative intentions of the other. (According to the impressive theory of Paul Grice,⁷ the very meaningfulness of sentences is dependent on such beliefs and intentions of speakers and writers.) But, granted a suitably adjusted version of Plantinga's premise, it appears to follow that, granted Darwinism, there is no meaningful communication. For its existence is dependent on defensible beliefs being held, and yet, given Plantinga's claims that, granted Darwinism, people's beliefs are explicable by forces and factors beyond their control, the relevant beliefs are neither defensible nor trustworthy. So human communication, being dependent on the satisfaction of a condition that is not in fact satisfied, turns out to be illusory.

Further, if the reality of human communication (including the current essay) is reliable and presupposed in our every thought, but is represented as illusory by Darwinism, then Darwinism has to be rejected. For once again, the reality of human communication is more securely known and less open to doubt than Darwinism and our reasons for accepting it.

To take one last example of a key human capacity, human creativity can be held similarly vulnerable. For creativity involves autonomous action of some unprecedented kind, invariably embodying defensible beliefs about words, music or other forms of art. But granted a suitably adjusted form of Plantinga's premise, adherence to such beliefs will also be groundless, granted Darwinism. For the beliefs that are indispensable for instances of creativity to take place will be explicable in terms of forces and factors beyond the control of the apparently creative agent, and episodes of apparent creativity will turn out to be illusory, and no better than random posturings or gesturings. This reasoning was endorsed by Karl Popper when he remarked that physical determinism "destroys, in particular, the idea of creativity,"⁸ adding that "the theory of evolution [...] gave the problem an even sharper edge."⁹ (For an explication of determinism, see Section 3.)

There again, while some episodes of apparent creativity may turn out in fact to be illusory, the phenomenon of human creativity itself appears to be sufficiently obvious as to lie beyond doubt, and more securely known and recognized than any grounds for doubting it. Yet such grounds Darwinism now seems to offer. Accordingly here we apparently have yet a further reason for rejecting Darwinism.

General arguments such as those presented in this section also appear to be more reliable than arguments against Darwinism based on the veracity of the first two chapters of Genesis. For arguments of the latter kind are subject to many kinds of doubt concerning textual transmission and translation, not to mention doubts about their plenary inspiration and inerrancy. Hence the general arguments presented in this section, like Plantinga's own general argument, comprise some of the strongest arguments available for doubting and even for rejecting Darwinism.

3 Versions of Darwinism presupposed by these arguments

The common theme of the arguments deployed in the previous section is that the beliefs in question would be adopted or adhered to regardless of their defensibility or well-groundedness, since factors and forces beyond the control of relevant agents are sufficient conditions of their adoption. Versions of Darwinism implying this are deterministic ones; they imply that in each situation only one future is possible. Granted

⁷ Grice, *Studies in the Way of Words*.

⁸ Popper, *Objective Knowledge: An Evolutionary Approach*, 222.

⁹ *Ibid.*, 224.

these versions, agents are caused (or necessitated) to adopt the relevant beliefs, whatever they may suppose about their own capacity for adopting beliefs autonomously and for acting autonomously on those beliefs.

Some forms of Darwinism, such as those ascribing control of history to a combination of genes and memes (as in Dawkins, *The Selfish Gene*), are deterministic in this manner, despite Dawkins' disclaimers in the final paragraphs of this book. By the time Dawkins gets round to claiming that human beings (alone in the universe) have the ability to rebel against the forces that control history, there is no longer any space left for such a rebellion to take place, because the context is already one of inexorable necessitation by the combination of genes and memes.¹⁰

Such deterministic versions of Darwinism might conceivably explain the evolution of less complex biota, such as unicellular organisms, and (more controversially) of plants. But Plantinga-type arguments, as presented in the two preceding sections, suggest the inability of these versions to explain more complex kinds of organisms, if, as most people hold, some of these organisms have capacities for the autonomous adoption of beliefs, for autonomous deliberation, for meaningful work, for meaningful relationships, for meaningful communication and for creativity. This is particularly clear for those deterministic versions of Darwinism that appeal to memes as factors determining our beliefs,¹¹ with the (unintended) implication that memes colonize our thinking and our reflection in such a manner that we are unable to resist their colonization, and that we entirely lack the ability to discriminate between valid and invalid reasoning, or to adopt beliefs on the basis of rationality.

Ampler criticisms of the theory of memes as determinants have been presented by Mary Midgley, both in "Gene-Juggling,"¹² and in "Why Memes?"¹³ The incompatibility of this theory with our capacity to distinguish rationally between valid and invalid arguments is well conveyed by David Holdcroft and Harry Lewis in "Consciousness, Design and Social Practice."¹⁴ To these publications readers seeking a more detailed treatment of the implications of deterministic Darwinism are recommended to turn.

Further, to such deterministic versions of Darwinism, an adequate response is available if it is granted that reflection, deliberation, meaningful work, meaningful relationships, meaningful communication and creativity actually take place. It can also be responded that our conviction that they take place is considerably more secure than any grounds we may have for adherence to deterministic versions of Darwinism. Accordingly deterministic Darwinism should be rejected.

4 Alternative versions of Darwinism: versions of a secular character

But Darwinism need not be held in a deterministic form. Cogent non-deterministic versions of Darwinism have in fact been put forward by a range of writers, some on a secular basis, and some writing from a religious perspective. (Some of the versions of Darwinism presented in this and the following section have previously been depicted, with slight differences of presentation, in an article of mine in *Philosophy*.¹⁵)

Karl Popper, for example, whose book *Objective Knowledge* is actually sub-titled "An Evolutionary Approach," argues for "indeterminism," which he glosses as "the theory that not all events in the physical world are predetermined with absolute precision, in all their infinitesimal details."¹⁶ Using "clouds" to symbolize apparently disorganized and unpredictable entities, and "clocks" for apparently fully predictable

¹⁰ Dawkins, *The Selfish Gene*, 215.

¹¹ *Ibid.*, 205–15.

¹² Midgley, "Gene-Juggling," 456–8.

¹³ Midgley, "Why Memes?," 67–84.

¹⁴ Holdcroft and Lewis, "Consciousness, Design and Social Practice," 43–58.

¹⁵ Attfield, "Darwin's Doubt."

¹⁶ Popper, *Objective Knowledge*, 220.

ones, he responds to the determinist who holds that “all clouds are clocks”¹⁷ by claiming (with Peirce) that “all clocks are clouds.”¹⁸ Popper takes his readers through the history of physics from Newton, via the explicitly determinist interpretation of Newtonianism adopted by Laplace¹⁹ to quantum theory, with its indeterministic implications,²⁰ also rejecting the compatibilism of David Hume.²¹ But he further argues that adopting indeterminism is not enough, and that the belief that “the only alternative to determinism is sheer chance,” fails to underpin human freedom.²²

Accordingly, Popper proceeds to put forward a form of evolutionary theory that is both indeterministic and makes room for human freedom and rationality.²³ This theory, which is a recognizable form of Darwinism, covers both the evolution of animal organs and behaviour, and human evolution, involving, in part, the emergence of organs outside our bodies, such as tools and machines,²⁴ generated through valid reasoning and critical arguments.²⁵ Throughout evolution, organisms are engaged in problem-solving by trial and error, with unsuccessful organs, organisms and hypotheses being eliminated; and when this happens to hypotheses, it is not we who die, but “our hypotheses die in our stead.”²⁶ This theory diverges from Neo-Darwinism in recognizing that there is a much wider range of problems than just that of survival, and also through recognizing the role of rationality in the solving of many of them.²⁷

Not everyone will find convincing Popper’s assimilation of evolutionary processes of problem-solving outside the human sphere to human problem-solving through rationality. But tribute is due to his attempt to find a place for rationality within an evolutionary, Darwinian scheme, and in an indeterminist form at that. It is also noteworthy that deliberation is one of the crucial capacities that Popper holds evolution to involve within human life.²⁸ The indeterministic character of Popper’s theory is further underlined in his later book *The Open Universe: An Argument for Indeterminism*,²⁹ but it is unnecessary to follow that argument in detail here.

More recently, the biologist Steven Rose has adopted an equally explicit stance on the relation of Darwinism to determinism in *Lifelines: Biology, Freedom, Determinism*.³⁰ He rejects “biological determinism,” and embraces a materialist but non-deterministic view of living organisms and systems. “Far from being determined, or needing to invoke some non-material concept of free will to help us escape the determinist trap, it is the nature of living systems to be radically indeterminate, to continually construct their-our-own futures, albeit in circumstances not of our own choosing.”³¹ Rose makes the theme of self-construction a central one. “The central capacity of all life is the capacity and necessity to build, maintain and preserve itself, a process known as *autopoiesis*.”³² This capacity, inherent in all life, is related without delay by Rose to human freedom: “This is why it is in the very nature of life and living processes themselves that we, as living organisms and specifically as humans, are free agents.”³³

Rose does not suggest that humans are free in the sense championed by Sartre of having no nature and being free to make of themselves whatever they will. Rather, humans are free “in the older, Marxist sense, of

¹⁷ Ibid., 210.

¹⁸ Ibid., 213.

¹⁹ Ibid., 214, n. 14.

²⁰ Ibid., 214.

²¹ Ibid., 221.

²² Ibid., 227.

²³ Ibid., 235–46.

²⁴ Ibid., 238.

²⁵ Ibid., 239.

²⁶ Ibid., 244.

²⁷ Ibid., 244.

²⁸ Ibid., 241.

²⁹ Popper, *The Open Universe: An Argument for Indeterminism*.

³⁰ Rose, *Lifelines: Biology, Freedom, Determinism*.

³¹ Ibid., 7.

³² Ibid., 8.

³³ Ibid., 18.

the freedom of necessity. We humans, more than any other life form on earth, make our own history.”³⁴ Rose clearly rejects the determinist view that at each moment there is only one future, adopting instead the view that human beings (and some other animals too) mould their own future; his version of Darwinism is later expounded accordingly.

Yet doubts may be harboured about his appeal to “the freedom of necessity,” particularly because he does not explain his reference to “the older Marxist sense of the freedom of necessity.” He may have been alluding to Friedrich Engels’s conclusion that “Freedom therefore consists in the control over ourselves and over external nature, a control founded on knowledge of external necessity.”³⁵

Rose probably here means that our acts of self-construction take place in circumstances determined by factors beyond our control (because of the past, economic circumstances and/or our general environment), and in circumstances not of our choosing. But his choice of phrase appears at least to constrain seriously the scope of choice. For if freedom of choice is possible only in circumstances that are themselves determined, and basically consists in an understanding of what could not be otherwise, then the agent too must be liable to be moulded by those circumstances. Thus the leverage of agents seems too limited, their scope for choice too narrowly confined, and their window of opportunity too fleeting, even if “freedom of necessity” allows of any genuine choice at all.

Rose would probably reject these apparent implications as misinterpretations, stressing that: “Development is essentially a constructivist process; the developing organism, in its being and its becoming, in its specificity and plasticity, constructs its own future,”³⁶ and that at most junctures the organism is already the product of previous episodes of self-construction. Yet doubts may well linger about the coherence of his emergent position. They concern the coherence of Rose’s version of non-deterministic freedom, which could apparently be reinforced so as to be more clearly non-deterministic, without any abandonment of his underlying materialism.

Another distinguished biologist and Darwinian, Richard C. Lewontin, presented a few years earlier a comparable version in *Biology as Ideology: The Doctrine of DNA*.³⁷ Lewontin, after praising Darwin for discerning that organisms “adapt or die,” proceeds to claim that biology has become frozen at the stage of recognizing the organism’s alienation from its environment, adding that: “Modern biology has become completely committed to the view that organisms are nothing but the battle grounds between the outside forces and the inside forces. Organisms are the passive consequences of external and internal activities beyond our control.”³⁸ But this would imply that the world is beyond our control, and that all we can do is to make the best of it. Even the environmental movement, he suggests, connives at this view of the environment.

These deterministic views, however, according to Lewontin, are distortions of reality, and equally of familiar experience. For “there is no ‘environment’ in some independent and abstract sense. [...] Organisms do not experience environments. They create them. They construct their own environments out of bits and pieces of the physical and biological world and they do so by their own activities.”³⁹ Lewontin, like Rose, rejects creation by the genes; unlike Rose, he avoids talk of “the freedom of necessity,” and appeals not to Marx’s analysis of history, but to Kropotkin’s account of social action and its possibilities. Maybe, by way of corrective, there should be greater stress on Darwin’s recognition that organisms need to adapt to circumstances over which they have little control. But Lewontin’s account more unambiguously emphasizes the extent of their freedom than that of Rose.

Positions such as those of Popper, Rose and Lewontin disclose some of the possibilities for secular non-deterministic Darwinism. There are problems of consistency within each of them, but these problems may well be surmountable. They certainly appear more surmountable than the problems that beset determinist

³⁴ Ibid., 18.

³⁵ Engels, *Anti-Dühring*, 106.

³⁶ Rose, *Lifelines*, 153.

³⁷ Lewontin, *Biology as Ideology: The Doctrine of DNA*.

³⁸ Ibid., 109.

³⁹ Ibid., 109.

and compatibilist Darwinisms. However, further versions of non-deterministic Darwinism should also receive consideration, versions having a theistic character.

5 Alternative versions of Darwinism: theistic versions

The first version to be considered here was put forward by Keith Ward, initially in his book *God, Chance and Necessity*,⁴⁰ and subsequently in an anthology chapter entitled “Theistic Evolution.”⁴¹ Ward accepts that “human beings have descended by a process of mutation and adaptation from other and simpler forms of organic life over millions of years,” and (like Darwin) that natural selection is the “main but not the only driving force of evolutionary change.”⁴² These passages show that Ward is a Darwinian, despite his reluctance to credit that natural selection is the sole and complete explanation of evolutionary change. He also advances the hypothesis that the universe was and is created by God, while recognizing that some forms of this hypothesis are falsified by acceptance of evolution, and that versions claiming that God directly creates every single event and in that way inaugurates every species are among them. Rather than determining every event, God selects a world both of natural laws, of random mutations, and of “the generally stochastic processes of genetic modification,” and thus “chooses chance.”⁴³

Ward gives as the likely reason for this choice that indeterminacy, or the absence of “sufficient causality,” is “a necessary, though by no means a sufficient, condition for the emergence of free and responsible choice on the part of agents generated by the evolutionary process.”⁴⁴ In other words, the creator was making room for “libertarian freedom,” which Ward explains as follows: “Libertarian freedom is that property of a rational agent by which, on at least some occasions, no prior physical state, even with the addition of a set of general laws of nature, entails one specific outcome of a particular situation. There are real alternative possible futures, and only the agent’s uncompelled decision decides which future is realized.”⁴⁵ It turns out that there is a range of grounds for Ward’s theistic evolution,⁴⁶ but these grounds need not detain us here. Ward recognizes potential problems for his “theistic evolution,” such as whether the creator’s purposiveness can be reconciled with the randomness of Darwinian evolution, and offers solutions to a range of such problems.⁴⁷

Be that as it may, the libertarian freedom central to Ward’s theistic evolutionism is available to be taken up by secular non-deterministic Darwinists (including followers of Popper or Rose or Lewontin), even if his theistic metaphysic is not endorsed at the same time. It does not, for example, turn on a non-materialist definition of “freedom.” It is, at any rate, available for this role unless the term “libertarian” is construed as involving a freedom that is wholly unconstrained. For, if it is construed (or misconstrued) in this way, free action appears to amount to entirely inexplicable and thus random action, and to be far from the responsible choices that Ward regards as important. But, as John Lucas has argued, action that is random and unexplained in terms of sufficient antecedent conditions can be far from random and unexplained in terms of the agent’s reasons.⁴⁸ Thus, Ward’s “libertarian freedom” need carry no overtones of randomness. Rather it relates to decisions of agents who select between two or more genuinely open futures, albeit in circumstances that are themselves beyond those agents’ powers of present choice. It thus presents what a consistent non-deterministic stance would need to say.

⁴⁰ Ward, *God, Chance and Necessity*, 61–95.

⁴¹ Ward, “Theistic Evolution,” 61–74.

⁴² *Ibid.*, 262.

⁴³ *Ibid.*, 262–3.

⁴⁴ *Ibid.*, 263.

⁴⁵ *Ibid.*, 263.

⁴⁶ *Ibid.*, 266–8, and 274.

⁴⁷ *Ibid.*, 268–71.

⁴⁸ Lucas, *The Freedom of the Will*.

A comparable and congruous version of non-deterministic Darwinism is presented by Kenneth R. Miller in *Finding Darwin's God*.⁴⁹ Miller is a biological scientist, strongly committed to Darwinism, who rejects the claims of Intelligent Design theorists that the biological world displays traces of “irreducible complexity” which cannot be explained by evolution. At pages 129–64 he replies ably to the claims about irreducible complexity on the part of Michael Behe in *Darwin's Black Box*.⁵⁰ But he also rejects the view, held in common by adherents of Intelligent Design and by materialists like Lewontin, that “evolution implies an absolute materialism that is *not* compatible with religion;”⁵¹ and defends in the rest of his book a combination of Darwinism and theistic creation.

Like Popper, Miller expounds the discovery of quantum indeterminacy, and the concomitant abandonment of determinism on the part of twentieth-century physics. The indeterminacy of the world is, he holds, a necessary condition of free-will. A creator wanting to facilitate free will would be likely to generate a world of regularities, making it comprehensible and conducive to purposeful action on the part of creatures, and at the same time of indeterminacy, without which there would be no free agency. The world is accordingly so fashioned as “to allow us the freedom and independence necessary to make our own acceptance or rejection of His love a genuinely free choice.”⁵²

Miller cites with approval Schrödinger's conjecture that the randomness of mutations may correlate with the indeterminacy of quantum mechanics,⁵³ adding that “the DNA molecule is structured in precisely a way that makes the behavior of individual atoms, even individual electrons, significant” and that “events with quantum unpredictability [...] exert direct influence on the sequences of bases in DNA.”⁵⁴ Responding to the possible objection that quantum variations may even out at the macroscopic level, and thus make no difference, he replies that, on the contrary, “Mutations are just as unpredictable as a single photon passing through a diffraction slit,” and that, because these items could be related, “evolutionary history can turn on [...] the quantum state of a single subatomic particle.”⁵⁵ If this speculation is correct, then his own overall stance is clearly strengthened, even though this interpretation of the implications of quantum physics is not indispensable to his case.

Miller maintains that the world is much as we would expect it to be if fashioned by a creator desirous both of universal regularities and of the kind of indeterminacy necessary if responsible action and free responsiveness to the creator are to be possible. After discussing various problems for commitment to Darwinism and to theism at the same time, Miller concludes by reaffirming his belief both in Darwinism and in the kind of God presupposed in the final paragraph of *The Origin of Species*:

There is a grandeur in this view of life; with its several powers having been originally breathed by the Creator into a few forms or into one; and that, while this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most wonderful and most beautiful have been, and are being evolved.^{56,57}

Neither Ward nor Miller would probably accept all the above claims and arguments of the other. Nevertheless the contours of a theistic and non-deterministic Darwinism have sufficiently come to light. Some will find the corresponding secular conjunction (as in Popper, Rose and Lewontin) more digestible, particularly when fortified by Ward's definition of “libertarian freedom,” and perhaps by Miller's account of quantum indeterminacy and its implications. Others may instead find the Ward/Miller synthesis more intellectually satisfying, and thus less unstable.

⁴⁹ Miller, *Finding Darwin's God*.

⁵⁰ Behe, *Darwin's Black Box*.

⁵¹ Miller, *Finding Darwin's God*, 189, n. 26.

⁵² *Ibid.*, 213.

⁵³ *Ibid.*, 206–7.

⁵⁴ *Ibid.*, 207.

⁵⁵ *Ibid.*, 207.

⁵⁶ Darwin, *The Origin of Species*, 560.

⁵⁷ Miller, *Finding Darwin's God*, 292.

6 How animal evolution renders credible the emergence of choice

Given either of these stances (the one secular, the other religious), evolution can facilitate in human beings (and perhaps other complex organisms such as primates and cetaceans) capacities for reflection, deliberation and communication, involving autonomous activity and autonomous control over related beliefs. Popper, as we have seen, explicitly includes deliberation as part of his account of human evolution. While indeterminism is insufficient to guarantee human (or animal) freedom, non-deterministic Darwinism is consistent with its emergence.

In this section, I want to foreground Mary Midgley's *The Ethical Primate*, a book that seeks to explain how the characteristic drives or desires of animals with evolutionary ancestries facilitate the subsequent development of choice and freedom. Amusingly, Midgley sets out the alternatives for a creator who wants to facilitate choice in a section called "Creation Troubles" which is also a dialogue between this creator (who aims to create free beings), and a Doubter, who is one of several fellow-creators and takes this aim to strain credibility.⁵⁸ The pro-freedom creator rejects the option of implanting a faculty of desire and then instructing creatures with this faculty to invent values and to want what they choose; for on this basis, choice could not even get started. Here the Doubter agrees.

The next idea of the creator is to equip creatures with desires that sometimes conflict, and to make them bright enough to see that they have to find a way of coping with dilemmas. But the Doubter retorts that granting them both a desire to drink and a desire not to drink would lead them each and all into deadlock. Yet the creator's plan is different. They are to be given sets of desires that don't usually clash but can clash sometimes, such as the desires to drink and to finish building the house, or the desire to drink and that to supply drink to their offspring. What is more, they are to be endowed with having thoughts of a kind that genuinely affect their actions, to avoid the kind of outcome depicted by Hume, who represents instincts as infallible and thought as an ornamental device for recognizing one's good fortune.⁵⁹ That is a path to laziness, but not a route towards choice.

In response to the Doubter's response that such creatures might be liable to breakdowns, the creator replies that on the contrary they will all be fairly similar: instinctively affectionate and sociable, able to consult one another, and possessed of imaginative intelligence. They will also not be standardized, but will all be different, in need of imagining the perspective of others, and in need of thinking for themselves. This latter need arises partly because they will need to pay attention to their own motives, to stand back from them, and to function as an integrated person.

This response makes the Doubter ask how they will resolve their disagreements. To this, the freedom-loving creator responds that she/he wants a mean between two undesirable situations, the creatures being so underlyingly harmonious as never really to be in opposition, and being so separate as not to care for the others. The first set of creatures would be too "corporate" for freedom to evolve, while the second set could not devise any way of acting freely in unison. Instead they are to be mutually dependent, but at the same time bound to disagree and even to quarrel.

Midgley now abandons the dialogue form, and recognizes that it is evolution that has actually instilled the potentially conflicting desires mentioned in the previous dialogue, whether a deity was operating through evolution or not. Evolved creatures are unlike machines in having potentially competing aims, held flexibly together; and only the existence of creatures such as these could make freedom possible.⁶⁰ The characteristic that seems to require more emphasis is the "brightness" or intellectual shrewdness, whether on the part of human beings or of their pre-human ancestors, and their related ability eventually to develop a grasp of their own desires and goals, and the need then to compare and prioritize them. For this involves an understanding of potentially conflicting reasons for action, and the possibility of deliberation and choice

⁵⁸ Midgley, *The Ethical Primate*, 160–3.

⁵⁹ Hume, *An Inquiry Concerning Human Understanding*, chapter 8.

⁶⁰ Midgley, *The Ethical Primate*, 163–4.

about how to act accordingly. Recognition of the role of intelligence, as just depicted, tallies fully with Midgley's explanation, and helps clinch her account of how choices between values could arise.

Midgley's account of how potentially conflicting desires could prepare the way for choice fits both the conflicts that other animal species can have, between desires such as for feeding autumn-born offspring and for joining in a migration, and how pre-human and human creatures could learn to reason about the desirability of conflicting courses of action, with genuine alternatives open to be chosen from. It thus considerably adds to the cogency to the accounts discussed above of how Darwinism can take a non-deterministic form, and one which makes room for reflection and deliberation.

7 How non-deterministic Darwinism supplies answers to Plantinga-style objections to Darwinism

As has been argued in Sections 2 and 3, arguments of the kind deployed by Plantinga against Darwinism are successful against deterministic versions of Darwinism. But such versions should, as was there concluded, be rejected, being incompatible with activities such as reflection, deliberation, meaningful work, meaningful relationships, meaningful communication and creativity, activities that manifestly take place in human societies, and arguably in others.

But non-deterministic versions of Darwinism, of the kinds propounded by Popper, Rose, Lewontin, Ward, Miller and Midgley, are importantly different, since they do not imply that the beliefs bound up with reflection, deliberation, meaningful work, meaningful relationships, meaningful communication and creativity would be accepted in any case, and not on the basis of good grounds. Such non-deterministic versions of Darwinism are thus immune from Plantinga-style objections to "Darwinism," and show that the scope of these objections is confined to versions of a deterministic nature.

Granted further that Leslie Stevenson has recently shown that determinism can never be known to be true,⁶¹ this is a more important finding than might at first be apparent. For any form of Darwinism with claims to be knowable (or even possessed of verisimilitude) would have to be of a non-deterministic kind.

Accordingly Plantinga's argument should not be held to undermine the most cogent versions of Darwinism, that is, non-deterministic versions. While effectively deterministic versions such as that of Dawkins should be regarded as subverted, it is more profitable to focus on the various versions of non-deterministic Darwinism presented above, to find ways to explore which has the greatest cogency, or, if possible, to synthesize them, as was done when the "Darwinian synthesis" (of the findings of Darwin and of Gregor Mendel) was carried out in the first half of the last century by scholars such as Ronald Fisher and Theodosius Dobzhansky.⁶² In any case, Plantinga's general argument against Darwinism should be rejected, as should the parallel Plantinga-type arguments introduced above.

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⁶¹ Stevenson, "Who's Afraid of Determinism?," 431–50.

⁶² Ruse, *Can a Darwinian Be a Christian?*

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