

Biological and Cultural Evolution

Mary Midgley

1984

Monograph Series No. 20

THE INSTITUTE FOR CULTURAL RESEARCH

Copyright © 1984 Mary Midgley

The right of Mary Midgley to be identified as the owner of this work has been asserted by her in accordance with the Copyright, Designs and Patents Act 1988.

All rights reserved

Copyright throughout the world

No part of this publication may be reproduced or transmitted in any form or by any means, electronic, mechanical or photographic, by recording or any information storage or retrieval system or method now known or to be invented or adapted without prior permission obtained in writing from the publisher, the Institute for Cultural Research, except by a reviewer quoting brief passages in a review written for inclusion in a journal, magazine, newspaper or broadcast.

Requests for permission to reprint, reproduce, etc. to:

The Institute for Cultural Research, PO Box 2227, London NW2 3BW

ICR Monograph Series No. 20

This version prepared for free download 2006.

The original hard copy edition:

ISSN 0306 1906 – ISBN 0 904674 08 8 – Published 1984

may be purchased from the address given above, or on the ICR website, www.i-c-r.org.uk

Opinions expressed in monographs published by the Institute for Cultural Research are to be regarded as those of the authors.

BIOLOGICAL AND CULTURAL EVOLUTION

The text which follows is a transcript of one of a number of talks given by distinguished speakers at a seminar mounted in June 1982 by The Institute for Cultural Research in cooperation with The Institute for the Study of Human Knowledge (USA). The aim of the proceedings was to present to a lay audience some aspects of current scientific understanding of evolution and to examine their implications. Each talk was followed by a period of questions and discussion with a pre-arranged interlocutor: this is included at the end of the main text.

THE AUTHOR

Mary Midgley is a professional philosopher whose special interests are in the relations of humans to the rest of nature (particularly in the status of animals), in the sources of morality, and in the relation between science and religion (particularly in cases where science becomes a religion). She was formerly Senior Lecturer in Philosophy at the University of Newcastle on Tyne, UK, and has written many books, notably *Beast and Man*,¹ *Science as Salvation* and *Science and Poetry*. She still lives in Newcastle and has three sons.

Biological and Cultural Evolution

I feel a little badly about the fact that this is a short paper, because it is chiefly destructive. It is designed to rid us of a bad way of tackling these questions. I am trying to get rid of what I see as a cuckoo in the nest of Darwinistic social thinking. When one has done that, perhaps the nestlings will be a little more visible and can be seen to.

Is there such a thing as cultural evolution? This must, of course, depend on what the phrase means. The phrase is used today, chiefly by social scientists, to describe a process parallel to biological evolution, as Darwin conceived it. The phrase means that changes in human history take place through a mechanism essentially like that of genetic mutation and selection. Biologists sometimes support this suggestion: some indeed hate it but it's others, the ones who like it, that worry me. The clearest and most confident statement of this view which I know is that of Richard Dawkins in the last chapter of his book *The Selfish Gene*.² Some people think that this whole chapter is simply a flight of fancy, not intended seriously, and that it is unfair to Dawkins to take notice of it. I thought so myself until I found that plenty of philosophers and social scientists were, in fact, taking it seriously, actually citing Dawkins, and that a much larger number seemed to assume, without citing him, that something of the kind would work and was necessary.³ This means, I think, that whatever his intentions are, the idea must be discussed and, since I think it is pernicious and mistaken, for rather interesting reasons, I'm here to say briefly what is wrong with it.

What Dawkins' theory undertakes to do is, as he says, to square up to the formidable challenge of explaining cultural evolution and the immense differences between human cultures around the world.⁴ He does this by postulating mutations that take place in certain entities which function as the genes of culture, and selection among those entities. He calls those entities *memes*. Examples of memes, are, he says, 'Tunes, ideas, catch-phrases, clothes, fashions, ways of making pots or building arches and also religious ideas and scientific theories such as Darwinism.'⁵ The great advantage of this conception, in his view, is that it provides an explanation independent of the advantage derived by the people who adopt these customs, and therefore one which suits his basic concept of selfishness. Memes, like genes, are, he says, selfish and ruthless; that is, they are each selected for their own advantage alone. Explanation in terms of memes is therefore pure of any nuance of human altruism or group selection. It is

intended to displace the kind of explanation which we normally give of culture and which other Darwinists accept, an explanation in terms of the advantage of the groups who practice those customs.

Now, historians at present look for the causes of such developments in the previous state of a culture on the one hand, and in psychological factors like human wishes, needs and intentions on the other. Dawkins, it seems, wants to substitute memes for both these kinds of explanation. For this he would need to show that these explanations don't work, that they have a serious gap or bias in them. In order to justify inventing a whole new range of entities to replace them, it is not enough to show that the existing explanations are incomplete. Of course they always are incomplete, because our information both about culture and about human needs is always inadequate. All explanations dealing with the real world are incomplete. But Dawkins and his followers ought to show beyond this that a quite new kind of explanation is needed and that the pattern of mutation and selection can supply it. The need is not obvious. History, as now practised, is not obviously a dead loss and, even if the need were shown, it is very hard to see how these patterns proposed by Dawkins could suit it. On the face of things, the elements of culture don't look like distinct units or entities on their own, in the way that organisms do. Yet a process of reproduction requires such units. Ideas and theories are certainly not given as unbreakable wholes, though our language reifies them, gives them a grouping, for the convenience of thought. It is the business of language to break up the world into convenient packages, but very often we find reasons to change those verbal boundaries, and there is nothing wrong with doing that. Moreover, even when the packages do seem reasonably distinct, there is no obvious reason to expect them to give place to distinct successors, as happens in biological reproduction, rather than changing, as they seem to, by slow and continuous development.

Consider an example Dawkins is quite given to, the idea of God.⁶ To think of that as a single, unitary idea seems very strange; the very words used for God differ from one language to another – and I'm told there is no such word in Chinese. In the course of changing cultures, the ideas attached to such words vary enormously, and they vary by a smooth transition, not by the sort of stepwise jerks which mutation would require. On the face of it, that is a very odd way to talk about ideas. Dawkins, indeed, has a general metaphysical belief in a process which he calls *selfish replication*.⁷ He considers this to be widely at work in the universe and to supply an explanation for many inorganic phenomena as well as organic ones – indeed, possibly for the development of all complex entities. That is a very ambitious metaphysical theory, far from clear to me and no necessary part

of Darwinism. It is to extend this general idea, that Dawkins takes up the theory of culture, but sweeping general theories of that kind can only be extended into new fields by showing that they actually do some work there. It is hard to see how cultural changes could be explained at all by this theory. The theory seems, in fact, equipped merely to add to the mystery – that is, to the puzzles requiring explanation. The most obvious difficulty relates to the idea of mutation. Mutation, being itself a random process, can scarcely be said to increase our knowledge of what is going on. Had there been a mutation in the idea of God at the end of the eighteenth century, that wouldn't show us what the change was actually about. And it throws no light on the selection process. Concerning itself with entities whose lifestyle is entirely hidden from us, this idea does not seem capable of increasing our understanding.

So far, so wholly destructive. But an idea like this, of course, is not invented without some reason. There are some sensible reasons to which we need to attend. The first is, I think, the attractive analogy which often springs to mind between 'selection processes' in human and evolutionary history. It does of course often happen, in both, that a crowd of competing possibilities arises, only a few of which are realised. Naturally, we ask why. And in both sorts of case, we may well frame our answer in such terms as 'the survival of the fittest', a very attractive, loose phrase. The answers, therefore, look seductively alike, but really they are quite different. In human cases the term 'fit' has a whole extra range of meaning; it has, in fact, its normal meaning, which is an evaluative as well as a descriptive one. It doesn't just mean "likely to survive or reproduce in these circumstances", but also "adapted for particular human purposes". References to those purposes and knowledge of them is not a legitimate tool in biology, but it is a perfectly legitimate tool in history; in fact, it is an essential one.

Cultural selection is selection in a directly literal sense; there always are actual people who literally choose, select, prefer one thing rather than another. However confusedly they act, they always have their motives, their reasons at some level. But in biological selection there are no such people and no extraneous purposes for which the results must be "fit". The analogy between the two kinds of selection can therefore never be complete. It is often illuminating, but only in passing – it must never be pressed. To insist on tackling human history by the methods of biology seems like a perverse importation of ignorance.

Why then should theorists want to do it? The reason, I'm sure, is that they think rationality demands it. Quite rightly, they want to treat the world as an intelligible whole. They hope to do that by finding a single universal pattern, an intellectual method, which can be applied equally everywhere so

as to avoid irrational breaks. In particular, they want to stress the continuity between human life and that of the rest of creation. Some of them, including Dawkins, are especially struck by the fact that the biological theory of evolution itself seems to demand that continuity. Man, if he didn't originate separately, ought they feel to be explicable in the same terms as all other organisms. Universal laws of development ought, therefore, somehow to be found and, if they don't work at once, they must simply be improved until they do.

I myself am very much in sympathy with this general demand for a sense of continuity between our species and the rest of creation. I, too, think that it is always an intellectual gain to avoid breaks, to find intelligible relations between one's own kind of being and others. But it doesn't follow that such continuity calls for universal laws of development, nor even that it allows them. Continuity is not identity. The unity of science is real, but it can't be stated so simply. It requires compatibility between the results of different enquiries, but not formal unity. Forms of explanation are bound to vary, because different sorts of subject matter present different problems to our understanding. To explain is simply to solve those problems, whatever they may be, and to remove those difficulties.

This point has been well expressed by speaking of 'emergent qualities': distinctive properties which any complex thing possesses, though the simpler elements out of which it is built don't possess them. There is nothing superstitious about this. The point can be seen in the parallel examples of flight, human language and music. The flight of birds has aeronautical properties; human language has linguistic properties; music has musical properties, and those properties have to be grasped in order to understand those activities. The properties weren't present in the universe before the activities arose. But this doesn't mean that they had to be created especially, at that moment, in the last-minute rush, and added to the world. Properties don't need to be created because they are not separate existences at all. Nor does it mean that they are unrelated to other properties. The properties of flight are related to other things about birds. It does mean that they call for different methods of study, because they form systems of a new kind. Neither aeronautics nor linguistics is a branch of biology; nor is musicology. There doesn't have to be any single form of thought, known as the 'scientific method', to which all these forms reduce.

The ideal of finding such a universal form of thought is, however, a very powerful one. Philosophers long followed it; they only saw that it was mistaken after patiently exhausting all possible candidates for the position. Having given it up for themselves, they now see that everybody else is continuing to try it. This ideal, moreover, took on a new lease of life in the

early 19th century, when theorists began seriously to float the notion of universal laws of development. A number of grandiose attempts at this were made. All of them had some point in the field from which they started, but all came to grief dramatically when they were applied to unsuitable areas. Hegel, the pioneer of this new study or attempt, notoriously proved from his universal laws that there could only be seven planets, just before the eighth was discovered. Hegel, as is less well known, also ruled that fossils were developing stones, busy on a steady process of effort to become alive. Marx, though he thought he was being much more cautious than Hegel, especially about the physical sciences, claimed, for instance, that the resources of the physical world open to human exploitation were literally inexhaustible. Of course, Marx's thinking can do better than this, but when it does so it uses sources other than Marx's supposedly universal laws. Marx's thinking was used to support Lysenko,⁸ and this use of it doesn't seem illicit by its own rules, nor much stranger than the bulk of Marxist contributions to the physical sciences.

Now, of course, the failure of these two attempts to find universal laws of development would not alone show that the whole project of finding such laws is impossible. From the point of view of a physical scientist still looking for a universal process, both Hegel and Marx can reasonably be seen to be partial. Both their dialectics are arts-based. Both are devised, first and foremost, with a view to explaining something in human history, and are only extended thereafter to science. Is it possible, then, a scientist might ask, to redress that bias, to formulate a universal law of development which starts from and does justice to the behaviour of physical matter? I think this is what Dawkins would like to do. Others, however, have been there before him.

The one other who was most noticeably there before him was the prime patenter of the word 'evolution' – a word that Darwin himself scarcely ever used – and its 19th-Century application. He was that pre-Darwinian evolutionist who did so much to shape the errors which we still live by, and whose confused social-Darwinist thinking has caused so many of them to be fathered on Darwin: Herbert Spencer. Spencer declared that the law of evolution was a universal one applying to all processes, inorganic, organic and cultural alike – the kind of claim that Darwin never made. Spencer, quite rightly, stated that this view was independent of Darwin's. As an enthusiastic follower of Spencer put it, the theory of evolution dealing with the universe as a whole 'from gas to genius', was formulated some months before the publication of the Darwin-Wallace paper.⁹ So it was. It was set out in Spencer's *Synthetic Philosophy* in 1857, two years before *The Origin of Species*. Spencer there defined evolution, otherwise called progress, as

the universal transformation of the incoherent homogeneous into the heterogeneous coherent.¹⁰ This process, he said, was always an improvement. The idea is a trifle vague, as propositions extending from gas to genius tend to be. Spencer, however, found no difficulty in drawing detailed consequences from it in the field of human affairs. Politically, he claimed, it obviously required the most thoroughgoing individualism. He saw all heterogeneity, all individuality, as the inevitable product of natural forces and the manifestation of universal progress. He explained that mankind had, therefore, a prime duty not to stand in its way. (You wouldn't think you could, but apparently you can.) Heterogeneity demanded freedom of all sorts, but particularly the fullest possible economic freedom and decentralisation of government. Unlimited commercial competition was the path of progress. Spencer, therefore, welcomed Darwin's theory when it came, because he saw it mainly as a further endorsement of his ideas, his competitive ethics and metaphysics. He was happy to cite the United States, then busy on commercial expansion of the most ruthless and unbridled kind, as an example of a society conducting itself in the way which a proper understanding of evolutionary theory would dictate.¹¹

All this, of course, is social Darwinism, which ought properly to be called Spencerism. It's a museum of confusions, many of them well worth the attention which I have no time to give them today. The examples should, I hope, make clear what I am objecting to in the general idea of social or cultural evolution. It's bound to be a false guide.

There are at least three reasons, each wholly sufficient, why it cannot work. Darwin mentioned all of them. First, biological evolution itself does not have a single upward general direction. It is not, as Lamarck and Spencer thought, a reliable escalator leading all life upon a single upward path. Instead, it's a branching bush of divergent forms adapting constantly to innumerable changing circumstances. There is never a guarantee that these will work, and extinction is common. No universal laws emerge which can intelligibly be extrapolated to culture.

Secondly, in the human race, individual natural selection has largely given way to cultural change. If you think of the effect of the kinship systems in rescuing people, and in confusing the question of who is responsible for children, I think that becomes clear. Darwin said it himself.¹² Culture is now the dominant adaptive mechanism of our species and has its own modes of changing. It too is neither infallible nor an escalator, so why talk about evolution as if it took a single direction?

Third, the time scale, both of evolution and of cultural change, is far too great for us to have the slightest hope of identifying their general direction from within. Hindsight constantly shows us the folly of those who have

hoped to do so for history. For biological change the difficulty would be inconceivably larger. Even if there were some temporary direction, we wouldn't be able to spot it. The spiders in the corners of the carriage do not know where the train is going. Since the project is impossible, those who attempt it must really be doing something else. What they're usually doing is to project some particular contemporary pattern, which happens to interest them strongly, onto the vast backcloth of history. They then claim validation for the local version from the Brocken spectre which it has produced. In this way Spencer presented the views of emergent *laissez faire* capitalism and made them justify themselves. Similarly, and by contrast, Marx, for his part, projected those of the exploited working-class and saw all future history as a stage for completing the frustrated revolutions of 1848. Morally speaking, Marx's enterprise was much the more respectable, but there is nothing scientific about either of them; both make fraudulent claims.

Probably this kind of thinking has, in fact, only two choices: if it doesn't want to be vacuous, which it often is, it has to be pretentiously self-deceiving – and the self-deceptions are usually dangerous. At present, their most prevalent form is still Spencer's; the social-Darwinist view of evolution as a process red in tooth and claw, justifying all sorts of cut-throat competition in human society by claiming that, in the familiar phrase, 'there is no alternative'. This is something which our bloody-minded age needs like it needs a hole in the head. Moreover, any such evolutionary doctrine, even of a different content, must carry the implication that we are better than our predecessors, and therefore than surviving 'primitive' peoples who seem to resemble those predecessors, and this is not a necessary truth.

The other bad effect which these speculations can have is to distract us from the genuinely important business of understanding our nature as evolution has framed it. We are not blank paper at birth, but complex beings with an emotional constitution which we very much need to understand better. We have a nature as well as a history. Unfortunately, many theories about that constitution have painted it in rather lurid colours, sometimes indeed in unrelieved black. Put off by this, people of goodwill for some time took to claiming that we actually were blank paper and had no such constitution at all. It has become increasingly clear that this is evolutionary nonsense. Thus a conflict arises which calls for new and serious thinking. The idea of cultural evolution strikes me as nothing but a dodge to put off the work of doing that thinking, a piece of displacement activity brought in to dodge the conflict. It is not the right way to grasp the continuity between human and non-human nature. We need to drop it and find a better path.

QUESTIONS AND DISCUSSION

As Mrs. Midgley's interlocutor, Robert Cecil, Chairman of the Institute for Cultural Research, began by referring to what he termed the "wholly terrifying phenomenon of social Darwinism". Embedded in the consciousness of nations, it had led to a struggle for survival among them in which fitness had been interpreted almost exclusively in terms of weapons. "How are we going to get this identification of social Darwinism with the nation-state out of our systems – because if we don't we are doomed?"

Midgley: There is a propaganda job to be done here. It is a considerable job which I don't think that people have tried very hard to do yet. That is, I think this particular delusion has been rather widespread, so that everybody who is in a position to do some propaganda, should do a little. The general psychological question, of how people are to be induced to drop a conceptual scheme which is serving a convenient purpose, is a problem we all know about. What seems to me very odd about sociobiology in general, however – not just Dawkins – is that its language is that of social Darwinism: the term 'selfish' is central to it. Life is in some sense said to be essentially selfish. Yet the doctrine of sociobiology, ill-expressed by that language, is quite contrary. Kin selection, which is clearly at least partly true, is central to any way of looking at natural selection now. What is selected, the line that survives, is the line which takes in social creatures, the line which takes enough trouble about its young for those young to survive. Nor is it only young, but all kin. The self-sacrificing baboon which, as has been seen to happen, leaps on attacking leopards while the other baboons get away, is showing a nature, obviously evolved by many ages of baboonery, in which it is a genuine motive to care for those who depend on you. That is possible because more of the genes of the one who started to be like that survive. Unless it is not reproduced at all, the tendency to that kind of conduct can in the long run become widely inherited and it is a much more consistent interpretation of Darwin to say that it does do this.¹³ The essential doctrine of sociobiology is that this kind of thing is possible, that what is called altruism – acts done for their own sakes, but which in fact benefit others – is perfectly possible. Kin selection makes it work. Sociobiologists then express this in a strange manner, either by saying that the cause is the selfishness of the gene, as if the gene were the agent making the baboon act because it knows that more of it will survive as a result; or that it is the selfishness of the individual, because he is increasing his own inclusive fitness, which means having an awful lot of descendants. Now, to use the term 'selfish' for this is, I think, extremely perverse. Its effect is that what people pick up from sociobiology is reinforcement of their social

Darwinism when, in fact, if this were put more clearly, they would see that they must drop it.

Cecil: Do you actually hold that group selection and the kinship mechanism is the only one by which altruism can have come into human behaviour?

Midgley: I don't know of any other, unless you mean an act of God. I think this is important. I mean, I don't know of any other scientific explanation. About God I would like to say that I am all for Him being there in the first place, but I don't see Him as so incompetent a creator that He must leap in and shift handles as things move on. The scientific is a perfectly adequate explanation here, and if you have an adequate explanation, I don't see why you would look for a different one. May I just distinguish between kin selection and group selection? Group selection, as such, is a little difficult to accept, because it would mean that anything advantaging the group will continue. That's not true, however. If the first self-sacrificing baboon had sacrificed himself before having any young, that mutation would have died out. If, however, his mutation was not so severe or so promptly active that he left no descendants, than it could continue because he benefitted his kin; that is kin selection. That makes much clearer how it works. It is the theoretical minimum that I think we should rest on.

Cecil: Why can't we just say: 'There is altruism in the human race, we don't know where it came from?'

Midgley: Perhaps the obvious reason is that it has been claimed that the human race is not altruistic. Egoism, psychological egoism, proposed by Hobbes as a basis for the social contract, is a very powerful concept in political thinking. People don't usually believe it explains everything if you mention that to them, but they often assume it. One job that ethology really has done is to shake people about this. It was assumed that people and animals were essentially egoistic and nothing could possibly aim at the benefit of another creature. When to their surprise they are shown that even animals sometimes do this, I think it helps. And if a plausible explanation is available too – a reason why the altruism can be present – there seems no reason not to use it.

Ornstein: May I ask a few questions from the audience? First, is there not in fact a direction in evolution, in that organisms appear to be more complex now than they were at periods in the remote past?

Midgley: Yes, that's right, Darwin did indeed say that. Things are getting more complex in a general sort of way, but sometimes, very often indeed, they stay still; sometimes they even go back, as in the case of parasites. In

going back, however, though they may lose their eyes and so forth, they are still adapting themselves to their situations. But if one tries to say anything more specific than that organisms are getting more complex, if one starts to define this complexity and, still more, if one puts a value on it, if one says the outcome is always an improvement, one very quickly gets into frightful difficulties.

Ornstein: You seem to be saying that social evolutionism and the idea that universal laws exist are mutually dependent and that if one is false so must the other be. Why? It could be that evolutionism is a mistaken strand of law-making.

Midgley: I didn't say that there are no scientific laws in general, laws in the different sciences. I'm not sure whether the questioner has in mind historical laws, laws of history, because I do think those are rather different from scientific laws, and perhaps one shouldn't call them laws in the same sense as in the sciences. For example, if you said that revolutions are always followed by dictatorships, this might be a useful generalisation, but it would not be like the laws of physics. I'm inclined to think that all generalisations about human history or change are of that modest kind.

Ornstein: A final question arguing against universal laws: this asks whether memes – for example, the idea of God – might not vary from one culture to another according to the ethnogenetic basis of each. Do not entire cultures have their own individual morphologies, as Goethe and Spengler, among others, have maintained?

Midgley: Yes, I do think such ideas vary enormously. I'm not quite sure what the questioner means, but surely this variation doesn't stop it being 'the same meme' for Dawkins? When we say such ideas are basically the same, I don't think we are suggesting, as he does, that there is an independently existing entity moving for its own advantage from one culture to another, exploiting the cultures in which it lodges. There is often quite a problem about whether one is going to say that two expressions of an idea are really the same idea. I know nothing about Chinese thought, but one might well say, having looked at some Chinese idea, that one believed it actually to be the idea of God. That would be a remark about what the Chinese mean and what we mean and what other cultures mean. I don't think it would be the postulation of an independent entity, that's all. I think cultural variations are enormous, and can be extremely important. Usually when we talk about an idea that belongs to another culture, we get it slightly wrong. I think that is a very important point against Dawkins.

REFERENCES

1. *Beast and Man; The Roots of Human Nature*. Harvester Press 1979, Methuen University Paperback 1980. And by the same author: *Heart and Mind. The Varieties of Moral Experience*. Harvester Press 1981, Methuen University Paperback 1983. *Animals and Why They Matter*. Penguin 1983. *Women's Choices; Philosophical Problems Facing Feminism*. Weidenfeld and Nicolson 1983. *Wickedness; A Philosophical Essay*. Routledge & Kegan Paul 1984.
2. Oxford University Press 1976.
3. See for instance a number of papers in *The Philosophy of Evolution*, ed. Uffe J. Jensen and Rom Harré, Harvester Press 1981.
4. *The Selfish Gene*, p.205.
5. p.206.
6. p. 207.
7. pp. 206, 211.
8. A Soviet biologist, who was discredited in the USSR during de-Stalinisation.
9. Cited by James R. Moore in *The Post-Darwinian Controversies*, Cambridge University Press 1979, p.167. The disciple was Edward Clodd.
10. *First Principles* by Herbert Spencer, fifth edition, 1884, p.396.
11. For this distressing but very illuminating story, see Richard Hofstadter, *Social Darwinism in American Thought*, (New York, Braziller 1959) Chapter 2 'The Vogue of Spencer', and James Moore, *op. cit*, Chapter 7, 'The Vogue of Herbert Spencer'.
12. *The Descent of Man* (Princeton University Press Reprint, 1981) pp. 165–6, Chapter V of first edition.
13. See his repeated emphasis on the social instincts, both in man and other animals, as a source of morality, notably in *The Descent of Man*, chapters 3 and 5. Though often puzzled about the manner of their transmission, he never doubted their presence and force.