



Midgley

Evolution as a Religion

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Mary
Midgley

Evolution as a Religion

Strange hopes and stranger fears

Revised edition, with a new introduction by
the author



London and New York

To the Memory of Charles Darwin
Who Did Not Say These Things

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This book has grown out of an article of the same name published by Basil Blackwell in 1985 in a book called *Darwinism and Divinity*, edited by John Durant. I am grateful to the publishers for permission to reprint its scattered elements here. The only other parts which have appeared before are as follows: in chapter 17, about half of an article called 'Towards a new understanding of human nature; the limits of individualism', published in *How Humans Adapt; A Biocultural Odyssey* (edited by Donald J. Ortner) by the Smithsonian Institution Press, Washington, D.C. 20560, USA in 1983, has been reworked. Chapter 18 appeared, almost as now, in *Encounter* (February 1983) under the title 'Duties concerning islands'. Chapters 14 and 15 contain scattered parts of an article called 'De-dramatizing Darwinism', published in *The Monist*, 67, 2 (April 1984). I am grateful to all those concerned with these publications for their kind permission to reprint.

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INTRODUCTION

This book had a very simple origin. In the early 1980s I was asked to speak at a conference on 'Evolution and Religion'. This suddenly made me wonder whether the link between these two things was perhaps closer than had been noticed. Was the idea of evolution somehow beginning to be used, not so much as an antidote against religion but as a substitute for it – indeed, as a form of religion itself?

I had been struck for some time by certain remarkable prophetic and metaphysical passages that appeared suddenly in scientific books about evolution, often in their last chapters. Though these passages were detached from the official reasoning of the books, they seemed still to be presented as science. But they made startling suggestions about vast themes such as immortality, human destiny and the meaning of life. These are difficult topics with which philosophical and religious thinkers have long wrestled. But the scientific writers did not usually refer to any earlier discussions. They simply and confidently laid down their own surprising views about them. Their pronouncements seemed to be seriously intended. But it was far from clear on what level they were meant to be taken.

All this seemed to me to raise most interesting questions about the kinds of thought that can go on in the wide areas that lie outside both official science and official religion. Simply defining these two

provinces does not help us much when so many other ways of thinking are possible. In this book, then, I tried to sketch out a wider map on which these speculations might be placed so as to tell us something about the general shape of our thought. Some years later, I extended this map further in a book called *Science As Salvation*,¹ to deal with similar – and even more startling – pronouncements made by physicists – especially cosmologists – and promoters of artificial intelligence.

Today, the approach to this phenomenon that I suggested in these two books still strikes me as reasonable. But has it got out of date? In sixteen years, the kind of quasi-scientific speculation that I wrote about might easily have been quite discredited and abandoned. In that case my books would, of course, no longer be needed.

I wish that this had happened. Instead, quite to the contrary, quasi-scientific speculation of the kind that I wrote about is, if anything, an even more rampant growth now than it was when I first drew attention to it. Moreover, it still comes in the same general forms.

Certainly the balance of emphasis between those forms has shifted somewhat. But I think it would not be sensible to rewrite the book now in order to track that shift. Academic life moves very slowly and strong rhetoric, once launched, can keep afloat for an amazingly long time. Several of the books that I have quoted have had huge sales. They are still regularly used as textbooks on countless courses. Their influence, direct and indirect, is bound to persist for a long time, even in those cases where, at a more refined level, they are supposed to have been refuted.

It will persist because the appeal of the myths that underlie them is strong – so strong that, even if particular forms of those myths do become obsolete, new ones are always likely to replace them. And the point of my mapping project is not just to object to the particular forms. It is to make us more aware of the underlying myths themselves. That is the only way in which we can get some control over their influence. We still very much need to do this, even where a particular expression of them may be going out of fashion.

Among these recent shifts of emphasis the most obvious one is due to the end of the Cold War. Marxism, which I repeatedly cited as an

¹ London, Routledge, 1992.

example of a quasi-scientific faith approximating to a religion, has ceased to play that role in the West. It is, however, still vigorous as a faith in many parts of Africa and South America. And its effect on the history of Europe – and indeed of China – seems to me still persistent enough to make it important for us to understand it. So I do not think it would be sensible to remove it from my text. On the economic front, Marxist mythology has been succeeded by that of its near neighbour the belief in Market Forces, which also sometimes uses religious imagery, for instance in the notion of the Hidden Hand. That faith, however, does not usually appear in scientific books, so it is not relevant to my subject here.

By contrast, prophecies of a dazzling future for humanity, attainable through genetic engineering or artificial intelligence or both, have, if anything, grown louder and more frequent of late. So has the tendency to treat that project as if it were the inevitable next stage of evolution. But I do not think that they have become any more intellectually respectable, or produced any new arguments that I ought to answer.

What I said against such ideas in these two books still seems to me to be valid. I still think, as I did sixteen years ago, that these projects have nothing to do with any reputable theory of evolution. And for our real problems in the world, which are essentially social and moral, biochemical solutions (as proposed in genetic engineering) are usually irrelevant. Nor does it make sense to suggest that machines programmed by existing human beings will be able to reform our society for us when we cannot do it for ourselves. These schemes still seem to me to be just displacement activities proposed in order to avoid facing our real difficulties.

About sociobiology the position is rather different. Here, at the academic level, things have certainly improved. At that level, the crude rhetoric of *selfishness* has been toned down and solid scientific points about how populations develop have, to some extent, been separated from ideological exaggerations. To mark this greater sobriety, the very word *sociobiology* is now largely avoided in learned circles.

Unluckily, however, as far as the wider public is concerned, the horse of myth had bolted long before this stable door was locked. Selfish-genery now colours large areas of our intellectual landscape and it is likely to go on doing so until some other invading myth displaces

it. Anyone who wants to know what is wrong with the scientific aspects of it should read Evelyn Fox Keller's splendid book *The Century of the Gene*.² But the imaginative aspect of it, which is what I talked about here, still remains, and as far as I can see my discussions of that are still likely to be needed. So I have let them stand.

² Harvard University Press, 2000.

1

EVOLUTIONARY DRAMAS

There is grandeur in this view of life.

Charles Darwin

SCIENCE AND SYMBOLISM

The theory of evolution is not just an inert piece of theoretical science. It is, and cannot help being, also a powerful folk-tale about human origins. Any such narrative must have symbolic force. We are probably the first culture not to make that its main function. Most stories about human origins must have been devised purely with a view to symbolic and poetic fittingness. Suggestions about how we were made and where we come from are bound to engage our imagination, to shape our views of what we now are, and so to affect our lives. Scientists, when they find themselves caught up in these webs of symbolism, sometimes complain, calling for a sanitary cordon to keep them away from science. But this seems to be both psychologically and logically impossible.

Our theoretical curiosity simply is not detached in this way from the rest of our life. Nor do scientists themselves always want it to be so. Some of the symbolic webs are ones which they approve of, and promote as part of the ideal of science itself. For instance, Jacques Monod,

as an atheistical biochemist, does not just rejoice at getting rid of the theistic drama. He at once replaces it by another drama, just as vivid, emotive and relevant to life, in which Sartrian man appears as the lonely hero challenging an alien and meaningless universe:

It is perfectly true that science attacks values. Not directly, since science is no judge of them and *must* ignore them; but it subverts every one of the mythical or philosophical ontogenies upon which the animist tradition, from the Australian aborigines to the dialectical materialists, has based morality, values, duties, rights, prohibitions.

If he accepts this message in its full significance, man must at last wake out of his millenary dream and discover his total solitude, his fundamental isolation. He must realize that, like a gypsy, he lives on the boundary of an alien world; a world that is deaf to his music, and as indifferent to his hopes as it is to his sufferings or his crimes.¹

But 'discovering his total solitude' is just adopting one imaginative stance among many possible ones. Other good scientists, very differently, have used the continuity of our species with the rest of the physical world to reprove human arrogance and to call for practical recognition of kinship with other creatures. Many, like Darwin and the great geneticist Theodosius Dobzhansky, have held that an attitude of awe and veneration for the wonders of the physical world is an essential condition for studying them properly. Others have talked in a more predatory way about the joys of the chase and the triumph of catching facts. Both motives, and many others, are evidently so habitual in science that they are only not mentioned because they are taken for granted.

It seems often to be assumed that they are therefore irrelevant, that Science itself is something so pure and impersonal that it ought to be thought of in complete abstraction from all the motives that might lead people to practise it. This, unfortunately, cannot work because of the importance of world-pictures. Facts are not gathered in a vacuum, but to fill gaps in a world-picture which already exists. And the shape of this world-picture – determining the matters allowed for it, the principles of selection, the possible range of emphases – depends deeply on the motives for forming it in the first place.

Imagination, which guides thought, is directed by our attitudes. For instance, predatory and competitive motives tend to produce a picture dominated by competition and predation – one in which these elements do not only play their part, as they did for Darwin, but are arbitrarily and dogmatically isolated as sole rulers. Thus, in a familiar distortion which will concern us repeatedly, the sociobiologist M. T. Ghiselin flatly declares:

The evolution of society fits the Darwinian paradigm in its most individualistic form. The economy of nature is competitive from beginning to end. Understand that economy, and how it works, and the underlying reasons for social phenomena are manifest. They are the means by which one organism gains some advantage to the detriment of another. No hint of genuine charity ameliorates our vision of society, once sentimentalism has been laid aside. What passes for co-operation turns out to be a mixture of opportunism and exploitation. The impulses that lead one animal to sacrifice himself for another turn out to have their ultimate rationale in gaining advantage over a third, and acts for the good of one 'society' turn out to be performed for the detriment of the rest. Where it is in his own interest, every organism may reasonably be expected to aid his fellows. Where he has no alternative, he submits to the yoke of servitude. Yet, given a full chance to act in his own interest, nothing but expediency will restrain him from brutalizing, from maiming, from murdering – his brother, his mate, his parent, or his child. Scratch an 'altruist' and watch a 'hypocrite' bleed.²

As we shall see, this claim is essentially pure fantasy, not only unsupported by the empirical facts which are supposed to be its grounds, but actually contrary to them, such as they are. Is this a quite exceptional aberration? Some will suspect that it must be, not only because the world-picture involved is a bad one, but because scientists ought to be so impartial that they either do not have anything so unprofessional as a world-picture at all, or, if they have one, do not let it affect their work.

But this is a mistaken ideal. An enquirer with no such general map would only be an obsessive – someone who had a special motive for collecting facts indiscriminately. He would not be a person without an

attitude, or without special motives, but one with motives so odd as to inhibit the kind of organizing activity which normally shapes people's ideas into some sort of coherent whole. Merely to pile up information indiscriminately is an idiot's task.

Good scientists do not approximate to that ideal at all. They tend to have a very strong guiding imaginative system. Their world-picture is usually a positive and distinctive one, with its own special drama. They do not scrupulously avoid conveying any sense of dark and light, of what matters and what does not, of what is to be aimed at and what avoided at all costs. They use the lights and shadows to reveal the landscape. Like those who argue usefully on any other subject, they do their best work not by being neutral but by having strong preferences, being aware of them, criticizing them carefully, expressing them plainly and then leaving their readers to decide how far to share them.

Symbolism, then, is not just a nuisance to be got rid of. It is essential. Facts will never appear to us as brute and meaningless; they will always organize themselves into some sort of story, some drama. These dramas can indeed be dangerous. They can distort our theories, and they have distorted the theory of evolution perhaps more than any other. The only way in which we can control this kind of distortion is, I believe, to bring the dramas themselves out into the open, to give them our full attention, understand them better and see what part, if any, each of them ought to play both in theory and in life. It is no use merely to swipe at them from time to time, like troublesome insects, while officially attending only to the theoretical questions. This will not make them go away, because they are a serious feature of life.

DARWIN'S BALANCE

The drama that attends a theory need not, then, be mere melodrama. When sensationalism is present it is either irrelevant or – if it really belongs to a theory – shows that that theory is bad. The drama that goes with a good theory is simply the expressive aspect of the theory itself. In order of time, it is often conceived in advance of much of the supporting evidence. But when further facts accumulate, it ought to respond to them by refining and subtilizing its cruder outlines.

This process usually makes it less extreme and one-sided, and so

moves it away from the gratuitous sensationalism which marks melodrama. That does not make it less stirring or less important for life; it can make it more so. This imaginative and emotional deepening is part of the growth of a theory, not just a chance ornament. When the young Darwin immersed himself in the arguments about cosmic purpose in Paley's theological textbook *The Evidences of Christianity*, and repeatedly read *Paradise Lost* on exploring trips from the *Beagle*,³ he was neither wasting his time nor distorting his scientific project. He was seriously working his way through a range of life-positions which lay on the route to the one he could finally use.

The result of this long preliminary pilgrimage was to make his own picture unusually balanced and inclusive. To keep it so is, however, terribly hard. He himself made clear that he felt this difficulty deeply, and was constantly dissatisfied with his efforts, constantly changing his books to do justice to some neglected angle. The vastness of the truth and the one-sidedness of formulae always haunted him.

This haunting by no means reduced his work to an undramatic neutrality. Instead, the tension of opposites makes the drama which he shows us comprehensive and Shakespearian, so that it includes every mood. Gillian Beer has lately pointed out how rich his style is in fertile metaphors and models, which he continually uses to supplement and correct each other.⁴ Centrally, he will not lose hold of either of the two emotional responses which belong most naturally to evolutionary speculation – on the one hand, optimistic, joyful wonder at the profusion of nature, and on the other, pessimistic, sombre alarm at its wasteful cruelty. Since he cannot qualify every sentence, selective quotation often makes him seem enslaved to one or other of these attitudes. And others who have made real efforts to come to terms with the conflict have been misrepresented in the same sort of way.

No malice is needed for this distortion. Even given goodwill, the difficulty is immense. What is needed is not just a set of rules for handling factual disputes, of the kind which is recognized as part of scientific training. Since this vast issue involves our whole view of our place in the world, discussion of it calls out and reflects the whole shape of the character. The way in which we treat it inevitably reveals our weaknesses and prejudices. Dozens of awkward truths about ourselves are relevant to this subject; our avoidance of any of them projects

a distortion on to the screen of our theory. Obviously we shall never escape their influence. What is needed is the kind of effort which Darwin made to become aware of them, to separate them from the more narrowly factual issues, and to watch out for their dangers.

Am I exaggerating these dangers? Some physical scientists are likely to feel that the kind of thing I have been describing does indeed happen in other disciplines, notably in the humanities, but does not normally happen in their own, and cannot really have mattered to Darwin. I only wish that they were right.

The destructive message of this book is a somewhat dismal one. It concerns the sort of trouble which arises when, with writers less careful than Darwin, the dramas take over. About evolution, theory itself has again and again been distorted by biases flowing from over-simple, unbalanced world-pictures. The trouble does not, of course, lie in mere wish-fulfilment of the obvious kind which paints the world as we should like it to be. It involves being obsessed by a picture so colourful and striking that it numbs thought about the evidence required to support it. Standards of proof then fall headlong.

Half the trouble of course takes place out of sight, in the mere choice of problems, in taking some things for granted and being quite unpersuadable about others, in unconsciously placing the burden of proof on one's opponents, and sometimes in pure tribal feeling which confines one's attention to the fellow-specialists who already share one's premisses. Of course it is true that the resulting mistakes are usually not as bad as the exaggerated forms in which they are reflected by outsiders, and also that they are 'not part of science'. Mistakes never are. But since what is needed in order to correct them is not to avoid all world-pictures altogether, but to form better ones, this whole process is a matter for real scientific concern.

FALSE LIGHTS

There are two distortions in particular which will mainly concern us in this book, and they had better be indicated, however crudely, right away. Neither is new; both have often been denounced. But both persist, not just in the minds of outsiders ignorant of evolutionary theory, but also in those of many scientists who develop and expound it.

The first is the better known and the more obviously pernicious. It is the 'Social Darwinist' idea, expressed by Ghiselin, that life has been scientifically proved to be essentially competitive, in some sense which exposes all social feeling as somehow mere humbug and illusion. The phrase 'survival of the fittest' has been used, ever since Herbert Spencer first coined it, to describe an individualistic law showing such things as co-operation, love and altruism to be unreal, a law which (somewhat mysteriously) both demands and predicts that they should always give way to self-interest.

This has often been exposed as nonsense. Since many very successful species of social animals, including our own, have evolved these traits, have survived by them and continue to live by them, their unreality cannot be the message of evolutionary theory. But because of its strong dramatic force, as well as various political uses, this notion persists through repeated attempts to correct it, and often twists up the ideas even of those who think they are helping to get rid of it. It is especially troublesome in the American sociobiology debate, a topic to which I shall have to give a rather disproportionate amount of attention, simply because its wide publicity makes it, just now, the most prominent hotbed of noisy errors about evolution.

The second main distortion may be called Panglossism, or the Escalator Fallacy. It is the idea that evolution is a steady, linear upward movement, a single inexorable process of improvement, leading (as a disciple of Herbert Spencer's put it) 'from gas to genius'⁵ and beyond into some superhuman spiritual stratosphere. This idea, first put forward by Jean-Baptiste Lamarck at the beginning of the nineteenth century,⁶ convinced Spencer instantly and completely.

It did not convince Darwin at all. He thought it vacuous, pointed out the obscurity of the metaphor 'higher', and relied on no such paid-up cosmic insurance policy to bail out the human race. He developed his own view of selection on the humbler model of a bush – a rich radiation of varying forms, in which human qualities cannot, any more than any others, determine a general direction for the whole.

Here too, however, what he rejected has been kept by many people as a central feature of the idea of evolution and seen as a key part of 'Darwinism'. Still unsupported by argument, it too continues to produce some extremely strange theorizing, and in its less obvious way

also to do a great deal of damage. These two kinds of drama are, in fact, the shapes into which the two main strands of feeling about evolution naturally develop, if they are not held in balance and forced to correct each other. They are the hypertrophied forms of cosmic optimism and cosmic pessimism respectively. Since both these moods are common, theory-builders often oscillate between them rather casually, and produce views which owe something to both. Unluckily, this is not the same thing as the synthesis which Darwin attempted. It can merely give us the worst of both worlds.

THE FEAR OF BIOLOGY

Melodramas like these, especially the 'Social Darwinist' or Spencerist one, account, I am sure, for the strong objection which many people still feel to seriously taking the theory of evolution on board at all. This objection is not confined to Biblical creationists. Certainly the persistence of creationism, leading to a recent expansion and even the conversion of a few physical scientists, itself indicates something beyond mere passive conservatism. But what is much more interesting and important is the subtler resistance still common among social scientists.

This is not a denial of evolutionary theory itself, which is usually conceded as correct in its own sphere, but a steady rejection of any attempt to use it in the interpretation of human affairs. A sanitary cordon is erected at the frontier between the physical and social sciences, at which biological explanations generally and evolutionary ones in particular still tend to be turned back, marked with an official stamp which may read 'Fascist', 'Racist', 'Galtonist', 'Innatist', 'Biological Determinist', or at times, most grimly of all, merely 'Biological'.

This habit is fortunately on the way out, and a modest two-way traffic does now go on, to the general advantage. But a good deal of work is still needed to explain – as is always necessary in these cases – the distortions which gave rise to the prejudice in the first place, and just why they are not actually part of biological science. That is a main business of this book.

Tribally speaking, this debate is conceived as a border dispute

between social scientists and biologists. It can appear to be one between their respective sciences themselves. Since, however, sciences cannot oppose each other in this way, there is plainly a need for rethinking and restatement when their representatives start doing so. It is helpful, I think, to begin by looking at the historical reasons why inter-science war at this point did not surprise or shock people as much as it ought to have done.

In the first place, within the social sciences themselves, disputes about the sources of human conduct have often been somewhat aggressively and competitively conducted. There is a real difficulty in grasping the vastness of the subject, in seeing that distinct insights need not be rivals, but can explain different aspects of life, and can eventually be compatible. In this way physical explanations have chronically been seen as competing with psychological ones, introspection as competing with laboratory work, observation with experiment, interest in heredity with interest in environment, history with science, and answers to large questions with answers to small ones.

In this competitive atmosphere, the standing of biological explanations was also much injured by their repeated misuse during the nineteenth century for sinister political purposes. Starting from Francis Galton's eugenic proposals to weed out the lower classes, as well as non-European races, by selective breeding, oppressors repeatedly invoked the name and prestige of biology, along with Social Darwinist distortions of evolutionary theory, to justify exploitation. The notion of fitness was twisted to preserve white dominance in the United States through so-called intelligence testing, bolstered by false, but seductive, biological theories.⁷ It also figured in the ravings of the Nazis.

Thus biology itself became associated in the public mind with a string of indefensible right-wing positions. Since these people's biological theories were usually false, based on views of (for instance) race which were not biological at all, this hijacking ought no more to have discredited genuine biology than the errors of alchemists discredit chemistry. The association is a quite external one. It is in fact just as easy to misuse environmentalist theories for oppressive purposes. For instance, J. B. Watson, the founder of behaviourist psychology, did this in recommending his perverse and inhuman system of baby care.⁸ And the whole notion of natural human tastes which rulers must not distort

or ignore – a notion on which we all rest when we resist bad institutions as ‘inhuman’ – presupposes a firm biological basis in inherited human nature.

Marx’s central notion of ‘dehumanization’ rests on this plinth, and his attacks on the notion of human nature are simply aimed at inadequate forms of it. If there were no such thing as human nature, the objections to a *Brave New World* existence could never arise. Conditioning is the tool of tyrants. Natural, inborn human spontaneity, seeking a more satisfying life even among people who have been brutally conditioned to know nothing but slavery, is the source of resistance to tyranny. It is the myths, not real biological theory, which have associated our evolutionary origins with injustice and oppression. That is why it is so important to expose them.

This irrelevance of bad political doctrines to real biological theory has been the theme of a great deal that I have written, and I must not repeat those discussions here.⁹ One feature of the present enquiry, however, is different. Previously I have been largely occupied with myths which seemed to be deforming the social sciences; here I deal mainly with ones infesting the physical ones. I hope it will be clear, in the one case as in the other, that this is no more an attack on those sciences themselves than an exposure of forged money is an attack on the Mint or a denunciation of quack remedies is an attack on the medical profession. I have been heartened by the readiness of a number of scientific colleagues to make this distinction, and I very much hope that readers will be willing to put themselves to the same trouble, for which I thank them.

2

DO SCIENCE AND RELIGION COMPETE?

If a general council of the Church Scientific had been held at that time, we should have been condemned by an overwhelming majority.

T. H. Huxley

THE WILBERFORCE LEGEND

Political feuds, however, are hardy plants, very difficult to weed out of a controversy once they have got into it. And this particular controversy was already distorted by animosities drawn from an older warfare, that which has been conceived as raging between science and religion in the nineteenth century, centrally over the theory of evolution. That seems to have been the point at which the idea of evolution, and to some extent of science generally, began to be seen as immoral and inhuman, while scientists began, in reply, to see notions of morality and humanity as anti-scientific and obscurantist. The whole idea of this warfare is a very strange one, and it is part of our business in this book to understand it better.

It is very interesting to notice how far later tradition has exaggerated the Victorian dispute and distorted our view of its nature. As James