

Religion, Science and Ethics



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Robin Attfield's research concerns ethics, philosophy of religion, history of ideas and environmental philosophy. One recently published book is *Creation, Evolution and Meaning*, an interdisciplinary work bestriding the philosophies of religion, science and meaning and environmental ethics, published by Ashgate in 2006. His previous book was *Environmental Ethics: An Overview for the Twenty-First Century* (Polity/Blackwell, 2003). His edited collection *The Ethics of the Environment* was published by Ashgate in 2008.

Summary

This address opens with stewardship, a central theme relating theistic religions to ethics. This theme is central to modern Christianity and Judaism, and increasingly to contemporary Islam. It is accepted by Islamic scholars such as Azizan Baharuddin. While it is not itself an ethic, it is a model of the role of humanity within the created order, and one with ethical implications.

The most relevant field of science is ecological science. This science embodies widely accepted teachings about ecosystems. Climate science is an off-shoot, and is influencing international climate negotiations. We all need to accept and act on its findings.

But ecology is grounded in Darwinism. Darwinism encountered resistance from some, as well as a welcome from other religious leaders. I have argued elsewhere that Darwinism and theism are compatible. One apparent problem concerned whether humans could have non-human ancestors. Another problem concerned pre-human suffering, which is a genuine problem for theologians.

But we cannot discard Darwinism to solve this problem, as many Christians recognised. For there are many strands of strong evidence for Darwinism.

Recognising this problem suggests that we should discard metaphysical anthropocentrism, which clashes with the Hebrew Bible (for example, Psalm 104). This also allows us to recognise the intrinsic importance of animal well-being.

But this recognition helps solve the problem of pre-human animal suffering, which is discussed in some detail, using Rolston's arguments about the positive value of a world of fauna and flora over a world of flora only, and of a world of heterotrophs (which eat others) and predation over a world of autotrophs only.

Ethical implications of all this are now elicited: Preserve biodiversity, species and habitats. Prevent animal cruelty and neglect. Stop factory farming, and imports from factory farms. Preserve creatures for our successors.

Theological implications are also elicited. We should recognise that God wants all creatures to flourish, as well as human beings, and to be allowed space and opportunities to develop in accordance with their created natures.

Introduction: Stewardship

To begin with a theme which relates theistic religions to practical life and in a way to ethics. This is the theme of humanity as God's stewards, placed on earth to take care of our planet and its environs in a manner for which we are responsible and answerable to God. This, at minimum, means that we cannot treat the world and its creatures in any way that we please. We may use the world to secure food, drink, clothing and shelter, but at the same time we should care for its inhabitants, including its non-human inhabitants, either for the sake of God the creator, or maybe for their own sake. We should avoid making species extinct, and treat non-human species with care and compassion, perhaps because they are creatures of God, and thus fellow-creatures of ourselves.

This approach has been found to be present in some ancient philosophers such as Plato, but is mainly associated with theistic religions such as Judaism, Christianity and Islam. There is much in the Hebrew Bible about the importance of the land and the need to look after it, using some of it for agriculture, and leaving other areas for the wild creatures. Psalm 104 expresses God's care both for humanity and for wild creatures such as lions, storks and cedar trees; they all have their place. The New Testament reflects similar attitudes, but largely accepts what Judaism already believed and taught. Islam found new ways of expressing the role of humanity, with human beings as God's Khalifa (deputy or vice-gerent) on earth, answerable to God to look after the earth for the sake of both the present and future generations of humanity; non-human species, for example, are to be preserved mainly for the sake of future people. This is very much the stance of some contemporary Muslim scholars, such as Professor Azizan Baharuddin of Kuala Lumpur (Baharuddin, 1995, p. 202; Nasr, 1989, pp. 144-45).

I will use the word ‘stewardship’ for this approach. Stewardship is not itself an ethic, as it does not embody ethical principles or priorities; but it implies indirectly the superiority of some patterns of behaviour over others. For example it implies that preserving other species is in general superior to eliminating them, and also to mistreating or exploiting them. It also suggests that, within limits, making the desert bloom and growing crops and fruit on potentially fertile land is better than leaving it as a wilderness. There are some passages of the early Christian bishop St. Basil to this effect, words which were imitated a thousand years later by one of the early practitioners of modern science, John Ray.

Relevant Branches of Science

If we now turn to more recent developments in science, the branch of science that best informs us about how the natural world functions on earth is ecology, a branch of biology that was founded in the late nineteenth century and was developed in the early twentieth century by scientists such as Frederick Clements in USA and Sir Arthur Tansley in Britain. Tansley devised the term ‘ecosystem’ to capture the long-term inter-relatedness of living beings and non-living elements such as soil, rivers and the atmosphere in particular places. Ecology teaches us not to disrupt ecosystems, but to accommodate our activities to them, whether activities of farming, fishing, mining or forestry (Attfield, 2021). Since it provides helpful guidance on how to care for our planet, adherents of Judaism, Christianity and Islam have largely welcomed it, including, as I understand it, Professor Baharuddin.

Equally informative is an off-shoot of ecology, namely climate science, a development of the late twentieth century. Climate science studies global climate systems and factors that change them: and it is an increasingly clear conclusion of climate science that human activity has raised average temperatures through emissions of carbon gases and through other so-called greenhouse gases such as methane. Effects of carbon emissions include rising sea-levels, which endanger all oceanic coastlines, and an increase in the severity and the frequency of extreme climate events like hurricanes, wildfires, heatwaves, droughts, and floods. Despite some politicians and journalists having at one time been sceptical about these conclusions, the scientists are virtually unanimous about them; and most of the world’s religions accept them and have warned governments about the need both to mitigate greenhouse-gas emissions, to adapt to the increased levels of gases such as carbon dioxide which are by now beyond reversal, and to finance the mitigation and adaptation of poor countries which could otherwise not afford to invest in such measures.

While these policies are in my view ethically mandatory, and I have written about them elsewhere (Attfield, 2018, p. 2021), I want now to turn to another area of science, the science of biological evolution or, to give it a one-word title, Darwinism. For climate science, which nearly everyone accepts, derives from the science of ecology, which again nearly everyone recognises as valid and important; but ecology is an offshoot of Darwinism, to which Darwin himself made the key contributions, speaking not of ecosystems (for that notion had not yet been invented) but of the web of life as found in one place or another. Even now, Darwinism is not universally accepted; and in nineteenth-century Britain it encountered considerable opposition, particularly from many adherents of religion, although others gladly accepted Darwinism as fully compatible with their faith in God.

One source of objection was Darwin's teaching that humans are descended from other animals such as apes and gorillas; this teaching was considered to be an assault on human dignity. This particular objection has, I think, largely disappeared; for the descent of humans from other animals does not mean that humans lack distinctive accomplishments and capacities, which could have emerged in the transition from our pre-human ancestors to ourselves. At the same time, the comparative study of human anatomy and primate anatomy has assisted our understanding of how the human body functions, and how to repair it after accidents or illness.

The Problem of Animal Suffering

A much more serious problem has been the discovery of many centuries of animal suffering, much of it prior to the emergence of humanity some few hundred thousand years ago. The question that this raises is how a God who is loving and compassionate could allow pain and suffering on this scale as some creatures predated others. Admittedly there is little or no problem if non-human animals lack independent value altogether, as some Christians and some Muslims have taught, although even theologians such as these need to accept, and have accepted, like Christian theologian, Jean Calvin, that all creatures are God's creatures, and should be treated with respect as such. Such theologians are also free to include the benefits to future generations of humanity. But the problem is greater if we accept that animal pain matters, and that suffering it is likely to be just as bad as the suffering of pain on the part of humans, and in some cases greater, because non-human animals lack the foresight needed to discern that most suffering will come to an end before too long.

Now there are, of course, some important moves that can be made by those who seek to reconcile God's goodness with the reality of human and animal

suffering. Thus a good God would govern the world by laws of nature, so as to make it possible for intelligent creatures such as human beings to understand it and to foresee both the near future and the impacts of their own actions. But the operation of laws of nature unavoidably involves suffering, for example for creatures who or which undergo falls or suffer violence from other creatures. So if God's will is that humans should guide their actions with an understanding of the world around them, and God makes the world operate through laws of nature accordingly, then God cannot prevent all suffering.

This is, I believe, a good way of reconciling God's goodness and the reality of suffering. But it could itself be criticised for suggesting that all the suffering on the part of non-human animals (in their millions) is justified for the sake of the eventual development and fulfilment of human beings. Another way of expressing this problem is that the response in terms of laws of nature seems so far to suggest that the suffering of animals is justified because of benefits to human beings, without there being any important benefits to the animals themselves. And this seems at least disproportionate, and possibly unjust.

Some people might respond to this problem by rejecting Darwinism, and holding that animals came into existence not long before human beings; so the centuries of animal suffering are simply a myth. But this view is hardly tenable. For, there are several kinds of evidence in favour of Darwinism. One is the evidence of fossils, set in ancient rock-strata, best explained by these creatures having lived many millennia ago. Another is comparative morphology; thus (for example) the bone-structure of human beings closely matches that of other mammals. Another lies in the natural variations found within species, called mutations by biologists, from which human beings select the more promising variants when breeding (for example) race-horses or racing pigeons; if natural factors promoted naturally arising variations, that could account for gradual change in species over time, and thus for the emergence of new species. Other evidence lies in structures of the human body that now have no function, like the appendix, but the existence of which can be explained if they served a function among species that were our ancestors. Also there is the way in which missing links, predicted by Darwinism, such as there having been feathered dinosaurs that became the ancestors of birds, have actually been found, in this case through the discovery of fossils of *archaeopteryx*, which turns out to be half-dinosaur and half-bird. And there is the theoretical benefit of an explanation of life that is simple and elegant; all life on earth is explained as having a common ancestor and as branching out in the course of time, so that the origins of the biodiversity of the current world can be readily understood.

This is far from the whole story. But even this partial story strongly suggests that we should not discard Darwinism, but instead try other lines of inquiry when we seek to reconcile the facts of suffering with God's goodness. The line of inquiry that I would like to present here concerns the positive value to be found in the lives of non-human creatures and of their flourishing. There is a kind of consistency in this approach. For if the problem arises because of the negative value of the injuries and illnesses and sufferings of non-human creatures, then we are already recognising that these are intrinsic evils, or what many philosophers call 'disvalues', and as intrinsic disvalues at that (Rolston 1992). And if the sufferings of non-human creatures count as intrinsic disvalues, then their health and flourishing should count as being intrinsically valuable. This is nowadays the view of many ethicists, and taking this step has a certain kind of logic to it. For if sufferings count as having negative value, then there would have to be positive value when these creatures, far from suffering, are developing the capacities natural to their kind and flourishing accordingly. Or, to translate this into equivalent language, if the suffering of animals counts as a reason against its infliction and in favour of its prevention, then the flourishing of animals and other creatures should be understood as providing a reason for promoting and prolonging it, and as an independent reason at that, independent of human interests, such as reasons deriving from the livelihoods of human farmers.

Discarding Anthropocentrism

We should next consider whether there is a theological counterpart to this move. Those of us who believe in God and in God's goodness believe that there is a theological counterpart to the intrinsic value of human health and flourishing, namely God's will for human beings to flourish. But there is no requirement for us to be anthropocentric in our beliefs about God's will or about God's love. Granted that God desires the flourishing of his or her human creatures, why should not God also desire the flourishing of his or her non-human creatures? This could help to explain the existence of many nonhuman creatures in places where human beings cannot normally see, hear or feel them, such as in the depths of the deep oceans, or in the waters beneath the Antarctic ice-shield. It is implausible that all of them exist solely for human benefit, or were created for that sole reason. If, by contrast, God desires the flourishing of life in general, and not only of human life, that would also help to explain how there were almost certainly millions of non-human creatures living across the millennia before humanity ever came into existence. Theists, whether Christian, Jewish or Muslim, have long accepted that the various

kinds of non-human life are fellow-creatures; and this belief coheres well with the claim that God loves them as well as loving human beings.

To put this in different language, I am suggesting that we should discard theological or metaphysical anthropocentrism, the view that everything that exists was created for the sake of humanity, and for no other reason. This does not involve any essential change in our beliefs about God's will for human beings. But it suggests that we should favour a theology that is more biocentric, according to which living creatures were brought into being for their own sake, and for the glory of God, and not only for the sake of human beings.

At the same time, I am suggesting that we should also discard ethical anthropocentrism, and the kind of ethic for which nothing but human well-being is the proper focus of ethics. For the well-being of non-humans turns out to matter as well. This does not mean that we should treat non-humans exactly the same as human beings. For example, it would be absurd to suggest that non-humans should vote in elections, since they are in no position to understand what is at issue, or to make related choices. But it would mean that we should take seriously the well-being of animals and other creatures, and, where everything else is equal, allow them to live according to their natural, inherited capacities, with the habitats that they need left intact, if they are wild creatures, and with their needs provided for if they are domestic creatures.

Back to Prehuman Animal Suffering

Let us now reflect on how this helps with the problem about reconciling God's goodness with the widespread suffering that we find in the world. For we will no longer be inclined to suggest that the suffering of animals, including the pre-human suffering across the millennia before human being came into existence, is justified solely because of eventual benefits to human beings, such as human beings being enabled to understand the world around them, with its laws of nature, as a regular world, and being thus enabled to make choices based on such an understanding. For we can also hold that, alongside this purpose, God desired the animals of all these pre-human centuries to flourish in ways natural to themselves, and that the world did not need to wait for the eventual emergence of human beings before the benefits of pre-human suffering began to appear.

When the immense positive value of the flourishing of non-human species is seen alongside the immense positive value of human flourishing and human compliance with the will of God, the balance of evil in world history begins to seem less overwhelming. Besides, in many cases, suffering is itself a precondition of goods and benefits. One familiar example is found in the pains

of child-birth, necessary for the birth of a flourishing human life. There is a counterpart to this at the births of non-human mammals; for though these are usually probably less painful because the brains (and thus the heads) of non-human offspring are less large, such births are often difficult, as veterinary surgeons can attest. Yet these births too are a precondition of flourishing non-human lives.

But it is still necessary to take into account the suffering that results from predation among non-human creatures, for this is what accounts for a large proportion of suffering in that sphere. Much predation is painless, as it consists in the consumption of living creatures such as plants, bushes and trees, which lack nervous systems and (it may be presumed) the capacity to feel pain. But that leaves huge amounts of suffering to bear in mind. And the predation that takes place in nature is particularly difficult to justify by reflection on the benefits to human life, even if human life is one of the eventual benefits that emerge from centuries and millennia of pre-human predation.

However, Holmes Rolston has suggested a different approach, in a journal article entitled 'Disvalues in Nature'. He reflects on whether there could have been a world with flora but no fauna, and thus a world without painful predation, and answers that such a world, given the existing laws of nature, would probably be impossible, given that "in a world in which things are assembled something has to disassemble them for recycling" (Rolston 1992, 253). So there would have to be either funguses or herbivores or both, at least if such a world was to be sustainable.

Yet the real question is one of value. Would a world consisting only of flora (whether short-lived or not) be better or more valuable than one consisting of both flora and fauna? To this question, Rolston replies that no one thinks that the answer is 'yes'. Here is how he continues: "Heterotrophs must be built on autotrophs", or, in other words, beings that derive their food from other creatures (heterotrophs) must ultimately depend on there being creatures (autotrophs) that gather their food not from other creatures but from the soil and/or the atmosphere, "and no autotrophs and sentient or cerebral" (Rolston, 1992, p. 253); in other words, in a world of nothing but flora there would be no feelings and no thought. So, if we value attributes such as the capacities to feel and to think and have purposes, then we must consider a world of fauna as well as flora more as valuable or better than a world of flora alone, or, we might add, than a world of just flora and funguses. And this implies that it is better to have a world of feeling and thought and the predation that unavoidably accompany those attributes than a world without any of these, or with predation only at the level of funguses.

Besides, the presence of predation actually adds value to a world. So as to isolate painful predation, let us ask whether a world of flora and of plant-eating fauna but no other living creatures would be better than the actual world. Rolston tackles this question too, and answers:

An Earth with only herbivores and no omnivores or carnivores would be impoverished. The animal skills demanded would be only a fraction of those that have resulted in actual ecology [that is, in the full range of creatures that we actually have]: no horns, no fleet-footed predators or prey, no fine-tuned eyesight or hearing, no quick neural capacity; no advanced brains.

He proceeds to explain how predation enhances the capacities of prey species as well as of predators, and how the destinies of both kinds of species are intertwined (Rolston, 1992, p. 254). So, if we overwhelmingly value creatures with capacities resulting from predation (as in fact we do), then we have to value predation in general, not for itself, but for what it is the indispensable means for.

Admittedly, predation is indispensable for these valuable capacities only granted the laws of nature of the actual universe, and it would be possible for an all-powerful God to introduce these capacities by proroguing those laws. So, they could have been generated by a series of supernaturally contrived miracles. But, would a good God select a world of frequent supernatural interventions over a regular world governed by laws of nature such as our own? Here the answer is surely 'no', for a world of frequent supernatural interventions would, as we have already noted, be a world that intelligent creatures could neither understand nor predict, nor therefore make intelligent choices in; and yet we assume that one aspect of God's goodness is provision for such choices, and for the formation of mature characters on that basis (Attfield, 2006, pp. 128-29).

My conclusion is that when Rolston's reasoning is supplemented in this way, it is successful and persuasive, and establishes that a world of predation is preferable to a world without it, despite all the suffering involved, both pre-human and contemporary. The reasoning that has just been rehearsed is not itself science, but scientifically-informed philosophy or theology of science; and it brings us to see that, as long as we are prepared to recognise intrinsic value in the lives of non-human creatures, then the long centuries and millennia of predation are not, in the end, a problem for reconciling belief in a loving God and the world as it is, even if it is understood as evolving in the manner presented by Darwin. And all this tallies with passages such as Psalm 104, which, as we have seen, expresses God's care both for humanity and for wild creatures such as lions, storks and cedar trees; they all have their place.

Ethical and theological implications

At this stage, however, some of the ethical implications can be spelt out, and then some of the theological implications. Stewardship of the planet involves principles and practices of preservation, and avoidance of excessive global warming and also of biodiversity loss, another global crisis which stewards of the planet would seem to avoid and reverse. (I say 'another' rather than 'the other', because there is a third world-wide crisis, that of air pollution, which we also need to reverse. I believe that some Iranian cities such as Isfahan are experiencing this crisis, just as are British ones like London.)

The avoidance of excessive global warming means avoiding carbon emissions, both in energy generation and also from homes and from vehicles. All countries need to generate electricity not from carbon-related sources such as coal, gas and oil, but from renewables, such as solar power, wind-power, wave-power and hydroelectric systems. While nuclear energy avoids emitting carbon, it poses other problems, like the radioactivity that it leaves to coming generations both from the waste-products of spent nuclear fuels and from decommissioned power stations; so, on my view it comprises a defective form of stewardship, even though it could be regarded as assisting in the overall project of carbon dioxide mitigation.

Such mitigation is directly important for all oceanic coastlines, including those of the Indian Ocean. It is also important in order to diminish the increasing severity and frequency of wild-fires, droughts, heat-waves, storms, and flooding which result all over the world from global warming. It is true that the developed nations of Europe and America have caused a large part of this global warming, but it is now in the interests of all countries to share in its remediation, assisted where possible by technology transfer from the more developed economies. The present generation need to take steps such as these for the sake of future generations, which will need a liveable environment, and also for the sake of other species, of which the same is true. Non-human species should be preserved both for their own sakes and for the sake of our human successors, who should be enabled to enjoy the opportunity to experience them.

Further ethical implications include efforts to preserve ecosystems and vulnerable habitats for wild creatures, of which the numbers have seriously declined, and of which many species have been reduced to extinction. The restoration of ecosystems can have the further effect of limiting the spread of deserts, also an issue for Iran.

Another measure implicit in planetary stewardship is the replacement of diesel- and petrol-powered vehicles by vehicles with electric motors, themselves fuelled, where possible, by renewably-sourced electricity. Besides

assisting carbon mitigation, these steps are going to be important for reducing the air pollution of numerous cities, which is important for human health. Many bronchial and pulmonary infections derive from urban pollution, and could be prevented if such pollution is reduced.

Besides these measures, we need, particularly if we reject anthropocentrism, to adopt better methods of farming. Factory-farms are currently spreading, and prevent most of the animals reared in them from enjoying any satisfactory level of well-being. Such factory farms ought to be replaced by free-range farming, and plans to introduce factory-farms should be reversed. Also imports from the factory-farms of other countries should cease, thus reducing the economic motive for the pursuit of this practice in other countries.

In these remarks about ethics, I have avoided entering into theories of normative ethics. Fortunately, the model of stewardship, which is not itself an ethical theory, allows practical conclusions to be drawn, without the need to debate whether the policies suggested are based on (say) Kantianism, contract theories, virtue-ethics or consequentialism. But it is worth adding that, whichever ethical theory is preferable, the pursuit of the virtues is going to be needed, in connection with saving the planet just as also in ordinary family life and civic life.

Having introduced some ethical implications, I would like to finish by underlining one theological implication. Thus, if we adopt the kind of argument deployed here to reconcile God's goodness with the implications of Darwinism, we need to hold that God cares not only for human beings but for other creatures as well. And even if we do not adopt that line of argument, there is a religious basis for adopting non-anthropocentric stance, going back to the Hebrew Bible (known to Christians as 'the Old Testament'), the common source of both Christianity and Islam. There, it is clear from Psalm 104 that God cares not only for human beings, but for other creatures such as cedars, storks and lions. It is also clear from the part of the book of Job where God Addresses Job that sea-creatures are as much a part of God's creation as humanity. The Hebrew Bible, then, is theologically non-anthropocentric, and supplies us with an ancient precedent for taking a wide interpretation of God's concerns.

This view also tallies with the wide range of the biodiversity which we have inherited, and which theists hold God to have created. While many creatures are directly beneficial to human beings, there remain many which are not. This in turn suggests that the creator cares for this wide range of creatures as a whole, and not just for humanity.

Further, if we adopt this view about God's purposes in creation, it becomes easier to accept the view that everything with a good of its own has independent value, and supplies an independent reason for action of one sort or another. That does not mean that we cannot kill and eat other creatures, for the needs of human beings for food will often supply a stronger reason for consumption than the reasons for preservation. But as long as such independent reasons are nevertheless recognised, then we will hold that the well-being of all living creatures has intrinsic value; that, other things being equal, each and every creature should be allowed to develop in accordance with its inherited nature; that the world is full of value; and that God is to be praised for creating and sustaining such a valuable world.