

## **GOD, DESIGN, AND EVOLUTION: A TELEOLOGICAL ARGUMENT FOR ATHEISM\***

**Raymond D. Bradley**

Many things in the natural world work so well that they seem to have been designed. But by what? Could nature itself, by processes including those of evolution, be the designer? Or must their complex structure and function be attributed to some intelligent designer or God? Is natural design compatible with intelligent design? How good is the argument from the presence of design to an intelligent designer? And if we could legitimately infer the probable existence of an intelligent designer from the presence of design in the natural world, what could we then infer about that designer's nature?

These are the main questions before us. But first . . .

### **A: AN HISTORICAL PERSPECTIVE ON THE DEBATE ABOUT EVOLUTION**

Belief in God has been defended on two main grounds: revelation and reason. And the theory of evolution has been seen by many as threatening both.

It is plainly inconsistent with the *prima facie* meaning of God's message to mankind as revealed in the first book of *Genesis*.

And it undercuts one of the main rational arguments for the existence of God: the so-called "Argument from Design" (known to philosophers as the Teleological Argument).

#### **1. The God of Revelation:**

Seven times, in just three verses (21, 24, 25) of *Genesis* chapter 1, we are told that every living creature that God created in the first six days was created to reproduce "after his/their kind".

Historically, these declarations set the Bible in opposition to the Theory of Evolution.

*Genesis* tells us not only that God created the heaven and the earth, but also he created each species afresh, unchanging, and reproducing according to its kind. And given the presumption that the Bible is indeed the word of God and that God would not say anything not true, Bible-believers are committed to belief in the immutability of species.

The problem is that this contradicts the principal thesis of the Theory of Evolution: that the species are not immutable, each later one having evolved from earlier and different ones.

To be sure, some theists put their own interpretations on the word of God so as to effect some sort of reconciliation between it and evolutionary theory. And we'll consider some of these in due course.

But even the most liberal interpreters of God's revelation want to see God's hand at work in evolutionary processes. Turning from revelation to reason, they argue that the immense diversity and complexity of life-forms could arise only in accordance with the designs of God. They turn to:

## **2. The Teleological Argument: from Design to an Intelligent Designer.**

William Paley most famously expounded the Teleological Argument.<sup>1</sup> In his version it appeals to the analogy of a watch the components of which are so complex and well-structured for the purpose of telling time that the very idea of its having arisen by sheer chance defies reason. The design of the watch requires an intelligent designer. Likewise, the design of the universe and of such structures as the eye require the existence of a supremely intelligent designer, otherwise known as God. God is, so to speak, the Great Watchmaker.

But let's be careful here. If the argument from design to intelligent designer is to avoid circularity, then we have two options. Either we must insist of speaking of "apparent design" - a linguistic move that I'll avoid because it sounds tiresomely pedantic when repeated too often - or we have to find a sense of the word "design" which isn't a synonym for "that which is designed by an intelligent agent". There are at least two such senses. One is that in which we can speak of the design of a snowflake, or the design created by the frost on the window. In this sense, "design" is a virtual synonym for "pattern" or "complex structure". Another is the sense of "design" in which it functions as a near synonym for "functional efficacy". After all, when we think of Paley's example of the human eye, it matters little how many parts the eye has. What counts is the fact that it functions effectively (in most cases) to show us the way around. Again, when we later consider an example of what Paley's latter-day exponent, Michael Behe, calls "irreducible complexity", viz., the mouse-trap, what matters is not how complex it is or how many parts it has, but how well it works. The notion of complexity is largely a red herring.<sup>2</sup>

---

<sup>1</sup> William Paley, *Natural Theology*, Vol. 6 in *Works* (London, 1805), Chapter 1.

<sup>2</sup> Behe is thinking of an ordinary mouse-trap. But how about a mouse-trap consisting of a deep bucket with a see-saw arrangement delicately balanced on its rim and baited at the end over the bucket? Two parts, only one of them moving, yet far more effective than a bought one as it keeps on catching mice without having to be reset. What counts is whether it works and works well.

In these non question-begging senses of the word, evidence of design in the universe - especially in the biological sphere - is not at issue.

What is at issue is how such design arises. Does the presence of design in this neutral sense require intelligent design? Or can it be explained in terms of natural design - in terms, that is, of evolution?

The theory of evolution says that in the biological domain the latter is all that is needed. Hence the threat it poses to the argument from design to intelligent designer. Neither the laws of nature nor chance have any prevision of their own outcome. They do not serve some consciously intended purpose. According to evolution, nature itself is the Great Watchmaker. But it is a blind one. Hence Richard Dawkins' talk of evolution as the Blind Watchmaker.<sup>3</sup>

## **B: THE ISSUE OF COMPATIBILITY.**

Evolutionary theory has become the flash-point for a number of even grander questions: "Is Reason compatible with Faith?"; "Is Science compatible with Religion?"; and, more particularly: "Is belief in Evolution compatible with belief in design by a Supreme Intelligence, i.e., God?"

Couched in terms of such high generalities, these questions should be shunned until their meaning-presuppositions are made clear.

Let's therefore be clear that by "compatible" we shall mean "logically consistent", not something like "psychologically able to be maintained jointly by some persons or societies". Some persons have no difficulty embracing contradictory beliefs.

Next we need to be clear that consistency and inconsistency are relations that hold between statements (whether believed or not) and that two or more statements - or sets of statements - are consistent if and only if it is *logically possible* for them to be true together.

Let me illustrate by reference to another highly general question "Is Christianity compatible with Judaism, or Islam?" Construed as a sociological question, the answer is surely "Yes". For in some societies, present as well as past, all three religions have existed side by side in harmony. But construed as a logical question, the answer may not be so immediately obvious. We need first to determine the specific doctrinal belief-content of the three religions to see whether the set of beliefs subscribed to by one contains

---

<sup>3</sup> Richard Dawkins, *The Blind Watchmaker*, Harlow: Longman, 1986.

any specific belief that is inconsistent with any member of the set of beliefs subscribed to by the others. We need, in short, to descend from generalities to specifics.

Consider, then, the specific statement "Jesus was the son of God". This is asserted within the set of statements endorsed by orthodox Christianity, but denied by both orthodox Judaism and Islam. Hence, from the point of view of logic, orthodox Christianity is logically inconsistent with both. Talk about these religions believing in "the same God under different names or descriptions" is sheer obscurantism.

Unfortunately, the need to descend from generalities to specifics is all too often ignored by those who debate even grander topics such as "Is Religion compatible with Science." Anyone trying to answer these questions in such abstract terms is doomed to waffle. Talk by the famed evolutionist, Stephen J. Gould, of religion and science as "two non-overlapping magisteria" is no exception.

So many empty and pretentious words have been written about these and similar issues that it is time for a conceptual clean-up and a closer look.

When it comes to the issues raised by our topic "God, Design, and Evolution" we need to be clear about the specific reference or references of the terms "God" and "Intelligent Designer", and the meanings of "design", and "evolution". Only after we are clear about which "God" we are referring to, what sort of "design" is at issue, and what exactly are the assertions, implications, and presuppositions of the Theory of Evolution, can we determine the extent to which inconsistencies are real rather than apparent: based in logic rather than mere psychological attitudes.

First, let's deal with . . .

## **C: CONTEMPORARY, NEO-DARWINIAN, THEORY OF EVOLUTION.**

### **1. Its credentials as a scientific theory.**

The core thesis of the theory of evolution, as proposed by Darwin and refined by his neo-Darwinian successors, is that natural species are not produced by divine decree but by natural processes of variation, procreation, geographical isolation, and consequent survival of certain populations as opposed to others; in brief, by natural selection.

This claim - one asserted to hold of *all* natural species - cannot be "proved" by appeal to empirical evidence. No completely universal claim can. But this doesn't mean that it doesn't have compelling empirical support. Plant and animal breeders utilize the same processes. And laboratory experiments have shown repeatedly how rapidly new species will evolve within a few

generations given genetic variation, isolation of the breeding populations, and factors such as competition for food.

But laboratory experiments and other forms of direct observational evidence are no more needed to substantiate the truth of evolutionary theory than are observations of ships slipping over the horizon, or photographs from space, to demonstrate the claim that our earth is roughly round in shape. Were the round earth theory not true, we couldn't make sense of terrestrial geometry, cartography, chronometry, aeronautics or navigation. In like manner, were the theory of evolution not true, we couldn't make sense of a host of other empirically grounded sciences.

Contrary to many of its critics, the theory of evolution isn't just a "hypothesis". Rather, it is a "theory" in that honorific sense in which the term is bestowed on a whole system of observationally confirmed laws, principles, and hypotheses - ones that enable us to give causal explanations of a wide range of phenomena.

It is in this sense that the theory of evolution is a major scientific theory. It encompasses a unified and well-attested set of laws and principles drawn not just from natural history, but from a host of other empirical sciences as well - cosmology, astronomy, physics, biochemistry, geology, plate tectonics, paleontology, population genetics, ecology, anthropology, and comparative anatomy, among them. And its explanatory power extends beyond the evolution of living organisms. If recent theorists are right, it can even tell us much about the realms of human psychology and social behaviour.

The theory of evolution, then, is no more "just" a hypothesis than are the theories of Copernicus, Newton, or Einstein. And like these other hugely successful theories, the theory of evolution satisfies one of the most important criteria for scientific, as opposed to pseudo-scientific, status. It is falsifiable. That is to say, it yields consequences such that were any of these found to be false, we would have to conclude that the theory itself is false. For instance, were the earth found to be only six thousand years old as claimed by Creationists, or some tens of millions of years old as claimed by Lord Kelvin in Darwin's day, rather than the currently estimated thousands of millions, there would not have been enough time for evolution to have done its work and we would have to conclude that the theory is false. Again, if facts about the transmission of hereditary information - facts discovered by immunology, biochemistry and molecular biology - had turned out otherwise, evolution might well have been abandoned.

## **2. What evolutionary theory is, and is not, logically committed to.**

Bear in mind that the question is not about what add-on doctrines happen to have been asserted by various proponents of evolution. It is about what the theory itself asserts or logically implies. From the fact that some

evolutionists happen also to be atheists it does not follow that evolution implies atheism. If it did, then, from the fact that some evolutionists happen to be theists, it would also follow that evolution implies theism. The absurdity is obvious. Matters of logic are no more determined by facts about human psychology or the association of ideas in people's minds than are matters of mathematics.

Here, then, are some of the questions we need to answer:

**(a) Is the theory logically committed to abiogenesis, an account of how life itself began?**

The answer is, No. The question as to how living things arose from non-living ones is beyond the scope of evolutionary theory. And, for the present at least, it seems beyond the competence of science to provide any sort of definitive answer. The search is on, of course.

But any account that is given would involve mechanisms other than those of natural selection, the process that Richard Dawkins has aptly described as "the slow, cumulative, one-step-at-a-time, non-random survival of random variants".<sup>4</sup> True, a theory of abiogenesis would be a welcome addition to science. It would bridge the gap between the living and the non-living and so allow for a more or less continuous story to be told starting with something like the Big Bang and ending with us today. But it would be a different, all-encompassing, story.

**(b) Is it committed to methodological naturalism?**

Yes. Like any other empirical science it is committed to the search for natural explanations of the events in its domain.

This shouldn't come as a surprise. For what would an alternative methodology look like?

How about something we might call methodological *supernaturalism*? Presumably it would consist in a return to pre-scientific modes of thinking in which every gap in our understanding of how the world works was filled by invoking the agency of some supernatural being. Today we've made some progress. We see no need for nature-gods to produce the rhythms of nature: summer, autumn, winter and spring. We no longer invoke the gods of Greco-Roman or other mythologies to explain eclipses, lightning, or earthquakes. Today, most of us have abandoned the idea that diseases and disasters occur because the gods are angry. We no longer live in what Carl Sagan called "the demon-haunted world". Rather, we adopt the principles of

---

<sup>4</sup> Richard Dawkins, *Climbing Mount Improbable*, London: Penguin Books, 1997, p.70.

methodological naturalism, looking to nature itself for the causes that eluded our superstitious forebears.

**(c) Is it committed to metaphysical naturalism or materialism?**

In one sense, No. In another, Yes. Materialism is a philosophical - more specifically an ontological - theory about the nature of reality. It asserts that the ultimate constituents of reality are the sorts of things with which physics deals (subatomic particles and their basic properties), together with complexes of these and their emergent properties (properties possessed by complexes that are not possessed by their simpler constituents)<sup>5</sup>.

Neo-Darwinism certainly does not imply materialism in its full generality. It does not imply the non-existence of a non-physical, or supernatural, world. Clearly, any evolutionists who maintained metaphysical materialism in its full generality would be stepping outside the bounds of their competence.

However, neo-Darwinism does hold that homo sapiens is wholly a product of the laws of nature together with such ostensibly random events as mutations. It is committed to the view that man has an animal lineage and is no less purely animal than his ancestors. It has no room for the idea that man is a compound entity, comprising a soul as well as a body - unless that soul is thought of as an idle addition, lacking any causal efficacy.

Evolutionary theory, in short, is committed to restricted but not to unrestricted metaphysical naturalism.

**D: CONCEPTIONS OF "DESIGN" AND THEIR COMPATIBILITY WITH EVOLUTION.**

There are four main ways in which the notion of design may be conceived - four conceptions of how an intelligent designer could execute his design:

- \* For deistic evolutionists, God's design was fully implemented at the time of general creation. Subsequently, he let the laws of nature, including those of natural selection, do their work as he had intended.
- \* For theistic evolutionists, God's design was only partially implemented at the time of general creation. As theists, they believe that he has intervened from time to time since then to make design adjustments, e.g., to breach the barrier from non-living to living. But as thoroughgoing evolutionists, they believe that evolution proceeded naturally without any need for his intervention.

---

<sup>5</sup> An obvious example of an emergent property is that of fluidity, possessed by water but not by the individual molecules that are its constituents, let alone by the atoms composing those molecules.

\* For theistic quasi-evolutionists, God's initial design has been repeatedly supplemented by design adjustments. They believe that natural selection, especially, has been in need of his helping hand. The theory of evolution by itself is incapable of explaining the form or function of living creatures.

\* For evolutionary anti-evolutionists, God's design is manifest not just in general creation but in his special creation of the various life-forms that we see about us today. A little micro-evolution, perhaps, occurs naturally. But macro-evolution doesn't occur. God's design adjustments have to be made for each new species, past, present, or future.

## 1. "Design" according to deistic evolutionists.

Deism had its hey-day in the Enlightenment: in the works of thinkers such as Thomas Hobbes, John Locke, David Hume, Lord Herbert of Cherbury, Thomas Paine, and - on the continent - Voltaire. Its roots are to be found in skepticism about the doctrinal disputes, the conflict-spawning enthusiasms, and the crass mystery-mongering, they perceived in revealed religions.

The main problem, according to deists, is that the traditional religions all rely on one alleged revelation or another.

Rejecting all the gods of revelation, deists turned instead to a God of reason. Although often accused of being atheists, because they rejected the revealed God of theism, the fact is that they still believed in the existence of some sort of god, albeit a non-theistic one. They thought that some sort of God had to be postulated in order to explain the way the universe works.

Most, though not all, of them argued for some sort of Designer God or Universal Engineer, but his design - as they conceived it - was antecedent design, design that needed no subsequent tinkering. A good engineer, as they conceived him, would get his design right at the outset.<sup>6</sup>

Is evolution consistent with this sort of intelligent design?

Clearly, if evolution had been committed to universal, unrestricted, metaphysical materialism, the answer would have to be, No. For the God of deists is conceived of as a supernatural being. But evolution, we recall, is

---

<sup>6</sup> Most deists also thought the question as to why anything at all, the universe in particular, exists could best be answered by adding another entity - some sort of Creator God - to the list of existing things. How they thought this expanded list of existing entities - now including a creator along with his creation - could be explained without abandoning reason and taking recourse to the sort of mystery they despised, is a matter I shan't pursue here,

committed only to restricted materialism. Hence there is no conflict on this score.

The intelligent designer of deistic evolutionists may be likened to a Computer Engineer who not only designs hardware that never needs repair but also loads it upfront with software (natural selection) that never requires updates.

## **2. "Design" according to theistic evolutionists.**

On most accounts a necessary condition of being a theist as opposed to a deist is that one believes in an interventionist God.

Now this condition can be satisfied in various ways. One could invoke God's agency not only as the first cause or creator of the universe, but at subsequent points in its development. For instance, one might think of God as directly responsible for abiogenesis, by intervening with the laws of nature so as to create life in a universe previously without it. Or one might think of him as bringing about the catastrophic asteroid impacts that were responsible for the extinction of the dinosaurs.

To be sure, any of these violations of the laws of nature by a supernatural agency would constitute a miracle in David Hume's now-standard sense of the word. And the very idea of miracles cannot be countenanced by anyone committed to the methodological naturalism employed within science in general.<sup>7</sup>

But a story could in principle be told about all these miraculous interventions such that they wouldn't impinge on the truth of the core thesis of evolutionary theory: that once simple life-forms had arisen, subsequent ones evolved by the processes of natural selection alone. Nor would it conflict with either the methodological naturalism, or the restricted materialism, to which evolutionary theory is committed.

The concept of design according to this sort of theism poses no threat to a belief in evolution. It is not just that some theists do in fact believe in both a designer-God and evolution. There is no logical reason why they shouldn't.

## **3. "Design" according to theistic quasi-evolutionists.**

I use the term "quasi-evolutionists" to describe all those theists who are inclined to think that the broad outlines of neo-Darwinism are probably, if not certainly, true but hold that it can't explain *all* the phenomena. God's direct intervention, they claim, is needed as an explanation for at least some. In short, they accept evolution with significant caveats.

---

<sup>7</sup> Which is why so-called liberal theists have insisted on demythologizing the old concepts of God.

One prime example is the current Pope, John Paul II, who reportedly has licensed Catholics to accept evolution subject only to the condition that they believe that God intervened at some unspecified time to endow our evolutionary ancestors with souls.<sup>8</sup>

Other examples are to be found among the group of contemporary theists who subscribe to what is popularly called Intelligent Design Theory. Writers such as molecular biologist Michael Behe and philosopher William Dembski claim that although neo-Darwinism can perhaps explain the evolution of simple structures, it can't explain how what they call "irreducibly complex" structures arose. Such structures, they hold, must have arisen literally overnight as a consequence of the interventions of an intelligent designer.

#### 4. "Design" according to theistic anti-evolutionists.

The concept of design that stands in starkest opposition to the theory of evolution is that held by Creationists: those who believe in the doctrine of special creation, not just the doctrine of general creation.

For Creationists, the source of truth about the origin of species is to be found wholly in biblical revelation not at all in reason. For them, the story of God's intelligent design is revealed in *Genesis* chapter 1. It begins with his creating the heavens, the earth, and the sea (verses 1 to 10), and then continues (verses 11 to 30) with his creating various kinds or species *de novo*, starting with the grasses and trees, moving on to creatures of the sea such as whales, creatures of the sky such as fowls, animals that move on the earth, and finishing with the crown of his accomplishment - us. The chapter finishes by telling us that all this took just six days, and - more importantly - that God thought he'd done a good job. As verse 31 puts it: "And God saw every thing that he had made, and, behold, it was very good. And the evening and the morning were the sixth day."

Now it is only fair to point out that Creationists differ among themselves about how literally this talk of six days is to be taken: whether as periods of 24 hours, as suggested by talk of mornings and evenings, or as aeons stretching into thousands or even millions of years.

But on one point they all agree. When God says that each living form would "bring forth", i.e., reproduce, after its kind, he meant what he said. According to Creationists, there is no wiggle-room for interpretation here. So, believing as they do in the inerrancy of God's word, they have no alternative

---

<sup>8</sup> Some of those current thinkers who emphasize what they call "human exceptionalism" seem to echo the Pope's position while not necessarily endorsing his dualistic metaphysics. They tend to talk, rather, of the uniqueness of human consciousness and free will - features that set us apart, on their view, from the rest of the animal world, including those of our pre-human ancestors.

other than to reject as vain conceits of man's finite intelligence any scientific findings that conflict with it. This holds for the theory of evolution, in particular. God's story is true. Evolution's must therefore be false.

## **E: A CUMULATIVE CRITIQUE OF VARIOUS TELEOLOGICAL ARGUMENTS.**

How good are these various arguments from design to an intelligent designer?

### **1. The intelligent designer of deistic evolutionists.**

According to deists, it will be remembered, the universe at large exhibits design in at least one of the non-question-begging senses of complex structure and/or functional efficacy. And such design, they infer, calls for a designer with supremely intelligent powers. Hence the deists' God, Supreme Being, or Supreme Intelligence.

This is about as minimal as the argument from design can get. Yet it, and each more elaborate form of the argument for an intelligent designer, confronts a devastating dilemma:

Either it is possible that something should work well without its being probable that it was designed by an intelligent designer, or it is impossible that anything can work well without its having been thus designed. If it is possible, then - given the scientific evidence - it is probable that it is nature itself that does the designing. But if it is impossible, then since any intelligent designer would have to work well enough to design a universe that works well, it follows that that intelligent designer was designed by a second intelligent designer, the second by a third, and so on ad infinitum.

For any advocates whatever of intelligent design - whether they are deists or theists - both alternatives are unacceptable. Unless they say that there is an infinity of intelligent designers (an absurd consequence, and one that contradicts their idea that there is just one intelligent designer), they will have to concede that the presence of design in the universe does *not* make it more probable than not that it was designed by an intelligent designer.

In any case, the hypothesis of an intelligent designer can't really explain what it is supposed to explain. Recall that the whole argument gets its appeal from seeming to offer a plausible explanation of apparent design. The problem is that as an explanation it offers to explain too much. An "explanation" that purports to be the explanation of *everything* that occurs isn't a genuine explanation of why *anything* occurs. A genuine explanation of why something occurs must be an explanation of why that occurred and not something else. By way of explaining why the universe contains order,

structural complexity, and functionality, the intelligent design hypothesis offers us nothing better than "Because God designed it that way." Since this hypothesis could still be invoked even for the case where the universe was utterly chaotic, the intelligent design hypothesis doesn't explain why the universe is ordered rather than chaotic. It is about as helpful as saying "Because that's the way it is." We are offered words but no explanation.

Even the minimal argument from design to an intelligent designer is a miserable failure.

## **2. The intelligent designer of theistic evolutionists.**

What distinguishes the theists' account of the intelligent designer from that of the deists is that they see him as much more than just the creator and designer of the universe. They see him as an intervener. Their God is not only akin to a Great Computer Maker and Great Software Provider; he is also the Great Computer Serviceman who visits on-site, without us actually seeing him, to tinker with his products, changing the hardware perhaps or upgrading the software.

What are the credentials of this enriched account of how the intelligent designer carries out his design?

Remember that this account has its main source in revelation rather than reason. And any genuine revelation must constitute a violation of a law of nature by a supernatural agency, i.e., a miracle. So what are credentials of belief in miracles?

Pretty abysmal.

Consider revelatory miracles, first. The most obvious problem with a belief in God intervening so as to adjust his original set-up is that there are so many accounts of what these revelations consist of and that most, if not all of them, are mutually inconsistent for the reasons noted earlier. Yet each of them is supposed to have experiential credentials of its own: in visions of Krishna or the Mother Mary; in faith-healing by gurus or evangelists; and in experiences of being spoken to - perhaps by an inner voice - by Yahweh, the Holy Ghost, or Allah. What is especially troubling about all these experiences is that the concepts used to describe them reflect the antecedently formed religious beliefs and expectations of those who have them in such a way as to suggest that they have their causes in subjective states rather than objective fact. Hindus don't report visitations from Mother Mary. And Christians don't report visitations by Krishna. It was for these sorts of reasons, among others, that deists were contemptuous of *all* revelatory miracles.

Now consider non-revelatory miracles. For genuine theistic evolutionists these must, for the reasons already given, be restricted to events outside the domain of evolutionary explanation. They must consist in

interventions in laws of nature other than those of natural selection. But where are these to be located? Not, presumably, in events such as eclipses, meteor showers, earthquakes, storms, or plagues, all of which were seen by our prescientific ancestors as "signs from the gods, or God". The gaps in their understanding of how the world worked have now been filled by naturalistic explanations, no recourse to supernatural ones any longer being needed. Most educated theists, I am sure, would agree. But where, then, outside the off-limits domain of evolutionary explanation, will our theistic evolutionist locate his designer's design-adjustments? Most plausibly, I have suggested, in the gap in our present understanding of how abiogenesis occurred.

But this is a pretty precarious foothold, one likely to be upset by further developments in the scientific quest for how the transition for non-life to life could have been effected. It seems unlikely that this example of a "god-of-the-gaps" argument will fare any better than its predecessors.

Be that as it may, there is a much more serious problem facing theists, whether or not they believe in evolution. For the very fact that their intelligent designer has to make design-adjustments shows that he didn't get his design right at the outset. Sure, *Genesis* 1:31 assures us that "God saw every thing that he had made, and it was very good." But any theist must allow that he could have done better. Otherwise, why his subsequent tinkering? And why the need for us, today, to try to make the world a better place? Saying something about our inability to discern God's inscrutable will might satisfy those who have an appetite for mystery. For the rest of us, it won't.

### **3. The intelligent designer of theistic quasi-evolutionists.**

From the spectrum of possible accounts of this sort of intervention I'll select just two: that of the current Pope and his followers, and that of exponents of Intelligent Design Theory (IDT for short).

Pope John Paul II is a metaphysical dualist. More particularly, he is a dualist with respect to the nature of human beings. He would allow that human ancestry can be traced back to non-human hominids, and their ancestry still further back to more primitive primates, and so on. But we, he would insist, have a foothold not only in the natural world but also in the supernatural one. We have more than just animal bodies. At some unspecified point in our lineage, the Pope declared on 26 October 1996, God miraculously infused us with souls.

The issues raised by dualist conceptions of human nature are vast in scope. But it is worth drawing attention to some of its problematic implications and presuppositions. If the soul is conceived as being some sort of ontologically independent entity, not dependent for its existence or survival on the existence or survival of the body, then its possession is an all-or-nothing matter. Either a particular animal body has one added to it, or it doesn't. Consider, then, the first soul-possessing hominids. Call them Adam and Eve.

Then, on the assumption that Adam and Eve are in fact descended from animal forebears, it must follow that Adam and Eve had parents who, unlike them, have no prospect of going to heaven to be with their children. Some theistic quasi-evolutionists might find this a bit hard to digest. Others might be prepared to set sentiment aside and swallow it whole.

But this only hints at more serious problems. After all, the question as to precisely when souls got injected into the human species is paralleled by the question as to precisely when souls get injected into individuals of our species. Do we inherit a little bit of soul from each of our parents in much the same way as we inherit some of our genes from each? If so, are we more or less constrained by our soul-heredity as we are, on some accounts, by our genetic heredity? If our parents don't provide our souls, does God give them to us at the moment of conception? If our souls aren't given to us at the moment of conception, how many cell divisions does God deem necessary before conferring his gift? What happens to the souls of aborted fetuses? And more significantly from a philosophical point of view, how does this dualistic concept of the soul relate to other mentalistic concepts such as those of mind, consciousness, intelligence, and free will? For instance, are our minds entities, too, distinct from both our bodies and our souls? If so, will our minds go along with our souls when our bodies die? Or do they cease to exist when our bodies go to the grave?<sup>9</sup>

My questions could be multiplied almost without end. Unfortunately, God hasn't revealed the answers. So the Pope et al have no options other than to take a stab at arbitrary guesses, or retreat once more into mystery.

Mind you, an alternative account of what we refer to as consciousness, intelligence, free will, the mind, and even the soul, can be given without recourse to mystery, arbitrariness, or metaphysical dualism. It is that which sees these mentalistic terms as being compendious names for properties not independent entities. It construes them as emergent properties of certain natural entities, intellectually mature human beings most prominent among them, properties that have emerged by degree in the evolutionary development of homo sapiens (and to a more limited extent within that of certain other animals), properties that emerge too in the embryological and post-natal development of individual members of our species. This is an account that can plausibly be told within the framework of evolutionary theory without modifications. It is a story that I have sketched elsewhere<sup>10</sup>, and a story that evolutionary theorists like Daniel Dennett are now fleshing out in convincing detail.

---

<sup>9</sup> If we say the latter then we are faced with the unappealing consequence that our surviving souls will be mindless.

<sup>10</sup> See my paper "The Meaning of Life: Reflections on God, Immortality, and Free Will", in *Open Society*, volume 76, Number 3, Spring 2003.

Now let's turn to two of the most prominent exponents of IDT: molecular biologist Michael Behe, and philosopher William Dembski. That both are theists, not deists, is clear. But their positions on body/soul dualism, and the precise extent to which they think their arguments require amendments to, or even total rejection of, the theory of evolution are not at all clear. Their arguments are purely negative in intent, confined to pointing out what they regard as explanatory inadequacies in evolutionary theory. And for this reason their arguments can be recruited by not just by quasi-evolutionists but also by anti-evolutionists, i.e., Creationists. Interestingly, however, Behe claims not to be one of the latter, even going so far as to write: "I find the idea of common ancestry (that all organisms share a common ancestor) fairly convincing, and have no particular reason to doubt it."<sup>11</sup>

IDT makes use of Behe's concept of "irreducible complexity" which he defines as "a single system composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of its parts causes the system to effectively cease functioning. An irreducibly complex system cannot be produced gradually by slight, successive modifications of a precursor system, since any precursor to an irreducibly complex system is by definition nonfunctional."<sup>12</sup> His example of a mouse-trap is relatively uncontentious. And - surprise, surprise - it is something we already know to have been brought about by intelligent design, that of a human.

The question at issue, however, is whether supposed irreducible complexity can be brought about by non-intelligent design - in particular by the non-intelligent processes of natural selection. It simply won't do to beg the question, as Behe does, by saying that any precursor to a supposedly irreducibly complex system is "by definition" nonfunctional. As has been pointed out often in the past hundred and fifty years an organ can be just as useful in the early stages of its development as in its final phase, but functional in a different way or to a lesser degree. The first feathers, for example, may have been used for insulation rather than for flight. Some degree of light-sensitivity is better than none. And some degree of functionality of an organic molecule - the sort of thing that Behe likes to go on about - is also better than none.

Unfortunately, Behe and Dembski don't provide us with many examples of what they regard as clear-cut cases of interventions by an intelligent designer let alone of the timing of such interventions. More surprisingly, they don't even try to show how concepts of irreducible complexity need to be invoked for explanations of how well-evidenced major evolutionary transitions

---

<sup>11</sup> How he thinks he can square this with his claim that irreducibly complex organs and organisms must appear, as it were, overnight, I leave to others to guess.

<sup>12</sup> Michael Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution*, New York: Free Press, 1996.

took place: e.g., those from primitive bony fish to amphibians, from amphibians to reptiles, or from reptiles to both birds and mammals. For the most part they invoke God's design of the irreducibly complex on an ad hoc basis. Behe, especially, is most happy when talking about mouse-traps and molecules.

Now to be fair, if irreducible complexity of the kind that could only be explained by intelligent design were demonstrable at the level of molecular biology, then it could be invoked as the crucial point for IDT to get its grip. Behe could then say that God intervened at some unspecified time by providing the most elementary forms of life with irreducibly complex molecules and then say that all these grand transitions from one genus to another are just the workings out through natural selection of this initial complexity. I don't say that they would say this; only that they could.

But how good is the case for intelligence-requiring design at the molecular level? I have neither the time nor the expertise to offer my own independent assessment. So, for present purposes, it will suffice for me to quote a few points made by another molecular biologist, David Ussery.<sup>13</sup>

In 1996 Behe claimed that no Darwinian explanation could be found in the literature for the production of the nucleotide AMP or for the origins of the immune system. Yet, as Ussery points out, by 1998 just such explanations for both of these had already been published.

Ussery sums up the objection to Behe's examples from molecular biology like this:

These two examples are merely a small sample of the literally THOUSANDS of articles that have been published about the details of molecular evolution in the past two years. It is important to bring up these examples, because this shows a real weakness in the logic that says, "We don't know how this happened, so God must have done it!" What happens when someone calls your bluff and actually DOES provide a step-by-step mechanism for the gradual evolution of the immune system?

Philosophers have a name for the fallacy to which Ussery is calling attention. It is the so-called Argument from Ignorance.

This fallacy also infects the few other examples Behe gives of allegedly irreducible complexity: the cilia of the certain bacterial flagellum and the mechanism for blood-clotting. There's no real argument here. Just a gesture at our current ignorance - an ignorance that we only started to remedy the past few decades.

---

<sup>13</sup> Ussery's article, "A Biochemist's Response to 'The Biochemical Challenge to Evolution'" can be found on the following website: [www.cbs.dtu.dk/staff/dave/Behe.html](http://www.cbs.dtu.dk/staff/dave/Behe.html)

If IDT were to cut any ice, it would have to be able to predict the future. It would have to foresee that such ignorance will remain forever, not just in the next decade or century, but for as long as humans, or their evolutionary successors, are around to continue their scientific enquiries.

#### **4. The intelligent designer of theistic anti-evolutionists.**

Approximately seventeen hundred years ago, St. Augustine deprecated those who used the Bible to attack science. In "The Literal Meaning of Genesis" (Book 1, Chapter 19), he wrote:

Often a non-Christian knows something about the earth, the heavens, and other parts of the world, about the motions of the stars and even their sizes and distances, . . . and this knowledge he holds with certainty from reason and experience. It is thus offensive and disgraceful for an unbeliever to hear a Christian talk nonsense about such things, claiming that what he is saying is based in Scripture. We should do all that we can to avoid such an embarrassing situation, which people see as ignorance in the Christian and laugh to scorn . . .

Reckless and presumptuous expounders of Scripture bring about much harm when they are caught in their mischievous opinions by those not bound to our sacred texts. And even more so when they try to defend their rash and obviously untrue statements by quoting a shower of words from Scripture and even recite from memory passages which they think will support their case "without understanding either what they are saying or the things about which they make assertions." (1 Timothy 1:7).

Despite Augustine's cautionary remarks, theistic anti-evolutionists continue their crusade.

Among the more sophisticated of these are Plantinga and Inwagen.

Like the IDT theorists just discussed, these philosophers rely for the most part on more or less sophisticated appeals to arguments from ignorance.

Plantinga, especially, likes to use probability arguments against evolutionary theory. But both of those with which I am familiar are deeply flawed. His argument in chapter 12 of *Warrant and Proper Function* presumes that evolution implies metaphysical naturalism that this is inconsistent with theism. But as we have seen, although unrestricted metaphysical naturalism is indeed inconsistent with theism, evolution only implies restricted naturalism, which is not. Again, in his paper "When Faith and Reason Clash: Evolution and the Bible",<sup>14</sup> he argues that although evidence from the sciences together with metaphysical naturalism makes the

---

<sup>14</sup> Alvin Plantinga, "When Faith and Reason Clash: Evolution and the Bible," *Christian Scholar's Review* 21, no. 1 (September 1991): 8.

evolutionary thesis of Common Ancestry probable, evidence from the sciences together with an acceptance of theism, makes Common Ancestry improbable. Once more, this fails to distinguish between restricted and unrestricted naturalism. And, if construed as an argument for biblical theism, it obviously begs the question.

Unlike Behe and Dembski, both Plantinga and Inwagen are quite open about their commitment to biblical theism. They are self-avowed "people of the word", people who believe in biblical inerrancy.

Now this faces them with a predicament. How are they to interpret talk about various species reproducing "after their kind"? Literally or figuratively? Neither seems inclined to the literalism of hard-line six-day creationists. Both think that some degree of figurative interpretation is permissible.

But how can a figurativist avoid the dilemma of saying either that God didn't really mean what he so clearly said or that he didn't quite know how to say what he did mean? To opt for the first alternative would be to make God's word misleading and God himself a deliberate deceiver. But to opt for the second alternative would be to deny God's linguistic competence.

Plantinga tries to avoid the first horn of the dilemma by saying that God does indeed mean what he says even though it is difficult for us to figure out what that is. But what is the point of a revelation if we don't know what is revealed?

So how about the second horn of the dilemma? Inwagen tries to avoid it by explaining that the message of *Genesis* was revealed to God's chosen people in the only sorts of terms that such primitive people would understand. They wouldn't have understood a scientifically accurate account, so he had to provide the simplistic - albeit misleading - one found in *Genesis*. But Inwagen fails to credit God with enough imagination and linguistic resources to provide them with an account that would be neither obscurantist nor incomprehensible. What might such an account look like? Well, how about this?

In the beginning, God created a great ball of fire. From the fire, in time, came the heavens and a multitude of stars. Among the stars was the sun with the earth circling about it, and the moon circling about the earth. And from the waters and the clay in the earth there grew the seeds of all life. In time the seeds of life took on many forms. Some grew into plants. Some grew into animals. And others remained so small that the eye of man could not see them. As the acorn becomes the oak, so in time many of the earliest plants and animals begat new forms of plants and animals. And as the oak tree reaches out its branches, so these new forms of life reached their branches out in many directions. In time, many of these branches died leaving their skeletons in the rocks. Yet many continued to branch out unto this

day. From the earliest seeds of life there arose, at the tips of the branches, the fruit of today: the grasses and crops of the fields, the beasts that feed thereon, and man who feeds on both. And as the blink of an eye is to the life span of a man, so is the life span of many generations of men to the time that hath passed since the seeds of life arose on the face of the earth. And God was content with all that had grown from the great ball of fire he had created. For all had gone as he had planned and it needed not his further help or guidance.

My version sketches the outlines of a good deal of cosmology, astronomy, and evolution. And it depicts evolution as perfectly consistent with both a deist and a theist, conception of God. More to the point, it took me less than an hour to conceive and execute. Yet God, we are told, had all eternity.

Clearly, exponents of the sort of figurativism advocated by Augustine are impaled on one horn or the other of our dilemma.

But how about literalism, the position of those whom Isaac Asimov once described as "armies of the night": those of anti-scientific temperament who believe not only that God created the universe but that he did so in the manner and at the time revealed in *Genesis*? These Creationists accept the word of God at face value. They believe that God does indeed know how to say what he means and that, when he does say it, he really means what he says.

What can we say in response to those who thus pit revelation - their own particular account of it, that is - against virtually the whole of reason and experience and the science that has so carefully been built thereon?

We can draw attention to the fact that there are other revelation-based faiths inconsistent with theirs and with equally ardent believers. But they will reply that their faith is the only true one and that these other faiths are therefore false.

We can draw attention to the simplistic nature of much of their thinking, the false dichotomies in terms of which they couch so many of the issues. But conceptual clarity doesn't cut much ice with them.

We can draw attention to the sheer fallaciousness of many of their arguments. But logic exercises no constraints over them. Face them with a fallacy or an inconsistency and they'll say that their God is "beyond human logic".

We can point out the absurdly anti-scientific consequences of their literalism. But they are prepared to swallow these too without apparent discomfort.

Let me dwell on this last point for a moment. A couple of examples will serve to illustrate what I'm getting at. When confronted with the fossilized remains of now extinct species, they will say - with Philip Gosse<sup>15</sup> - that God planted them there to test our faith. When confronted with evidence of the age of the universe and the fact that light from its remotest regions has been travelling to us for billions of years, many will say that God created the universe only six to ten thousand years or so ago, complete with light already seeming to be on its way from those distant galaxies. It seems not to occur to them that answers such as the last two make God a great deceiver. But if it did, they'd find a reply to that too.

So back to my question: What *does* one say to those of such intransigent faith?

Well, what does one say to a paranoiac who won't allow any evidence whatever to count against his impervious belief-system? Not much that will help. When reason counts for nothing one has little alternative other than to shrug one's shoulders and walk away, hoping that he won't get back at you in some other way.

-----

So far I've shown that none of the arguments to intelligent design make it more probable than not that such a designer exists. Now, as a final *coup de grace*, I'll argue that even if such a designer did exist, we would have to conclude, from the flaws in his design, that it is more probable than not that he is either incompetent or malevolent. In short, I'll use the premises of the argument from design (the teleological argument) to argue that it is probable, if not certain, that neither the supremely intelligent designer of deists nor the omnipotent and perfectly good God of theists exists.

## **F: A TELEOLOGICAL ARGUMENT FOR ATHEISM.**

Here I am treading somewhat familiar ground. So I will be brief. And this I can best do by first quoting a few passages from Mark Twain's posthumously published book *Letters from the Earth*<sup>16</sup> and then adding a few comments.

### **1. Satan's moral outrage at his boss's design.**

Satan, before he fell from grace for being foolhardy and honest enough to criticize God, is writing back to fellow archangels Gabriel and Michael, the

<sup>15</sup> Philip Gosse, a nineteenth century anti-evolutionist, came up with this ingenious idea in his book *Omphalos*.

<sup>16</sup> Mark Twain [Samuel Clemens], *Letters From the Earth*, edited by Edmund de Voto, originally published in 1937, reprinted 1968, New York: Fawcett Crest, 1968. Because of its atheistic implications, the book had to be published posthumously (seventeen years after the author's death) and only after his daughter Clara Clemens finally withdrew her objections to its publication.

other members of the heavenly Grand Council, and is expressing moral outrage at the way their boss has set things up in the universe he had designed and created. He writes:

The human being . . . is composed of thousands of complex and delicate mechanisms which perform their functions harmoniously and perfectly, in accordance with the laws devised for their governance, and over which the man himself has no authority, no mastership, no control. For each of these thousands of mechanisms the creator has planned an enemy, whose office it is to harass it, pester it, persecute it, damage it, afflict it with pains, and miseries, and ultimate destruction. Not one has been overlooked.

From cradle to grave these enemies are always at work; they know no rest, night or day. They are an army: an organized army; a besieging army; an assaulting army; an army that is alert, watchful, eager, merciless; . . . It is the Creators' Grand Army, and he is the Commander-in-Chief. Along its battlefield its grisly banners wave their legends in the face of the sun: Disaster, Disease, and the rest.

Disease! That is the main force, the diligent force, the devastating force! It attacks the infant the moment it is born . . . It chases the child into youth . . . It chases the youth into maturity, maturity into age, and age into the grave.

With these facts before you will you now try to guess man's chiefest pet name for this ferocious Commander-in-Chief? I will save you the trouble- but you must not laugh. It is Our Father in Heaven!

What do you think of the human mind? I mean, in case you think there is a human mind.

Now it is clear that this indictment of a designer-god gets its grip no matter how that intelligent designer is conceived: whether as the God of deism, or that of various versions of theism.

It is also clear that Mark Twain, with Satan as his mouthpiece, could have gone on at length to give examples of the sorts of diseases with which God assails us. He does select a couple so as to describe their pernicious effects: hookworm; and sleeping sickness. But he could have gone on to list other exquisitely designed diseases that afflict only humans: SARS, measles, pneumococcal pneumonia, typhus, typhoid fever, smallpox, leprosy, poliomyelitis, five types of syphilis and gonorrhoea, AIDS, hepatitis, shingles, four types of malarial parasites, two types of tapeworm, an intestinal worm, three agents of filariasis, two species of schistosoma, pinworm, three types of lice, various types of fever, various genetic diseases such as Huntington's, and kuru [only transmitted by cannibalism], just to mention a few.<sup>17</sup> He could

---

<sup>17</sup> Ian Plimer, in *Telling Lies: Reason versus Creationism*, (Sydney: Random house Australia, 1994) gives most of this extended list, p. 125. Plimer adds: "Noah's family must have carried a veritable hospital full of diseases because this in the only way that diseases endemic to hominids could have survived the 'Great Flood'."

have extended the list to diseases that we share with other species - cancer, for example - and have gone into gruesome detail about their effects. Or even to diseases peculiar to species other than us. And he could have gone on to list the recruits to God's other devastating regiments, those that fall under the banner of Disaster: hurricanes, earthquakes, floods, droughts, volcanic eruptions, and huge asteroid impacts of the kind which (puzzlingly for a theist) have caused the extinction of most of the species God designed and/or created.

The problem with parading these medical terms before us, however, is that we tend to let them pass before our minds without thinking of their real significance. I invite you, therefore, to look them up by consulting a medical dictionary, or talking to someone who has intimate experience of the consequences of these diseases and disasters in concrete detail. Or use your search-engine to check on the internet for "Ebola haemorrhagic fever", for instance. Then ask yourself how you would describe an intelligent designer of such God-awful design.

Nature, we often say, is cruel. But so, by the same token, is God if he deliberately designed it to work that way. Nature, however, isn't malevolent. It isn't intelligent. But God, the great designer, is supposed to be supremely intelligent.

Does God, then, have flaws in his intelligence? Is God, not to mince words, just plain incompetent? Should we, perhaps, conceive of him as the Great Computer Salesman in the sky, someone akin to Bill Gates and Microsoft, someone who provides us with software aptly named Windows, which has such huge security gaps in its code that hackers can easily disrupt its operation?

## **2. The Great Computer Designer versus the Great Hacker.**

Some, I know, would respond by saying that all these troubles are of Satan's making, not of God's. Plantinga, for example, invokes this as a possibility to explain the occurrence of so-called "natural evils" such as those I've listed.<sup>18</sup> But set aside the fact that Satan - as depicted as by the Bible<sup>19</sup> as well as Mark Twain - is a relatively harmless hacker, more intent on asking

---

<sup>18</sup> The possibility envisaged forms part of Plantinga's "Free Will Defence". We, by virtue of our free will, are responsible for moral evils; Satan, by virtue of his, is responsible for natural evils. But the concept of free will is just a diversionary tactic. The questions still remain: Is Satan going to continue to abuse his free will forever? Will God eventually show his disdain for Satan's freedom by putting an end to him and his evil acts? Both possibilities are problematic for theists, for the reasons developed in the text.

<sup>19</sup> See my "A Moral Argument for Atheism", *The New Zealand Rationalist and Humanist*, Auckland, Acme Printing, Spring 2000, pp. 9-10, about to be reprinted in *The Impossibility of God*, edited by Michael Martin, Prometheus Books, Buffalo, New York.

probing questions than on causing actual harm. For Christian myth holds that he really is a serious rival to God and that God currently is doing little, if anything, to prevent Satan's destructive interference in God's creation.

The problem with thus conceiving Satan, as the Great Hacker in the sky, is that if we also think of him as an *eternal* hacker, one whose maliciousness will never cease, then we are committed to Manicheism rather than either deism or theism. God, in that case, is not the Supreme Being after all - just one of two such beings.

Yet if we think of Satan's interferences as only temporary, ones that God will get under control in the long run, the same old problems arise. Why didn't God get his software right in the first place? Was it lack of foresight and bad planning? Why doesn't the Great Computer Maker fix the software here and now so as to put a stop to Satan's hacking? After all, theists believe he is a miracle-worker who can do anything he wants when he wants. Is he willing but unable? In that case, he is definitely guilty of gross incompetence with respect to the universe for which he undertook responsibility. Or is he able but not willing? In that case, he is guilty of horrendous crimes against his creation.

Another way of conceiving the relationship between the Great Computer Maker and the Great Computer Hacker is to hold that they are one and the same: different aspects of one two-faced deity who - in a perverse reversal of the Christian doctrine of Vicarious Atonement<sup>20</sup> - makes *us* pay for *his* misdeeds in the currency of suffering, worship, and intercessionary prayer. This conception even bears the stamp of biblical authority. After all, in *Isaiah*, God himself boasts: "I form the light, and create darkness: I make peace, and create evil: I the LORD do all these things."<sup>21</sup>

This third conception is no less credible than the first two - which is to say, not at all.

### **3. The character of the designer inferred from God-awful design.**

So there we have it. If, contrary to all my arguments, you still think that the universe was designed by an intelligent being, then just look at the God-awful nature of what he designed, and tell me how *you* can avoid concluding that he is either intellectually reprehensible or morally repugnant. How would *you* account for the weapons of mass destruction with which he incessantly attacks us?

---

<sup>20</sup> The doctrine that Christ, the earthly embodiment of God, atoned for our sins by suffering on our behalf. More succinctly, it is the doctrine that God killed himself to appease himself.

<sup>21</sup> *Isaiah*, 45:7. God confesses his dual role again in *Lamentations* 3:38 when he asks the rhetorical question: "Out of the mouth of the most High proceedeth not evil and good?"

For my own part, I no longer live in the God-besotted, demon-haunted, world that was foisted on me in my childhood. I find no reason whatever to believe in any supernatural supremely intelligent designer, let alone a malicious one like God or Satan. On the contrary, I believe the *non*-existence of such beings much more probable than not. Indeed I'd go so far as to say that, on the evidence, their non-existence - especially that of the theist's God - is not just desirable but about as certain as it can be.

<sup>1</sup> William Paley, *Natural Theology*, Vol. 6 in *Works* (London, 1805), Chapter 1.

<sup>2</sup> Behe is thinking of an ordinary mouse-trap. But how about a mouse-trap consisting of a deep bucket with a see-saw arrangement delicately balanced on its rim and baited at the end over the bucket? Two parts, only one of them moving, yet far more effective than a bought one as it keeps on catching mice without having to be reset. What counts is whether it works and works well.

<sup>3</sup> Richard Dawkins, *The Blind Watchmaker*, Harlow: Longman, 1986.

<sup>4</sup> Richard Dawkins, *Climbing Mount Improbable*, London: Penguin Books, 1997, p.70.

<sup>5</sup> An obvious example of an emergent property is that of fluidity, possessed by water but not by the individual molecules that are its constituents, let alone by the atoms composing those molecules.

<sup>6</sup> Most deists also thought the question as to why anything at all, the universe in particular, exists could best be answered by adding another entity - some sort of Creator God - to the list of existing things. How they thought this expanded list of existing entities - now including a creator along with his creation - could be explained without abandoning reason and taking recourse to the sort of mystery they despised, is a matter I shan't pursue here,

<sup>7</sup> Which is why so-called liberal theists have insisted on demythologizing the old concepts of God.

<sup>8</sup> Some of those current thinkers who emphasize what they call "human exceptionalism" seem to echo the Pope's position while not necessarily endorsing his dualistic metaphysics. They tend to talk, rather, of the uniqueness of human consciousness and free will - features that set us apart, on their view, from the rest of the animal world, including those of our pre-human ancestors.

<sup>9</sup> If we say the latter then we are faced with the unappealing consequence that our surviving souls will be mindless.

- <sup>10</sup> See my paper "The Meaning of Life: Reflections on God, Immortality, and Free Will", in *Open Society*, volume 76, Number 3, Spring 2003.
- <sup>11</sup> How he thinks he can square this with his claim that irreducibly complex organs and organisms must appear, as it were, overnight, I leave to others to guess.
- <sup>12</sup> Michael Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution*, New York: Free Press, 1996.
- <sup>13</sup> Ussery's article, "A Biochemist's Response to 'The Biochemical Challenge to Evolution'" can be found on the following website:  
[www.cbs.dtu.dk/staff/dave/Behe.html](http://www.cbs.dtu.dk/staff/dave/Behe.html)
- <sup>14</sup> Alvin Plantinga, "When Faith and Reason Clash: Evolution and the Bible," *Christian Scholar's Review* 21, no. 1 (September 1991): 8.
- <sup>15</sup> Philip Gosse, a nineteenth century anti-evolutionist, came up with this ingenious idea in his book *Omphalos*.
- <sup>16</sup> Mark Twain [Samuel Clemens], *Letters From the Earth*, edited by Edmund de Voto, originally published in 1937, reprinted 1968, New York: Fawcett Crest, 1968. Because of its atheistic implications, the book had to be published posthumously (seventeen years after the author's death) and only after his daughter Clara Clemens finally withdrew her objections to its publication.
- <sup>17</sup> Ian Plimer, in *Telling Lies: Reason versus Creationism*, (Sydney: Random house Australia, 1994) gives most of this extended list, p. 125. Plimer adds: "Noah's family must have carried a veritable hospital full of diseases because this in the only way that diseases endemic to hominids could have survived the 'Great Flood'."
- <sup>18</sup> The possibility envisaged forms part of Planting's "Free Will Defence". We, by virtue of our free will, are responsible for moral evils; Satan, by virtue of his, is responsible for natural evils. But the concept of free will is just a diversionary tactic. The questions still remain: Is Satan going to continue to abuse his free will forever? Will God eventually show his disdain for Satan's freedom by putting an end to him and his evil acts? Both possibilities are problematic for theists, for the reasons developed in the text.
- <sup>19</sup> See my "A Moral Argument for Atheism", *The New Zealand Rationalist and Humanist*, Auckland, Acme Printing, Spring 2000, pp. 9-10, about to be reprinted in *The Impossibility of God*, edited by Michael Martin, Prometheus Books, Buffalo, New York.

<sup>20</sup> The doctrine that Christ, the earthly embodiment of God, atoned for our sins by suffering on our behalf. More succinctly, it is the doctrine that God killed himself to appease himself.

<sup>21</sup> *Isaiah*, 45:7. God confesses his dual role again in *Lamentations* 3:38 when he asks the rhetorical question: "Out of the mouth of the most High proceedeth not evil and good?"