DRAFT: LIABLE TO CHANGE

Why scientists and philosophers of science should teach intelligent design (ID) alongside the theory of evolution

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Disclaimer

The views expressed here are those of the author and should not be assumed to represent either the University of Birmingham or the School of Computer Science.
However I applaud both for allowing the academic freedom which permits expression of many opposing views.

This document explains, from the viewpoint of a philosopher/scientist atheist, why intelligent design should be taught alongside standard evolutionary theory. I have been very disappointed by things I have read by scientists recommending suppression of this topic, and even in one case arguing that the *worst* arguments in favour of ID should be collected together and refuted, which is a prescription for scientific dishonesty. An honest attack would present the *best* arguments, as cogently as possible, before exposing their flaws. (Something I learnt from the writings of Karl Popper.)

Of course, bad arguments should also be exposed, like the often-used argument that there's no conflict between science and religion because many excellent scientists are religious. That argument shows only that it is possible to be both religious and scientific. But it does not show that there is no contradiction, for unnoticed contradictions can exist even in what highly intelligent people think. One of the greatest logicians of all time was Gottlob Frege. Yet even he failed to notice that the system of logic that he developed was inconsistent, until a youngster Bertrand Russell pointed out the contradiction inherent in the notion of the set of all sets that do not contain themselves. Being an intellectually honest logician Frege made no attempt to suppress Russell's argument and even included a full discussion of it in an appendix to the book he had just completed.

So if a logician as great as Frege failed to notice the contradiction in his ideas, it should not be surprising that many religious scientists, especially those who are not logicians, fail to notice the logical inconsistencies in their beliefs and activities. But that's not the topic of this document.

NOTES now at end.

CONTENTS

WHAT MY MOTIVES ARE NOT

The typical scientific reader will immediately assume that because I advocate teaching 'Intelligent design' theory I am some sort of religious advocate.

On the contrary, I have been an adamant atheist since I was about 10 or 11 years old, growing up in Southern Rhodesia (where I was born in 1936). I had no direct exposure to World War II (which started when I was about three years old in 1939 and ended in 1945 when I was nearly nine), but I was very conscious of it as a result of the newsreels that were always shown in the supporting programmes at the 'bioscope' as we called the cinema then, to which I went once or twice a week. I also sometimes listened to wireless news ('Daventry calling' from the BBC) saw newspaper headlines, and heard adults talking about the war. There was some rationing, a trench was dug in the main town park, and there were airmen stationed in our town. We had no television then.

I don't recall exactly what convinced me that there was no god -- whether it was the news of the horrors on all sides of the war, whether it was the fairly obvious emptiness of the occasional perfunctory religious observances of my (Jewish) family or the hymn-singing and fatuous praying that started each day at school, whether it was the immorality of a god described as instructing a man to sacrifice his son on an altar (even if it was only a cruel hoax, to test his faith), whether it was something I read, or just the complete lack of any evidence for anything remotely like the good, all powerful, all knowing, loving god alleged to be listening to prayers of people on both sides of every conflict.

It was obvious that god could not be on both sides of such murderous conflicts, which implied that at least one side must be deluded in claiming that he was on their side.

If one side could be wrong, why not both, since neither had better arguments than the other for the existence of *their* god?

Since then, I have encountered very intelligent rabbis, priests, theologians, and religious scientists, but nothing said by any of them has ever provided a shred of evidence that shook my atheism, partly because it was so obvious that no truly good, all knowing, all powerful designer would have made such a mess of creating this world and especially human minds, as manifested in world war II and many other episodes since then. I later discovered that over 2000 years ago Epicurus had beaten me to that argument.

In my youth I thought atheism was justified by evidence that there was no god of the sort claimed by the main religions I heard about. Later, as explained in the note below, I came to realise that the very concept was incoherent, which was an even stronger reason for being an atheist, analogous to denying that there are round squares even if many people claim to have found pictures of round squares, seen edge-on.

THE FAILURE OF THE FREE-WILL DEFENCE

I soon encountered attempts to rescue god from that criticism by means of the free-will argument, which claims that the nastiness is not produced by god but by humans or satan (created by god mind you) acting freely. But such arguments seemed clearly to be mere sophistry, as I later discovered David Hume had pointed out long ago. In particular, most of the people who admire god for providing so-called 'free will' would not admire parents who allowed their children to torture animals or murder their school-mates, as exercises of free will. That's an example of a contradiction people don't notice in their thinking. (If there are people who admire such parents I'd be interested to know.)

In section 10.13 of Chapter 10 of my 1978 book I tried to show that the only worthwhile notion of free will required determinism, building in part on arguments used in a paper ('Physicalism and the Bogey of Determinism') presented at a conference on philosophy and psychology in 1971. Some of my papers criticising spurious attempts to use the idea of free will to give succour to theists and and indeterminists can be found by giving to a search engine: "aaron sloman" "free will". (A paper added in June 2006 discusses four concepts of free will, of which two are useful and two incoherent.)

The key idea is that the concept of "free will" invoked by the theologians was simply incoherent, since only in a deterministic world can we have the sort of freedom, using mechanisms produced by evolution, that enables our desires, hopes, fears, attitudes, preferences, values, ideals to produce our actions -- which is exactly what we require if we are to be acting as we want, the only notion of free will that makes any sense. The fact that what we want is a product of evolution, education, and our own previous experiences is no objection, nor is the fact that our ability to take decisions depends on our having fully functional brains. Any alternative kind of free will either amounts to randomness or just another kind of determinism involving ghostly spiritual mechanisms, which have never been shown to be any

better than brains. Dan Dennett's ideas are very similar, though he has written much more on the subject. (However, I expect Dennett would agree that Hume summed it all up long ago.)

Every argument I encountered for the existence of a god in my youth was either based on obviously false premisses (e.g. lying claims like 'Every person has a god-shaped hole' which I've even heard quoted by a highly intelligent religious scientist who really should have known better) or else depended on the existence of claimed miracles. But I was never so arrogant as to believe that things I could not understand must have inexplicable origins in the workings of somebody's god.

The folly of the argument from miracles or phenomena we don't understand, is obvious from the fact that many of our forebears would wrongly have deemed moving pictures in London showing events in Washington as they occurred, or even transatlantic telephone conversations, to be miraculous. Many things are not yet explained, but that's a reason for encouraging scientific research --- not giving up and believing in the supernatural, except for the superstitious and weak-minded wishful thinkers whose desires drive their beliefs.

RELIGION AS A SOFTWARE BUG

Moreover, I now realise that religion, like many other evils (e.g. nationalism, racialism) is probably a by-product of mechanisms produced by evolution which were originally selected because those mechanisms served some useful purpose, but which, like all complex designs, including complex software engineering designs, can also have dysfunctional side-effects. [I'll try to find time to fill this argument out later, though I expect others have done it.] Religion is one of the worst side-effects of evolution -- just another pervasive, highly dangerous self-replicating, and even often murderous software-bug, worse even than the design flaws in Microsoft software that were put there with good intentions, but allow malicious people to install viruses and trojan horses that wreak so much havoc. But we'll never get rid of religion (or nationalism, or racialism, or drug addiction, or many kinds of prejudice and intolerance) so lets find good ways of countering it. One way is to expose children to some of the spurious arguments and the counter-arguments. If scientists do not do that, impressionable youngsters will hear the spurious arguments only presented by believers (e.g. parents and priests) with ulterior motives, namely religious conversion or indoctrination.

(What a good scientist teaches is not indoctrination because it plants the seeds that will lead to rejection of the scientist's own theories and their replacement by better theories as we learn more. Poor scientists may fail in that respect: they unwittingly become like religious preachers claiming that they know the final truth on some questions about what the world is like. What bigoted preachers, rabbis, mullahs, priests and religious parents teach (at least the fundamentalist varieties) prevents children from exploring ideas and learning about views opposed to their own, and prevents development of critical abilities. It is like the old Chinese practice of foot-binding applied to the mind. I call it *mind-binding.* Just as foot-binding cruelly distorts the natural growth of feet of children for the sake of satisfying parents and others in the culture so mind-binding, cruelly distorts the natural growth of the mind through exploring freely in all directions. There is more on mind-binding and the evils of religion here.)

DARWIN, EVOLUTION AND PROGRESS IN SCIENCE

I don't recall when I first encountered Darwin's theory of evolution. I was not taught it at school -- the science teacher in the secondary school I was sent to in Cape Town (SACS) taught us that the reason why water expanded on freezing was to provide a protective layer of ice on the oceans in winter, so that fish would be preserved for us to eat. (I hasten to add that that was around 1952 and he was already quite old then, so it is unlikely that that nonsense is still being taught there.)

However, I probably picked up some information about evolution 'on the side' when I was doing my BSc in mathematics and physics in Cape Town, and then learnt more when I went to Oxford in 1957 where I gradually converted from mathematics to philosophy and did a D.Phil in epistemology. Never did I think the theory of evolution explained all biological phenomena and never did I think it had been proved.

That's partly because *no deep explanatory theory in science is ever proved:* there is always the possibility that a better theory will be found which accounts for more of what we have discovered, or adds precision, or directs us to new productive forms of investigation from which we learn faster than we did using our old theory. The most a scientist can ever say is that among all the theories that have been put forward that have sufficient substance to be evaluated against experimental and observational phenomena, one stands out as better than the others. That's what could be said about the heliocentric theory when it was put forward, and about Newton's mechanics in his time, until Einstein's work provided a better theory.

Badly taught scientists, who do not understand philosophical issues about science may preach that such and such a theory has been proved true or proved false, but in doing so they mislead themselves and their students. Good scientists always have an open mind as to whether something that nobody has thought of yet will change the status of a theory. Of course all such changes have to accommodate the accumulated detailed knowledge that has been tested and applied successfully in myriad ways: and that is not an easy accomplishment for a new theory. In fact, as Popper remarked, it may at first fail to explain with some phenomena that the older inferior theory explained.

> An excellent introductory overview of Karl Popper's philosophy of science is in Bryan Magee's book, *Popper,* in the Fontana, Modern Masters Series (1985). A version that is in some ways more sophisticated can be found in the work of Popper's pupil Imre Lakatos on the Methodology of Scientific Research Programmes. A wikipedia summary is available. In chapter 2 of my 1978 book The Computer Revolution in Philosophy (originally published in Radical Philosophy 13 Spring 1976 as 'What are the aims of science?') I tried to extend their work by indicating the importance of deep new theories about what is *possible*, which extend science in more profound ways than the discovery of new laws. Both Popper and Lakatos were more sophisticated than the caricature of Popper summarised in the slogan that what is not falsifiable is not science. Popper understood well enough that when the atomic theory of matter was first introduced there was no conceivable experiment that would refute it. That did not make the theory irrelevant to science. In 'What are the aims of science?' I tried to show that whereas laws, being universally quantified formulae, are in principle falsifiable by an instance, theories about what is possible (what can exist) are not falsifiable by any observation, yet they constitute the deepest advances in science because insofar as they extend our concepts they provide a framework for generating new questions and new theories (including falsifiable laws). I think that is something neither Popper nor Lakatos really came to terms with.

The overthrow of a previously well supported theory has often happened in the history of science. The Ptolemaic theory of planets moving round the earth in epicycles seemed to explain vast numbers of observations of planetary motion, but the Copernican theory that the earth moves round the sun, especially when later enhanced by Newton's theory of gravitation and his three laws of motion eventually proved to be a better theory. However, it is worth noting that some of the details accounted for by epicycles could not at first be explained by the heliocentric theory.

> (Much can be learnt about all these theories using the internet. E.g. a very short overview is here and a more comprehensive and detailed overview here, but you can search for 'ptolemaic' 'epicycle' 'Copernicus' 'heliocentric' 'Kepler', 'Newton', 'Einstein' using search engines and learn more: but remember to read critically.)

Newton's theory was so good and had so many successful applications in astronomy, engineering, and military ballistics, that some scientists, at least one poet, and maybe some philosophers, thought it would never be superseded. But niggling small unexplained details remained, until Einstein's theory of general relativity came along and provided a deeper, more general explanation than Newton's, including showing why Newton's theory was such a good approximation in all the cases where it seemed to work.

Newton's ghost may have derived partial satisfaction because in the context of Quantum theory, to which Einstein also made major contributions, some aspects of Newton's theory of light as made up of particles were revived, even though earlier diffraction experiments had made it seem that Newton was wrong, and that the wave theory of light of Huygens, Fresnel and Young was a better theory.

The theory of phlogiston was not so good, but was put forward by a distinguished scientist and did not survive long because a much better theory soon turned up.

So good theories have their ups and their downs, although after each change we never return to the earlier stages because of everything that has been learnt in between that needs to be explained by later theories, or later revivals of old theories suitably modified. This is why good scientists have deep humility about their theories, no matter where their personal preferences lie and no matter how strongly the evidence that is available at any time supports one theory over all available contenders, and no matter how vehemently they argue against their scientific rivals.

It is very important for students to be exposed to discredited theories and helped to understand both why intelligent people supported them and why they were eventually superseded. If we teach them only what is regarded as the truth they get a distorted view of science as a process and of the status of current theories. I fear that has already happened as a result of science education that is too narrow, and certainly some of what I hear from science journalists and broadcasters gives that impression -- including discussions of the issue of intelligent design.

For a true scientist nothing can be more exciting than being involved in the discovery of a new theory that shows how much of what was previously accepted has to be replaced by something deeper, more powerful, more precise, and more general. That is why, instead of forever blindly defending old theories because they were argued for by some great thinker of the past (Aristotle, Galileo, Newton, Einstein) the scientific community goes on 'reading the book of nature' and why, from time to time, despite kicking and screaming in their initial

dismay, they take a sharp turn and run with a better theory than those that came before.

This discovery of error followed by exploration of new alternatives is not an option for people who are convinced they already know the truth and lack the insight to see what made their thinking so rigidly shackled, and who try their hardest to imprison the minds of their children too -- a terrible crime against the young.

A TEST FOR SCIENTIFIC SINCERITY

So a good test for the scientific sincerity of a scientist arguing for Intelligent Design theory is whether he or she explicitly accepts the possibility that the phenomena that the theory is purported to explain will later be explained by a better theory that has not yet been thought of, that may be inconsistent with the main claims of ID theory. A further test of scientific sincerity is whether such a scientist points students at published results and possible future experiments that seem most likely to provide a refutation and plant the seeds of a better theory.

Of course this test is also relevant to the sincerity of neo-Darwinists. I have no doubt that the good ones will pass the test, though I wonder about ID theorists. (A web site that may provide the answer is this http://www.idthefuture.com/ --- though I have not had time to look closely at it. I spent a few minutes on it and did not find any clear evidence of insincerity: it even pointed out conflicts between ID theory and creationism.)

Of course I don't claim that all defenders of Darwin pass the sincerity test. There is too much passion of the wrong sort in science, when reputation, funding, and the possibility of public refutation are in the offing.

SO WHY BLOCK TEACHING ABOUT INTELLIGENT DESIGN?

Unfortunately, what I have seen in reactions to proposals about publishing and teaching the 'intelligent-design' theory suggests that there are now many scientists who behave as if they also had closed minds. That may be because they have looked at the detailed expositions of arguments in favour of intelligent design and seen how weak most of them are and how often what is presented as an attempt to do good science is a thinly disguised attempt to promote a particular religious theology that is fundamentally opposed to scientific enquiry because of its ultimate reliance on faith and authority. So the scientists who defend ONLY the teaching of the theory of evolution in schools are understandably worried that impressionable young minds will be corrupted by clever presentations of theologically inspired bad science.

I find that very sad, partly because it can give outsiders the impression that scientists are as much driven by blind faith and arguments from authority as the people on the other side -- by allowing themselves to be accused of scientific insincerity they give succour to the unscientific bigots whose support for ID theory has nothing to do with the aims of science.

More importantly this attitude ignores the educational benefits of exposing the young to a real and deep intellectual conflict in which they can learn to analyse, criticise and assess the arguments and evidence.

Expounding and criticising intelligent design theory as an alternative to evolution provides a wonderful opportunity for highly creative and intelligent science teachers to expose young minds to the cut and thrust of scientific debate, the careful analysis of arguments, the marshalling of evidence, the exposure of hidden motives behind bad science, the thrill of growing understanding of complex issues, and the need for new theories to account for as much as possible of the *detail* of what older theories can explain, while also solving and posing new problems.

The main counter-argument offered in the article by Richard Dawkins and Jerry Coyne (in Guardian Unlimited, September 1, 2005) is that there are more interesting and worthwhile controversies in biology and that time should not be wasted on an empty theory. The problem is that there just are many people around the world who, for religious reasons, find it hard to accept evolution and their reasons should be analysed and refuted. Moreover the corrupting effect of religious ways of thinking is so profound that even people who are only mildly attracted by them, or who might be attracted by them in future, should be helped to understand how to expose the flaws by confronting them directly in the context in which they are most often used to attack scientific ways of thinking.

Further, this provides an excellent opportunity to teach philosophy of science in the context of a real battle of minds, on a topic about which many of the learners will already be deeply concerned. What more can an educator hope for as a starting point for teaching science and philosophy through a major controversy?

Some people probably worry that young minds should be protected from the corrupting influence of bad science driven by theology. But this does not do justice to the learning powers of children. My wife taught pre-university biology as a part timer for many years, in schools that had small groups of students trying to fill gaps in their education, for various reasons. A few of those students came from religious faiths opposed to evolution. She did not enter into polemical debate, but just taught all the detailed biology as best she could, including field trips where possible, often avoiding the word 'evolution' but talking about mechanisms, experiments, observations, species differences, etc. I believe that more than one student was transformed by this, and one of them spontaneously told her at the end that he had realised that he had been learning about evolution and now thought it was a good theory rather than something from which pupils should be protected.

AN EDUCATIONAL EXPERIMENT

So here is a wonderful chance to do an educational experiment: collect a typical sample, of the **very best** arguments available for the intelligent design theory, including some arguments that convince most believers. (Do not focus on the *weakest* arguments, as some foolish scientists have suggested.) Find and present not only the strengths but also the interesting weaknesses in Darwinian theory, and the major gaps in our knowledge that opponents of Darwin like to argue from.

Show children how it is possible to check out points of conflict between the rival theories, by a mixture of

- conceptual analysis,
- use of mathematics to add precision to initially vague theories,
- use of ever more sophisticated and varied means of observation and experiment to collect

information about present and past organisms, how they grow, how they mend themselves, how they can be bred, etc.,
- use of increasingly sophisticated forms of computational modelling (both of intelligent mechanisms and of evolutionary processes),

Such teaching can honestly leave the many things that are still unexplained as topics for future research.

The excitement and challenge of such an educational experience will, I am sure, help far more bright young minds to understand why it is better to think as scientists do than as theologians do, and as a result some of them will become future scientists and others will be better informed citizens and parents.

Of course, in some cases it will fail: but much school teaching of science and mathematics fails anyway. Moreover, many children will have encountered the arguments only as expounded by zealots who have no commitment to scientific rigour (e.g. parents, friends, priests, mullahs, or whatever) and how can easily sway impressionable young minds that have not learnt appropriate defences. So by teaching ID in a scientific context and confronting it with evidence and argument will rescue some young minds from the enslavement of indoctrination.

Moreover, is better that those who remain convinced by intelligent design should have encountered opposing arguments than that they have heard only the religious presentations. For some of them the initially unsuccessful teaching will plant seeds that germinate later.

Of course, great care will need to be taken to ensure that the school text books are not all written by people on one side of the debate, and that the ones actually used present the *best* arguments on both sides and show how a good scientist deals with the confrontation.

Remember Karl Popper's advice: the best way to argue against an opponent is to present his theory in the strongest possible way, preferably better than he can. When you have refuted the strongest version of your opponent's theory, you leave no chance of being accused of attacking a straw man. (A first draft illustration of this is in this argument about the improbability of human evolution.)

Of course it will do no harm to point out some of the tactics used by the theological proponents of intelligent design theory, such as quoting anti-Darwinian opinions of a President of the British Association for the Advancement of Science, without mentioning the date when he was president, and without giving pointers to the context from which quotations are extracted, as was done here: http://atschool.eduweb.co.uk/sbs777/vital/evolutio.html

We should expose students to bad modes of argument, and to propaganda disguised as argument (whether produced by theologians or scientists), and show them how it is possible to do better, so that they become sensitive to the bad forms. (In fact, when I joined the University of Sussex in 1964 my first task was to help teach a first year course in philosophy which aimed to do just that.)

If we shield learners too much they may not develop healthy immunity to infection by bad ideas and bad arguments.

SOME THINGS TO TEACH

Some of the things that need to be taught in the context of the debate

- Discontinuities in biological change are no argument against evolution. That's because, since the work of Mendel and more recently Watson and Crick, we know that genetic information is made of discrete components (ultimately because molecules in DNA are discrete), and therefore continuous change in biological evolution is impossible. Of course most of evolution occurs in many small steps, which does not make it *continuous*, only *gradual*.

  But there is no intrinsic reason why big discontinuities should not occur, though normally they will be fatal to the organism involved. It's most likely that larger non-fatal discontinuities will involve duplication of some existing component. People can survive with extra fingers and toes, for instance. It is not uncommon for *duplication* to be followed by further genetic changes which produce advantageous *differentiation* of function. No designer is required, merely blind opportunism.

- The often presupposed impossibility of explaining mental processes on the basis of physical mechanisms has been completely undermined by our growing understanding of the many ways in which virtual machines doing many kinds of information processing can be implemented in physical machines, where both the virtual machines and the physical mechanisms have causal powers.
  For more on that see this presentation.

- Evolution of a particular species S never occurs in isolation from evolution of many others: instead there is always an ecosystem which can typically include: other animals that compete with S for space, or food, other animals that prey on members of S, other animals and plants that members of S eat, micro-organisms of many kinds both in S (e.g. helping with digestion, or infecting S with diseases), and in the environment of S.

  When some of the species are intelligent they can play a role in intelligent design of other species by selective breeding: as farmers have done for many years to plants and animals. Various processes such as mate-selection or selective feeding of more vigorous young by parents can also contribute to directing evolution.

  So certain types of intelligent or semi-intelligent design can occur in the framework of Darwinian evolution.

  More subtle *implicit* intelligent design can occur when the existence of new intelligent rivals to members of S, or intelligent predators of S, or intelligent prey of S, provides pressure on S to accelerate intellectual development

MORE LINKS

There's lots more at the web site of the British Humanist Association

A short introduction to issues related to ID theory can be found at the National Center for Science Education. (USA).

A large website purporting to promote ID as a purely scientific theory is http://www.idthefuture.com/.

Hear the debate between Jack Cohen and Steve Fuller at Warwick University in their podcast.

A list of academics of many kinds who have agreed to a statement headed 'A Scientific Dissent from Darwinism' can be found at 'Discovery institute news'. I would not sign it because the statement is "We are skeptical of claims for the ability of random mutation and natural selection to account for the complexity of life. Careful examination of the evidence for Darwinian theory should be encouraged." whereas I would say:

> "Reality has many levels of complexity and the level at which random mutation and natural selection have explanatory power does not preclude the possibility of higher level virtual machines that depend on those mechanisms but operate in ways that can only be described in an enriched ontology, just as the bit-manipulations in a computer have explanatory power for everything that happens at the level of a pentium or sparc computing machine, but does not account for everything that happens in a computer when those bit manipulations occur. For example, in order both to describe and to explain occurrences in *higher level virtual machines* we need to refer to many other kinds of processes, depending on the system, e.g. threats, plans, defences, winning and losing all occur above the level of bit manipulation in a chess-playing computer."
>
> Notice that this does not in any way challenge the theory of how the computer works as a bit-manipulating machine. For more on this see http://www.cs.bham.ac.uk/research/cogaff/talks/#inf (also referred to above).
>
> As an example, evolution produced humans with the intelligence to start using natural selection to breed animals with useful features, such as high milk production in cows, new colours and structures in plants, and various kinds of disease resistance. Explaining such human activities requires a different language from the language of random mutation and natural selection (e.g. we can talk about intentions, goals, plans and experiments), but that in no way contradicts the claims of Darwinian evolution.
>
> I suspect that we shall discover many more virtual machines in ecosystems involving dynamical relations between changing designs and changing niches that explain things that cannot be explained at the lower level, including possibly some of the things that bother scientifically sincere ID theorists. This idea could be the 'oxygen' that displaces the 'phlogiston' of ID. But only if bright young biologists are allowed to think about the problems. (My slides on information processing virtual machines mentioned above discuss this briefly.)
>
> Some of my own work on what needs to be explained by an *enriched* evolutionary theory (i.e. not a replacement for it) can be found in a discussion of orthogonal competences acquired by members of some species and not others during individual development. This is part of a larger enquiry into varieties of products of evolution.

I wonder whether some who signed the statement failed to dig deep enough at the Discovery Institute's web site to notice the statement

> The point of view Discovery brings to its work includes a belief in God-given reason and the permanency of human nature ....

which is not on their mission statement but here http://www.discovery.org/aboutFunctions.php

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There's also the free online version of *God's Debris* by Scott Adams (author of Dilbert Cartoons) -- a mixture of philosophy, (bizarre) theology, and science (not to be treated as authoritative).

Don't forget the wonders of Faith Based Programming.

The Positive Atheism Magazine (PAM)
Is concerned, among other things, to promote equality for atheists in that bigotry-ridden country, the USA.

Unfortunately, it refers to atheism as a religion, using the phrase "our own religion". I think that is most unfortunate, though perhaps it is intended as providing a link to arguments about religious freedom.

What I am after is not religious freedom but total freedom of thought and (almost) total freedom of speech: the freedom to pursue arguments, evidence, and criticism wherever it leads and to announce and promote the results of that pursuit, subject only to laws of libel or slander, and the like. This does not imply support for total freedom of action. I should be free to denounce or argue against people I regard as liars, politically mistaken, factually mistaken, confused, corrupters of the young, etc. But that's not the same as having freedom to shut them up or shout them down.

WHAT SORT OF ATHEISM?

When I say that I am an atheist I am talking about the non-existence of the sort of god that is central to mainstream versions of Judaism, Islam and Christianity, and probably many other religions, namely some sort of supreme being who created all that exists including himself, is all knowing, all powerful, all good, loves us, is not responsible for our wicked actions because he gave us something referred to as 'free will', who listens to human prayers and answers them under certain conditions and who may for his own reasons require a man to unquestioningly obey his command to take his son up a mountain and stab him to death. (And require him to be unquestioningly grateful if some other animal is provided as a replacement victim at the last moment.)

As a child I simply thought no such thing as that sort of god could exist because there was too much counter-evidence, as explained above. Later I realised that it was not just a matter of evidence: the whole concept is radically incoherent even though the specification looks syntactically and semantically well formed before it is analysed (like the concepts 'The direction in which the universe is moving' and 'The largest primer number' and 'The oldest person never referred to by me'. Exposing incoherence often requires work, and getting people to realise that 'It means something to me' does not demonstrate coherence.)

In the sense explained in this discussion of varieties of atheism I am an "analytical atheist" regarding the types of theism briefly characterised above.

> This is why I was mildly surprised at the wishy-washy view expressed by Jonathan Miller in his recent television series on religion in which he rejected the epithet 'atheist'.
>
> Perhaps I was wrong in thinking that he found the notion of the Jewish/Christian/Muslim god incoherent.

NOTES

NOTE added 20 Jan 2006:

What do the words 'god' and 'religion' mean?

When I first produced this document I forgot that the words 'god' and 'religion' are used in many different ways. Some of their interpretations would make some of my comments inappropriate. E.g. if someone uses 'god' to refer to something like the whole universe, or to the totality of things we cannot yet explain, then that's not the sort of usage I had in mind when I wrote this. Likewise, if people don't take it to *refer* to anything, but merely to *express* something, such as a sense of awe and wonder at the complexity and mystery of much of what is in the universe, then again, I was not commenting on that in this document.

> (I once had a philosophy tutor who was a christian and made some comment about believing in god. I said I did not think any such thing existed. He replied that you don't need to think god exists to believe in god. He used 'believing in god' as a phrase referring to having a kind of attitude to life, the universe and morality.)

What is a religion?

Similar cautionary remarks should be made about my use of the word 'religion'. People call all sorts of things religions. In my youth, travelling by train twice a year between CapeTown where I went to boarding school and university, and QueQue in Southern Rhodesia, I had to fill in a form every time I crossed a national border which required me to specify (among several other things) my religion. At some point I started writing 'mathematics'. To this day I have no idea why that was never challenged, nor what use was made of the information.

But of course mathematics is not a religion in the normal literal sense, even if it can be a way of life.

Some ill-informed people even think science is a religion -- because they don't understand the sense in which science is inherently sceptical. In science, but not in the sort of thing I am referring to as religion, all claims are up for challenge, even if some less than perfect scientists, or governments that claim to be science-based, occasionally act and talk as if things had been *definitively* proved or refuted.

The core of good science is the adoption of a critical, sceptical, exploratory approach to the search for truth and explanations, along with the rejection of authority as a source of answers, and willingness (in principle, though sometimes not when short of time, money or patience) always to consider alternatives to what currently seems to be the best answers to important questions. This is not the adoption of a belief, but a method. Its adoption is not based on faith, but on the logic of the task. If someone can demonstrate that there are better methods, then scientists may change how they do things -- as has happened often in the past as regards more specific methods used by scientists, e.g. for measuring time and distance.

In my critical comments about religions in this document I am not using the word 'religion' in the weak (sloppy?) sense that allows it to be stretched to accommodate anything that can play a large role in our life and thought.

I am referring only to organised theistic religions which, like Judaism, Islam and Christianity, require various propositions (e.g. about the origins or age of the universe, or the survival of a substantive soul or spirit after destruction of the body) to be believed to be true and various moral standards to be accepted because they are thought to come from some sort of authority specified by the religion. In this sense a religion is something that requires certain beliefs and moral standards to be accepted as unchallengeable matters of faith.

This type of religion would not include what I think Buddhism claims to be though I am no expert. As far as I can tell Buddhists are atheists. For more on Buddhism see

http://www.buddhistinformation.com/buddhist_attitude_to_god.htm

My criticisms of religion here would not apply to that sort of Buddhism, as far as I understand it, though I have not studied the subject deeply, so I reserve the right to change my mind if I learn more -- a right denied to children of adherents of the religions I do criticise.

ENDNOTES

Note Added 2 Mar 2011: The Brights Organisation
This organisation may be of interest to people with an atheistic/agnostic/naturalistic bent:
http://the-brights.net/
What is a bright?

- A bright is a person who has a naturalistic worldview
- A bright's worldview is free of supernatural and mystical elements
- The ethics and actions of a bright are based on a naturalistic worldview

I don't intend to go round saying "I am a bright" (it's enough to be a philosopher/scientist), though I largely sympathise with what they are doing.
Likewise "The British Humanist Association"
I thought the wording of their "Bendy Bus" campaign was rather silly, suggesting that humanists/atheists are selfish and irresponsible, though I approve of most of what they stand for.
Contrary to the slogan on the buses, there's plenty to worry about, even if there is no God, though not as much to worry about as the possibility of an all powerful, all knowing god ultimately responsible for all the dreadful things we see.

"Analytical atheism" is defined here:
http://www.cs.bham.ac.uk/research/projects/cogaff/misc/varieties-of-atheism.html

Note Added 10 Feb 2007:
It is also worth pointing out that many religious scientists quote Einstein as an authority defending their claim that science and religion are compatible. It is clear that such people have either not read what Einstein actually wrote on the subject, or if they have then they are deliberately misrepresenting him. For more on misrepresentations of Einstein's views on religion see see 'Einstein on Religion'.

Note Added 17 Jan 2007:
For an excellent outburst against wishy-washy scientists (and politicians) who lower their intellectual standards when discussing religion see MY GOD PROBLEM By Natalie Angier atheist Pulitzer prize-winning New York Times science journalist.

LIKELY TO BE UPDATED

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