



Darwin's Rottweiler and the Public Understanding of Scientism

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Zoologist Dr. Richard Dawkins (1941-) is 'materialistic, reductionist and overtly anti-religious.' [1] Charles Simonyi, head of Microsoft's Intentional Programming team, gave Oxford University funds to establish a Professorship for the Public Understanding of Science with Dawkins specifically in mind: 'Evolution's first great advocate, 1860s biologist Thomas Henry Huxley, earned the nickname "Darwin's bulldog" from his fellow Victorians. In our own less decorous day, Dawkins deserves an even stronger epithet: "Darwin's Rottweiler, perhaps," Simonyi suggests.' [2] Dawkins comments: 'if I am asked for a single phrase to characterize my role as Professor of Public Understanding of Science, I think I would choose Advocate for Disinterested Truth.' [3] While this sounds great in principle, the public would be better served if Dawkins' were ironically labelled 'Professor for the Public Understanding of *Scientism*', because, far from being a disinterested advocate of truth, Dawkins spends his time preaching the gospel of atheism using a raft of fallacious arguments dressed up in an obscuring cloak of science. While 'Darwin's Rottweiler' is skilled in rhetoric (the Royal Society for Literature elected him a fellow in 1997), he is less skilled in logic. Consider the following sampling of logical fallacies drawn from Dawkins' cannon:

1. Self-Contradiction – a statement that refers to and falsifies itself

In an open letter to his daughter Juliet, Richard Dawkins laudably encourages her to think for herself:

Next time somebody tells you something that

sounds important, think to yourself: "Is this the kind of thing that people probably know because of evidence? Or is it the kind of thing that people only believe because of tradition, authority or revelation?" And next time somebody tells you that something is true, why not say to them: "What kind of evidence is there for that?" And if they can't give you a good answer, I hope you'll think very carefully before you believe a word they say. [4]

Dawkins limits what can count as a good reason to believe something so tightly (conflating evidence with empirical evidence) that his encouragement is self-contradictory, because *it cannot be justified with anything that he would count as evidence*. In which case, Dawkins' statement tells us not to believe a word he says! Hence his demand for evidence is self-refuting. The belief that 'knowledge is identical to scientific knowledge' is not something that can be known scientifically. Rather, it is a *philosophical* dogma (called 'positivism').

2. Begging the Question - 'this fallacy occurs when a disputant uses his conclusion as one of the premises employed to establish [his] conclusion.' [5]

Dawkins asserts that: 'As time goes by and our civilization grows up more, the model of the universe that we share will become progressively less superstitious, less small-minded, less parochial. It will lose its remaining ghosts, hobgoblins and spirits, it will be a realistic model, correctly regulated and updated by incoming information from the real world.' [6] How can Dawkins know this assertion is true before all the evidence is in? Dawkins *assumes* that his conclusion is true and then promises that it will be justified on evidential grounds at some unspecified point in the future.

According to the theory of evolution, biological systems evolve through the incremental accumulation of beneficial mutations. Dawkins explains why: 'The larger the leap through genetic space, the lower the probability that the resulting change will be viable, let alone an improvement. [Hence] evolution must in general be a crawl through genetic space, not a series of leaps.' [7] He describes this gradual approach to obtaining biological complexity as 'Climbing Mount Improbable.' [8] Improbable because, as Steven

Vogel writes, the theory stipulates that ‘Nature in effect must transmute a motorcycle into an automobile while providing continuous transportation.’ [9] As Stephen Jay Gould admitted: ‘Our inability, even in our imagination, to construct functional intermediaries in many cases has been a persistent and nagging problem for gradualistic accounts of evolution.’ [10] Nevertheless, Dawkins, who assumes that evolution must be true because it is the only theory able to fill in the explanatory gap left by the exclusion of design, is content to say that even though we have no idea what path organisms took up Mount Improbable, *they must have done so*: ‘however daunting the sheer cliffs that the adaptive mountain first presents, graded ramps can be found the other side and the peak eventually scaled’ [11] How does Dawkins know that these ‘graded ramps can be found’ in advance of showing what they are, without even looking for them? Because Dawkins’ justification for this assumption is philosophical rather than scientific: ‘Without stirring from our chair, we can see that it must be so’, [12] explains Dawkins, ‘because nothing except gradual accumulation could, in principle, do the job. . .’ [13] What job? The job of explaining life *naturalistically!* Dawkins’ conclusion rests upon his presupposition that there is no designer.

3. The False Dilemma - Two choices are given when in actuality there are more choices possible.

When it comes to explaining biological reality, Dawkins asserts: ‘The only thing [William Paley] got wrong – admittedly quite a big thing – was the explanation itself. He gave the traditional religious answer [that life was created by God]. . . The true explanation is utterly different, and it had to wait for one of the most revolutionary thinkers of all time, Charles Darwin.’ [14] Dawkins fails to point out that belief in the doctrine of creation and the scientific theory of evolution by natural selection are in fact compatible. Michael Poole explains why the choice between creation and evolution is a false dilemma:

When giving causal explanations, it needs to be made clear whether the causes in question are primary (ultimate) or secondary (immediate, proximate) ones and also whether they are to be given in terms of an agent or a process. There is no logical blunder being committed if it is claimed

both that ‘God made the universe’ and ‘the universe was the result of a “Big Bang”.’ It is a logical error to hold that an explanation of cosmological mechanisms involved necessarily excludes divine agency. It certainly appears to be a common error to regard explanations of agency and explanations of process as alternatives. Perhaps the form of this mistake which generates most heat and lest light is the claim that one has to choose between ‘God created humankind’ and ‘humankind was the result of an evolutionary process.’ [15]

4. The Fallacy of Equivocation - ‘a word is used in two different contexts and is assumed to have the same meaning in both contexts, when distinct meanings ought to be preferred.’ [16]

Dawkins draws a distinction between objects that are clearly designed and objects that are not designed but superficially look a bit like they are designed, which he calls ‘*designoid*’ [17] and illustrates with a craggy hillside that suggests the profile of the late President Kennedy: ‘Once you have been told, you can just see a slight resemblance to either John or Robert Kennedy. But some don’t see it and it is certainly easy to believe that the resemblance is accidental.’ [18] Dawkins contrasts this Kennedy-esque hillside with the president’s heads carved into Mt. Rushmore, which ‘are obviously not accidental: they have design written all over them.’ [19] Dawkins asserts that no biological organisms are designed; they are (at most) designoid: ‘Designoid objects look designed, so much so that some people – probably, alas, most people – think that they *are* designed. These people are wrong. . . the true explanation – Darwinian natural selection – is very different.’ [20] The meaning of Dawkins’ crucial term shifts significantly in the course of his argument. Dawkins’ original definition of a designoid was of something with the superficial appearance of design. People have to have the resemblance between the hillside and Kennedy pointed out to them; some people ‘don’t see it’ [21]; and ‘it is certainly easy to believe that the resemblance is accidental.’ [22] Later, Dawkins wants to convince us that, although some biological objects give such a strong appearance of design that ‘most people’ [23] intuitively think that they are designed, they are in fact designoid. Dawkins’ argument equivocates between ‘things that look a bit like they might be designed, but on

closer inspection obviously are not' and 'things that give every appearance of being designed, but are not'.

5. The Non Sequiter – 'Comments or information that do not logically follow from a premise or the conclusion.' [24]

Stephen M. Barr's review of Dawkins' *Unweaving the Rainbow* is spot on:

It is not often that one can find exactly the point where an author goes off track, but here one can. It is in the fifth sentence of the preface of the book, which begins, 'Similar accusations of barren desolation, of promoting an arid and joyless message, are frequently flung at science in general.' However, what people object to in Dawkins is not the science but the atheism. Because he cannot see the difference, he writes a book that is a 300-page *non sequitur*. [25]

6. Special Pleading (double standard) - 'a fallacy in which a person applies standards, principles, rules, etc. to others while taking herself (or those she has a special interest in) to be exempt, without providing adequate justification for the exemption.' [26]

Dawkins thinks that using 'God' to explain anything is redundant: 'To explain the origin of the DNA/protein machine by invoking a supernatural designer is to explain precisely nothing, for it leaves unexplained the origin of the designer.' [27] Dawkins' objection to the God hypothesis is a double-edged sword that *counts against all scientific explanations, including evolution*. One might as well say that invoking evolution by natural selection explains precisely nothing because it leaves unexplained the origin of life capable of evolving; that invoking the supposed 'chemical evolution' of life from non-life explains precisely nothing because it leaves unexplained the existence of chemicals; or that invoking the finely-tuned laws of physics that underlay the big bang and the subsequent cosmic evolution that produced the chemicals explains nothing because it leaves unexplained the origin and fine-tuning of the fundamental laws of nature. Naturally, Dawkins wants to invoke all of these theories; he just wants to exclude design. However, trying to have it both ways involves Dawkins in the use of a double standard.

7. Wishful Thinking - 'a fallacy that posits a belief because it or its consequence is desired to be true.' [28]

Discussing the theory of 'chemical evolution' or *abiogenesis* [29] (the supposed naturalistic appearance of life from non-life), Dawkins says: 'Nobody knows how it happened but, somehow, without violating the laws of physics and chemistry, a molecule arose that just happened to have the property of self-copying – a replicator.' [30] Dawkins' belief in *abiogenesis* is wishful thinking in that he wants it to be true because it is necessary for an atheistic account of origins, despite there being a large body of scientific evidence against the theory. [31]

8. The Red Herring - 'A Red Herring is an irrelevant topic or premise brought into a discussion to divert attention from the topic at hand. Usually, the irrelevancy is subtle, so that it appears relevant to those not paying close attention.' [32]

Dawkins considers the odds against the chance formation of an enzyme: 'A typical enzyme is a chain of several hundred links. . . . An elementary calculation shows that the probability that any particular sequence of, say 100, amino-acids will spontaneously form is. . . 1 in 20100. This is an inconceivably large number, far greater than the number of fundamental particles in the entire universe.' [33] Dawkins is not cowed by this figure, however, because 'Darwinism is *not* a theory of random chance. It is a theory of random mutation plus *non-random* cumulative natural selection.' [34] Introducing the theory of evolution by natural selection to solve the problem of enzyme formation is a red herring because the evidence suggests that 1) nothing can reproduce to be selected without utilizing enzymes in order to reproduce, and 2) certain enzymes appear to be 'irreducibly complex' and thus inaccessible to any process of natural selection. [35]

9. Straw Man Argument - 'a type of Red Herring that attacks a misrepresentation of an opponent's position. That is called to burn a straw man. It is a surprisingly common fallacy, because it is easy to misunderstand another person's position.' [36]

According to Dawkins: 'Science shares with

religion the claim that it answers deep questions about origins, the nature of life and the cosmos. But there the resemblance ends. Scientific beliefs are supported by evidence, and they get results. Myths and faiths are not and do not.' [37] But as McGrath responds:

Dawkins's caricature of Christianity may well carry weight with his increasingly religiously illiterate or religiously alienated audiences, who find in his writings ample confirmation of their prejudices, but merely persuades those familiar with religious traditions to conclude that Dawkins has no interest in understanding what he critiques. . . The classic Christian tradition has always valued rationality and does not hold that faith involves the abandonment of reason or the absence of evidence. Indeed, the Christian tradition is so strong on this matter that it is often difficult to understand where Dawkins got these ideas. [38]

10. Ad Hominem – the fallacy of attacking the individual instead of the argument (*Ad Hominem* is Latin for 'against the man.')

According to Dawkins: 'Father Christmas and the Tooth Fairy are part of the charm of childhood. So is God. Some of us grow out of all three.' [39] Dawkins implies that anyone who believes in God is childish because belief in God is childish – but even if he were right about this, childish beliefs can still be right (e.g. children correctly believe that it's fun to play on swings and that having friends is a good thing).

11. Poisoning the well - 'a form of *Ad Hominem* attack that occurs before the meat of an argument, biasing the audience against the opponent's side before he can present his case.' [40]

Don't pay attention to anyone who doubts evolution in any way, because they aren't properly qualified scientists, they are only motivated by religious fundamentalism, and they are either mad or bad! That's Dawkins' well-poisoning take-home message about evolution-sceptics. It isn't true.

Against overwhelming evidence to the contrary, Dawkins 'has called anyone advocating a creator God "scientifically illiterate".' [41] Stephen Jay Gould recognized that 'Unless at least half my colleagues are dunces, there can be – on the most

raw and empirical grounds – no conflict between science and religion.' [42] Taken in any substantive sense, Dawkins' assertion that 'no qualified scientist doubts that evolution is a fact' [43] is incorrect. Dr. Jonathan Wells is a qualified scientist, a post-doctoral biologist in the Department of Molecular and Cell Biology at the University of California at Berkley. According to Wells: 'The Darwinian paradigm is in serious trouble, of the kind that matters most in science: it doesn't fit the evidence.' [44] Biochemist Michael J. Denton writes: 'I am sceptical that major evolutionary changes or macroevolution can be adequately accounted for in terms of the Darwinian model; that is by the gradual accumulation of small selectively advantageous mutations. I am unaware of any objective or quantitative evidence to support Darwinian claims.' [45] In response to a recent American television series on evolution, 132 qualified scientists signed a joint statement saying: 'We are sceptical of claims for the ability of random mutation and natural selection to account for the complexity of life.' [46] :

Signers of the statement questioning Darwinism came from throughout the US and from several other countries, representing biology, physics, chemistry, mathematics, geology, anthropology and other scientific fields. Professors and researchers at such universities as Princeton, MIT, U Penn, and Yale, as well as smaller colleges and the National Laboratories at Livermore, CA and Los Alamos, N.M., are included. [47]

Dawkins would have us believe that since these people doubt evolution, they can't possibly be 'qualified' scientists. With Dawkins, it seems that the only qualification that counts is belief in evolution.

Dawkins lumps the scientific movement advocating Intelligent Design Theory [48] together with 'biblical creationism', calling Intelligent Design Theory (ID) a 'euphemism for creationists.' [49] In reality, 'some of the strongest critics of Darwin's theory are scientists who happen to be non-fundamentalist Protestants, Catholics, or Jews (as well as agnostics).' [50] Thomas Woodward, author of *Doubts about Darwin: A History of Intelligent Design*, repudiates the claim that ID is motivated by religious premises:

in the course of hearing how key Design advocates came to their current view, it became clear that their entry into the movement stemmed from intellectual or scientific – not religious – reasons. . . Several of the founders frequently relate a vivid tale of how they previously had assumed the validity of Darwinian scenarios and were later shocked to discover major weaknesses in the case for Darwinism. Typically this intellectual epiphany leads to further reading and research, which cements the new radical doubt about the theory's plausibility. [51]

William A. Dembski is at pains to stress that Intelligent Design Theory is *not* 'creationism':

the design theorists' critique of Darwinism in no way hinges on the Genesis account of creation. On no occasion do design theorists invoke Genesis 1 and 2 as a scientific text. . . The design theorists' beef is not with evolutionary change *per se*, but with the claim by Darwinists that all such change is driven by purely naturalistic processes. . . the design theorists' critique of Darwinism begins with Darwinism's failure as an empirically adequate scientific theory, and not with its supposed incompatibility with some system of religious belief. [52]

Dawkins has called ID theorists 'a well-organised and well-financed group of nutters', [53] and claims: 'it is absolutely safe to say that, if you meet somebody who claims not to believe in evolution, that person is ignorant, stupid or insane (or wicked, but I'd rather not consider that).' [54] On the contrary, as Dembski writes: 'one can be reasonably well-adjusted, remarkably well-educated (as many design theorists are), and still think Darwinism is a failed scientific paradigm.' [55] Dembski, whose work on *The Design Inference* was published by Cambridge University, has a PhD in the philosophy of science and a PhD in mathematics (from the University of Chicago), and is currently associate research professor in the conceptual foundations of science at Baylor University. According to Dembski:

The following problems have proven utterly intractable not only for the mutation-selection mechanism but also for any other undirected natural process proposed to date: the origin of life

[56] , the origin of the genetic code [57] , the origin of multicellular life, the origin of sexuality [58] , the scarcity of transitional forms in the fossil record [59] , the biological big bang that occurred in the Cambrian era [60] , the development of complex organ systems and the development of irreducibly complex molecular machines. [61] These are just a few of the more serious difficulties that confront every theory of evolution that posits only undirected natural processes. It is thus sheer arrogance for Darwinists like Richard Dawkins. . . to charge design theorists with being ignorant or stupid or wicked or insane for denying the all-sufficiency of undirected natural processes in biology. . . [62]

As Woodward explains:

respected professors at prestigious secular universities are rising up and arguing that (1) Darwinism is woefully lacking factual support and is rather based on philosophical assumptions, and (2) empirical evidence, especially in molecular biology, now points compellingly to some sort of creative intelligence behind life. . . this story veers away from the usual *theistic evolutionary story* ("based on the evidence, theistic scientists are now concluding that God worked through evolution") and from the classic creation science tale ("scientists are recognizing that genesis is literally true after all"). [63]

Conclusion

The fact that Dawkins routinely employs fallacious arguments does not mean that his conclusions are wrong. However, when Dawkins affirms that 'God is dead' because 'science reveals a world without purpose or design', he certainly says something that 'sounds important'. So perhaps we should take his advice and ask ourselves: 'Is this the kind of thing that Dawkins knows because of the evidence?' When we do, we find that Dawkins believes in evolution as a philosophically certain deduction from his atheistic worldview (a deduction that elsewhere he presents as if it disproves belief in design!). Dawkins' uses a series of questionable and question-begging assumptions and other logical fallacies to shore up an atheistic worldview that is then used to bypass his own requirement for empirical evidence (e.g. he exhibits the sort of blind faith in *abiogenesis* that he accuses religious believers of having: 'I don't know how difficult it would be to

achieve that chemically.' [64]) – a requirement that is self-defeating as a philosophical absolute but which is surely rather important when it comes to the field of science. But of course, Dawkins confuses science with philosophical naturalism to produce *scientism*. Perhaps we really do need a 'Professor for the Public Understanding of Scientism'.

[1] Dorothy Nelkin, 'Less Selfish than Sacred? Genes and the Religious Impulse in Evolutionary Psychology', *Alas, Poor Darwin*, (Vintage, 2001), p. 15.

[2] Robert Downey in *Eastsideweek*, December 11, 1996 @ www.world-of-dawkins.com/Media/seattle.htm

[3] Richard Dawkins, *A Devil's Chaplain*, (Weidenfeld & Nicolson, 2003), p. 37.

[4] Dawkins, *A Devil's Chaplain*, p. 248.

[5] J.P. Moreland, *Love Your God With All Your Mind*, (Navpress, 1997), p. 123.

[6] Dawkins, *Royal Institute Christmas Lecture*, 1991, Lecture 5, 'The genesis of purpose'.

[7] Dawkins, 'Darwin Triumphant', *A Devil's Chaplain*, p. 86.

[8] Dawkins, *Climbing Mount Improbable*, (Viking, 1996).

[9] Steven Vogel, *Cat's Paws and Catapults*, (Penguin, 1998), p. 23.

[10] Stephen Jay Gould, 'Is a new and general theory of evolution emerging?', *Paleobiology*, Vol. 6 (1), January 1980, p. 127.

[11] Dawkins, *A Devil's Chaplain*, p. 211-212.

[12] Dawkins, *ibid*, p. 212.

[13] Dawkins, *ibid*, p. 212.

[14] Dawkins, *The Blind Watchmaker*, (Penguin, 1991), p. 41.

[15] Michael Poole, 'Explaining or Explaining Away', *Science & Christian Belief*

[16] www.tektonics.org/fallacies.html

[17] Dawkins, *Climbing Mount Improbable*, p. 4

[18] Dawkins, *ibid*, p. 3.

[19] Dawkins, *ibid*, p. 3.

[20] Dawkins, *ibid*, p. 4-5.

[21] Dawkins, *ibid*, p. 3.

[22] Dawkins, *ibid*, p. 3.

[23] Dawkins, *ibid*, p. 4.

[24] www.carm.org/apologetics/fallacies.htm

[25] Stephen M. Barr, 'Prophet of Pointlessness', *First Things*, August/September 1995.

[26] [www.nizkor.org/features/fallacies/special-](http://www.nizkor.org/features/fallacies/special-pleading.html)

[pleading.html](http://www.nizkor.org/features/fallacies/special-pleading.html)

[27] Dawkins, *The Blind Watchmaker*, *op cit*, p. 141.

[28] www.tektonics.org/fallacies.html

[29] cf. *ISCID Encyclopedia of Science and Philosophy*, 'Abiogenesis' @

www.iscid.org/encyclopedia/Abiogenesis

[30] Dawkins, *Climbing Mount Improbable*, *op cit*, p. 259.

[31] cf. Stephen C. Meyer, 'DNA and Other Designs' @

www.arn.org/docs/meyer/sm_dnaotherdesigns.htm;

Charles B. Thaxton, Walter L. Bradley, Roger L. Olsen, *The Mystery of Life's Origin*, (Lewis and Stanley, 1992).

[32] www.tektonics.org/fallacies.html

[33] Dawkins, *op cit*, p. 66.

[34] Dawkins, *ibid*, p. 66.

[35] William A. Dembski, 'Three Frequently Asked Questions About Intelligent Design' @

www.designinference.com/documents/2003.09.ID_FAQ.pdf cf. 'The DNA-Enzyme System is Irreducibly Complex' @

www.acs.ucsd.edu/~idea/DNA-enzyme.htm;

D.D. Axe, 'Extreme Functional Sensitivity to Conservative Amino Acid Changes on Enzyme Exteriors', *Journal of Molecular Biology*, 301 (2000), p. 585-595.

[36] www.tektonics.org/fallacies.html

[37] Richard Dawkins, *River Out of Eden*, (Windfield & Nicolson, 1995), p. 33.

[38] McGrath, *op cit*, p. 156-157.

[39] Richard Dawkins, *Thirdway Magazine*, June 2003, Vol. 26, No. 5, p. 5.

[40] www.tektonics.org/fallacies.html

[41] Julia Hinde, 'Does God Exist?', Harriet Swain (ed.), *Big Questions in Science*, (Jonathan Cape, 2002), p. 2.

[42] Stephen Jay Gould, quoted by Denis Alexander, *Rebuilding the Matrix*, (Lion, 2001), p. 330.

[43] Dawkins, *A Devil's Chaplain*, *op cit*, p. 220.

[44] Jonathan Wells, 'The Intelligent Design Movement, Evangelical Scientists, and the Future of Biology,' in *Darwinism Defeated?*, Phillip E. Johnson & Denis O. Lamoureux *et al.*, (Regent College Publishing, 1999), p. 137.

[45] Michael J. Denton, quoted from his professional resume, cf. Thomas Woodward, *Doubts About Darwin*, p. 57.

[46] cf. www.discovery.org/articleFiles/PDFs/100ScientistsAd.pdf,

www.arn.org/docs2/news/100scientists0929.htm
[47]

www.reviewevolution.com/press/pressRelease_100Scientists.php
[48]

cf.
www.arn.org/idfaq/What%20is%20intelligent%20design.htm

[49] Dawkins, *op cit*, p. 219. cf. John G. West, 'Intelligent Design and Creationism Just Aren't the Same' @

www.discovery.org/scripts/viewDB/index.php?program=CRSC&command=view&id=1329

[50] ARN guide to *Evolution*, p. 98.

[51] Thomas Woodward, *Doubts about Darwin: A History of Intelligent Design*, (Baker, 2003), p. 10 & 20.

[52] Dembski, 'What Every Theologian Should Know about Creation, Evolution, and Design', William A. Dembski & Jay Wesley Richards (ed.'s), *Unapologetic Apologetics*, (IVP, 2001).

[53] Mary Wakefield, 'The Mystery of the Missing Links' @

www.arn.org/docs2/news/missinglinkmystery102803.htm

[54] Richard Dawkins in *The New York Times*, quoted by Phillip E. Johnson, *Darwin on Trial*, (Downers Grove: IVP, 1993), p. 9.

[55] Dembski, *op cit*.

[56] cf. Charles B. Thaxton, Walter L. Bradley, Roger L. Olsen, *The Mystery of Life's Origin*, (Lewis and Stanley, 1992).

[57] cf. Stephen C. Meyer, 'DNA and Other Designs' @

www.arn.org/docs/meyer/sm_dnaotherdesigns.htm

[58] 'how sex began and why it thrived remain a mystery.' – B. Wuethrich, 'Why Sex? Putting the Theory to the Test', *Science* 281:1980-1982, 1998.

[59] The fossil record does not reveal a gradual development from simple to more complex species with numerous intermittent forms as predicted by Darwin's theory; instead 'the record reveals the sudden appearance at differing times of information-rich organisms within a hierarchical diversity of species with apparently no precursors.' – Francis J. Beckwith, *Law, Darwinism, and Public Education*, (Rowman & Littlefield, 2003), p. 118.

[60] 'Fossils of the earliest animals appear from around 570 million years ago (the Cambrian period), but within 25 million years all the main animal groups had arisen. This apparent 'Cambrian explosion' of activity is not readily

explicable in Darwinist terms'. – Andrew Barton, *Questions of Science*, (Kingsway, 1999), p. 143. cf. Stephen C. Meyer, Paul A. Nelson & Paul Chein, 'The Cambrian Explosion: Biology's Big Bang' @

www.discovery.org/articleFiles/PDFs/Cambrian.pdf

[61] cf. Michael J. Behe, *Darwin's Black Box*, (Free Press, 1996).

[62] Dembski, 'What Every Theologian Should Know About Creation, Evolution & Design', *op cit*, p. 231.

[63] Woodward, *op cit*, p. 196.

[64] Dawkins, 'Darwin's Dangerous Disciple' @ www.skeptic.com/03.4.miele-dawkins-iv.htm

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