

PE1531/A

Response to Petition 1530 re Creationism in Schools

Submission from the Centre for Intelligent Design UK

October 2014

On behalf of the Centre for Intelligent Design, we wish to raise serious concerns about Public Petition 1530 submitted by Spencer Fildes on behalf of the Scottish Secular Society. We request that the Petitions Committee consider the position outlined in this submission.

***Note:** Section 1 contains the main points we wish the Petitions Committee to consider. Sections 2-7 contain further explanatory and background material. Some of the points made in the summary require elaboration in the interests of clarity.*

1.0 Summary

1.1 In our view, this petition is significantly misguided and would be an unsafe basis for making any changes to Government guidance on science education in the area of origins. It is highly inaccurate in its terminology and in its view of the scientific method and of educational pedagogy.

1.2 It is particularly disturbing that the Petition does not recognise the difference between 'creationism' and 'intelligent design'. Failure to make this distinction leads to a distorted and inaccurate analysis of the how the study of origins should be handled in schools. Intelligent Design, properly understood, is a minimal commitment to intelligent causation in nature and is a legitimate inference from scientific data. It is not a religious position like 'creationism' and should not therefore be discounted in science education. It is also inaccurate to say that intelligent design is 'an alternative to evolution'.

1.3 The Petition also contains a fundamental misunderstanding about the nature of scientific controversy. It does not, as it claims, promote in science only what has been demonstrated empirically with certainty. Instead it imposes on science education a philosophical position which excludes, in the exploration of the origin and development of life, any process beyond what is vaguely described as 'natural'. This is tantamount to viewpoint discrimination and worldview indoctrination, the very thing the petition is trying to counteract.

1.4 We believe, therefore, that this petition may well contravene the European Code of Human Rights which holds that 'parents have the right to have their children educated in line with their religious and philosophical views'¹.

1.5 The claim that only 'natural biological processes' are involved in the area of origins is an unproven assumption, derived from the philosophy of naturalism, and one which, in all probability, is unprovable. Curiously, the Petition claims that its position is not inconsistent with 'overall belief in God as the ultimate creator', a position which fundamentally undermines its core argument. Since the Petition

concedes the possible existence of an 'ultimate creator', who must be, by definition, beyond 'natural processes', then it is illogical to claim that in certain areas of the origin and development of life only 'natural processes' can be invoked.

1.6 We recognise that 'natural biological processes' are extensive and offer adequate explanations for many aspects of living things. However, there are features of life which call for explanations which go beyond purely 'natural processes', such as the origin of such processes themselves, the evidence for design in nature, and the emergence of genetic information and conscious life.

1.7 There is also in the petition a significant confusion in the use of the term 'evolution' which is commonly used as an umbrella term for Neo-Darwinian processes. It is almost always used without clear definition. Few people, including the most ardent religious believers, deny that evolution in the form of adaptation is an empirically observed phenomenon. This can be described as 'micro-evolution' and it is the sort of variation, in, for example, the beak sizes of finches that Darwin observed in the Galapagos Islands. However, those findings say nothing about how finches arose in the first place. The speculation that evolutionary processes can explain the origin as opposed to the distribution of finches can be referred to as 'macro-evolution'. This is an unobserved and speculative feature of the theory of evolution. It is therefore inaccurate and confusing to refer simply to 'evolution' without clarifying which aspect of the theory is being dealt with.

1.8 Ironically, Intelligent Design is the position which gave rise to modern science in the first place because it gave a basis for the conviction that rational and systematic investigation of nature is a reliable and productive pursuit. The Neo-Darwinian position that life and the universe, including conscious thought, are the result of blind and purposeless processes gives no reason to believe that our investigations and conclusions have any validity or truth. Students should be aware of this.

1.9 This petition provides no basis for the Government to issue guidance in science education about theories of the origin and development of living things. We argue that it is completely inappropriate for Government to accord to any scientific theory the status of a protected position which cannot be challenged on the basis of the empirical evidence. This stifles debate, closes off legitimate areas of research, intimidates teachers in pursuing questions raised by pupils in science classes, and gives students a wholly false view of the methods of science. How are teachers expected to respond to the inevitable questions from pupils in science about 'creation' and 'intelligent design' and the limitations of evolutionary theory? By telling them that such discussion is off limits? Such a position advocated by Government would be a form of intellectual intolerance unworthy of a country which values academic freedom and encourages critical enquiry, especially in science education.

1.10 We urge the Petition Committee to reject this petition in the interests of open scientific enquiry and genuinely progressive science education. We would be glad to present our case in more detail to the Petitions Committee or to any other body which undertakes to consider it. We are also happy for this paper to be made public and to form part of the evidence to be considered in connection with this petition.

2.0 Science Education and Religion

2.1 We are most certainly not arguing that Biblical literalism or any other religious position should be imposed on science lessons, but we contend that what the Petition seeks to exclude is legitimate discussion in science of the ultimate questions posed by the evidence about the origin of the universe and the development of life. This includes the obviously non-material features of living things such as genetic information, sentience, mind and consciousness. To claim that naturalistic and random processes have explained all this is as absurd as it is inaccurate. It is important to note that, while scientific data is neutral, some theories and interpretations imposed on it may not necessarily be so.

2.2 Curiously, the Petition seems to recognise this. In the background notes, it is argued that no objection is being raised to 'the discussion of overall belief in God as the ultimate creator' and 'the respectable philosophical position that sees the operation of the Universe as a whole as the working of Providence'. This seems to be a clear recognition of the legitimacy of intelligent causation or design for the universe and for life.

3.0 Teaching Evolution

3.1 We agree that evolution should be taught in schools. However, we maintain that it should be presented objectively, indicating the evidence for and against the theory, as well as its limitations. Pupils should be made aware that 'evolution' has several meanings, including adaptation, common descent of complex life forms from simple precursors, and the development of complex life via a completely unguided process of 'natural selection' acting on random variations, described in the words of Prof Richard Dawkins as 'the blind watchmaker' thesis². These are very different propositions.

3.2 The evidence for adaptation is largely uncontroversial; however, the evidence for common descent and the development of complex life forms from simple ones is much more sparse and ambiguous. The evidence for the 'blind watchmaker thesis' is open to vigorous scientific and philosophical dispute. To present 'evolution' broadly as 'a fact' without distinguishing between its various claims is to mislead students and deny them the opportunity to understand the often tentative nature of scientific theories and of biological evolution in particular

3.3 Scientists and authors who are critical of key aspects of modern evolutionary theory based on scientific data include 'The Altenburg 16'³, Jerry Fodor⁴, Michael Denton⁵, Stephen Meyer⁶, Michael Behe⁷ and David Swift⁸. Some, such as the late Stephen J Gould⁹ and Lynn Margulis¹⁰, while accepting the main proposition of evolution, have disputed that the proposed mechanism of natural selection acting on random mutations, is sufficient for the task. Certain iconic arguments for evolution such as 'the tree of life' and 'junk DNA' have recently been called into question¹¹, and in the latter case been overturned¹². The growing body of doubt about Darwin cannot be ignored and should be part of progressive science education. Only ideologues dismiss it.

3.4 In this connection it is noteworthy that, in a public lecture entitled 'Darwin on Trial' at the University of California Irvine, law professor Phillip E Johnson argued that 'ambiguous terminology, faulty assumptions, and questionable rules of reasoning have transformed a theory which explains minor evolutionary change into a dogmatic naturalistic religion.'¹³

4.0 Natural Biological Processes

4.1 The essence of this petition seems to be that 'any theory which holds that natural biological processes cannot account for the history, diversity and complexity of life on earth and therefore rejects the scientific theory of evolution' cannot be permitted in science classes. This petition makes 'naturalism' or 'materialism' the exclusive and obligatory explanation for all aspects of biological science and, in effect, imposes a narrow philosophical position on the evidence.

4.2 We believe, however, that the approach taken in the petition is deeply flawed, for the following reasons:

- 'Natural biological processes' are not defined clearly, leaving open the question as to which range of processes might be at work.
- The question of whether discussion of the origin of these 'natural biological processes' can be permitted in science is left unanswered. Did they create themselves – a scientific and philosophical absurdity – or were they generated in some other non-material way?
- How 'natural biological processes' explain the existence of the obviously non-material features of biology such as genetic information, sentience, mind and consciousness is also left unanswered. Currently, biology has no credible theory about how these phenomena arose, only various speculations.
- Evolution based on 'natural biological processes' is assumed to have solved all these problems, but offers no explanation of how life arose, and, while it speculates that natural selection acting on random mutations can explain all the development and complexity of life, it has singularly failed to produce convincing evidence that this is the case.

5.0 Intelligent Design and Creationism

5.1 Another major difficulty with this petition is the near-complete misunderstanding of Intelligent Design (ID) and its confusion with 'creationism' which is described in terms of narrow Biblical literalism and defined as 'the separate creation of different kinds of living things'. As a matter of plain fact, it is quite wrong to regard 'intelligent design' as synonymous with 'creationism'.

5.2 ID is strictly an interpretation of the scientific data we have about origins, arguing that there is clear evidence in nature of design. It is based on the scientific principles of design detection such as are deployed in areas such as archaeology, the search for extra-terrestrial life and forensic science. These areas of science operate largely on the principle of making inference to the best explanation about events and causes which cannot be directly observed.

5.2 ID focuses on matters such as the ‘fine-tuning’ of the universe for life, the irreducible complexity of many living systems, and the enormous sophistication of genetic information. The latter has both material (chemical) and non-material (informational) dimensions, as has all functional information such as text or digital computer code. Information is essentially non-material and within all human experience is always the product of intelligent mind. It cannot, therefore, be described as arising only from ‘natural biological processes’.

5.3 The claim in the Petition that ID is ‘an alternative to evolution’ is also highly misleading. As noted above, the term ‘evolution’ has several meanings, including the ability of living things to adapt to their environments over time by natural selection. ID readily accepts that this is the case. However, the popular meaning of ‘evolution’ is that complex living things emerge from simpler ones by the unguided mechanism of natural selection acting on random mutations. ID disputes, on the basis of empirical evidence, that this is possible. Some ID proponents accept common descent, but have recently demonstrated from studies of the nature and frequency of beneficial mutations in, for example, the malarial parasite¹⁴, that major creative evolutionary change is most unlikely to arise from random mutations and would require intelligent guidance.

5.4 Intelligent Design, unlike Neo-Darwinism, is open to all of reality. ID infers from the evidence of design an immaterial intelligence at work within the processes of the natural world which is consistent with our everyday experience of intelligence guiding physical processes. Neo-Darwinism, on the other hand, rules out, a priori, the possibility of an intelligent cause in nature, not because the evidence compels that conclusion, but because the philosophy of naturalism demands it. Such a position is inherently unscientific and inconsistent with the empirical data. Science students need to be aware of the legitimate challenge Intelligent Design poses to Neo-Darwinism.

5.5 Both Intelligent Design and naturalism have profound religious and philosophical implications, but these should not be confused with empirical evidence. Naturalism, for example, can lead, as Richard Dawkins puts it, to ‘intellectually-fulfilled’ atheists¹⁵. It is, therefore, not simply a neutral scientific position as the Petition infers.

6.0 Scientific Controversies and Science Education

6.1 The proposition that a scientific theory, such as evolution, should be given protected status and be beyond criticism is a complete denial of the scientific method. The nature of science is to constantly challenge scientific propositions and modify them in the light of experience. It is also the case that science frequently advances when the consensus is challenged in the light of fresh evidence. All scientific theories are tentative and should not be beyond challenge, no matter how well established. It is also extremely poor practice to teach school students that the scientific consensus must be accepted without question, that no controversy exists when it plainly does, and that dissent must be suppressed.

6.2 It is noteworthy that the world-renowned philosopher and atheist, Thomas Nagel, subtitled his recent book ‘Mind and Cosmos’ (OUP 2012), ‘Why the Neo-

Darwinian conception of Nature is almost certainly false'¹⁶ His argument is that Neo-Darwinism cannot begin to explain mind and consciousness – both immaterial phenomena – and is therefore incapable of providing a credible explanation of origins. ID does not suffer from that disadvantage as it is prepared to countenance that there is evidence in nature of intelligent mind. Students need to be aware of these debates. The kind of ban proposed in this petition would completely stifle this legitimate discourse.

6.3 Interestingly, although Nagel is an atheist, he concedes the validity of Intelligent Design as a scientific proposition which is worthy of serious consideration¹⁷. His comment on this could hardly be more apposite to the content of the petition in question and emphasises the intellectual arrogance of limiting debate on the origin and development of life:

'Even though writers like Michael Behe and Stephen Meyer are motivated in part by their religious beliefs, the empirical arguments they offer against the likelihood that the origin of life and its evolutionary history can be fully explained by physics and chemistry are of great interest in themselves. Another sceptic, David Berlinski¹⁸, has brought out these problems vividly without reference to the design inference. Even if one is not drawn to the alternative of an explanation by the actions of a designer, the problems that these iconoclasts pose for the orthodox scientific consensus should be taken seriously. They do not deserve the scorn with which they are commonly met. It is manifestly unfair'.

6.4 The claim that the introduction of Intelligent Design into science lessons will confuse students is disingenuous. What will certainly confuse students is to demonstrate how scientific advances are made through painstaking research, sustained intellectual effort and hard work, and then claim that the vastly more complex structures of life arose by random naturalistic processes. This is not just counter-intuitive, but completely at odds with the cause and effect structure of the world. To brainwash our young people into accepting such contradictory positions is wholly reprehensible.

7.0 The American Experience

7.1 It is of interest that the American Senate addressed this issue in 2001 with the Santorum Amendment¹⁹ which said simply that 'it is the sense of the Senate that (1) good science education should prepare students to distinguish the data or testable theories of science from philosophical or religious claims that are made in the name of science; and (2) where biological evolution is taught, the curriculum should help students to understand why this subject generates so much continuing controversy and should prepare the students to be informed participants in public discussions regarding the subject'. The Amendment passed, in a slightly amended form, with a huge bipartisan majority of 91-8. The late Senator Kennedy urged all the Senators to vote for the amendment because, as he put it, 'we want children to be able to talk about different concepts and do it intelligently with the best information before them'. That is exactly what we want.

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References

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- ¹ ECHR, Article 2 of the First Protocol.
 - ² Richard Dawkins, *'The Blind Watchmaker'*, Penguin Books, 1986.
 - ³ *'The Altenburg 16, An Expose of the Evolution Industry'*, Susan Mazur, Scoop Media, 2009.
 - ⁴ *'What Darwin got Wrong'*, Jerry Fodor et al, Farrar, Straus and Giroux, 2010.
 - ⁵ *'Evolution: A Theory in Crisis'*, Michael Denton, Adler & Adler, 1986.
 - ⁶ *'Signature in the Cell'*, Stephen C Meyer, HarperOne, 2009.
 - ⁷ *'Darwin's Black Box'*, Michael Behe, Simon and Schuster, 1996.
 - ⁸ *'Evolution under the Microscope'*, David Swift, Leighton, 2002.
 - ⁹ See, eg, Stephen J Gould and Niles Eldredge, *'Punctuated Equilibria: The Tempo and Mode of Evolution Reconsidered'*, *Paleobiology* 3, 1977, 115-51.
 - ¹⁰ Mann, C (1991). "Lynn Margulis: Science's Unruly Earth Mother". *Science* **252** (5004): 378–381. doi:10.1126/science.252.5004.378. PMID 17740930.
 - ¹¹ See, eg, Stephen C Meyer in *'Darwin's Doubt'*, HarperOne 2013, chap 6.
 - ¹² See, for example, news.bbc.co.uk/2/hi/science/nature/4940654.stm.
 - ¹³ Published on 10 July 2014 at https://www.youtube.com/watch?v=emrBRLZ_JbE
 - ¹⁴ See Michael Behe, *'The Edge of Evolution'* Free Press 2007, chap 3, and more recent articles at <http://www.evolutionnews.org> such as *'A Key Inference of The Edge of Evolution Has Now Been Experimentally Confirmed'*, http://www.evolutionnews.org/2014/07/a_key_inference087761.html.
 - ¹⁵ Richard Dawkins, *'The Blind Watchmaker'*, Penguin Books, 1986, p6.
 - ¹⁶ *'Mind & Cosmos, Why the materialist Neo-Darwinian Conception of Nature is almost Certainly False'*, Thomas Nagel, Oxford University press, 2012.
 - ¹⁷ Ibid, p10.
 - ¹⁸ David Berlinski, *'On the Origins of Life'*, Commentary , 2006, reprinted in *'The Deniable Darwin and other essays'*, Discovery Institute Press, 2009.
 - ¹⁹ For a discussion of the implications of the Santorum Amendment see *'The Right Questions'*, Phillip E Johnson, IVP, chap 1, *'Biology and Liberal Freedom'*