

### Student Introduction

#### Intelligent Design (ID) and Irreducible Complexity (IC)

##### [1] A brief history of the ID movement

The modern Intelligent Design movement probably began in the early 1990's. Many attribute the publication in 1991 of Phillip Johnson's *Darwin on Trial* to his reaction to reading Richard Dawkins' *The Blind Watchmaker* (1986). It was the vehement naturalism of Dawkins and its anti-religious polemic, which annoyed Johnson, a Law professor from California. Johnson was careful to distinguish himself from both creation-scientists and evolutionary atheists. This has become a theme in subsequent ID writings. There is a self-conscious desire to distance the movement from extreme faith driven positions, whether atheistic or theistic. Johnson seeks to put a philosophy based on evolution, namely 'Evolutionism' on trial. ID proponents identify living things that defy evolutionary explanations. These are designated 'irreducibly complex'.

The two other key players in the evolution of the Intelligent Design movement have been Michael Behe, a Roman Catholic biochemist, and William Dembski, a mathematician, who has worked for Baptist seminaries but is often described as an eastern Orthodox believer. Wikipedia mistakenly calls him an evangelical Christian. Interestingly he also holds a doctorate in philosophy from Chicago and a Masters in theology from Princeton. The former wrote *Darwin's Black Box: the Biochemical Challenge to Evolution* in 1996. The latter is best known for *The Design Inference: Eliminating Chance Through Small Probabilities* (1998). Both have written other works since then and with others have disseminated their ideas through 'The Center for the Renewal of Science and Culture', based in Seattle. Whilst their work is ostensibly focused on the interpretation of aspects of the natural order which manifest so-called 'irreducible complexity', the mission statement of the Center, found in the 'Wedge Strategy' is 'nothing less than the overthrow of materialism and its cultural legacies... reversing the stifling influence of the materialist worldview...with a science consonant with Christian and theistic convictions.' This became a crucial factor in the series of court cases in the USA in the 1990's in which the old controversy about the teaching of evolution and creation in the classroom was revisited. The final judgement in the 2005 Dover court case included the assessment that 'ID was 'not science' and therefore could not be taught.

It should be emphasized however that the ID movement is not the same as the young-earth creationism, which featured in previous decades. This is a widespread confusion in the media. As Denis Alexander nicely puts it, 'ID is the "first cousin" of creationism, particularly in its strong opposition to Darwinian evolution. In fact ... ID is a form of 'episodic creationism.' In other words, it is perfectly possible for proponents of ID to accept the general paradigm of evolution as long as space is allowed for possible design 'interventions' at the points where standard evolutionary mechanisms do not appear to offer adequate accounts. The ID movement has within it a range of views, some of which are closer to young earth creationism, some of which accept large parts of the evolutionary narrative. A common core belief is that a naturalistic account of the origin and development of life on earth is inadequate and that the evidence points to the work

of design above and beyond the possible initial design of the evolutionary mechanisms at work.

## **[2] The worldviews question**

The discussions of Intelligent Design (henceforth ID) and Irreducible Complexity (IC) have often generated more heat than illumination. There are many reasons for this. One that is close to the surface of any discussion about matters of creation and evolution lie issues to do with incompatible worldviews. A single example will suffice to illustrate this. A theist and an atheist approach the matter with a priori commitments. The theist looks to God as the creating and sustaining ground of the whole universe; atheism denies this and asserts that the universe is all there is. So, on a priori grounds, ID and IC are taboo for a convinced atheist. There is no designer. A theist may or may not consider evolutionary explanations to be a complete account of the existence of perceived design. Some are happy with the belief that God set up the cosmos in such a way that it would evolve and generate complex biological systems without further involvement on His part. Other theists are not convinced by the evolutionary framework and wish to invoke God as the agent in the Special Creation of life and the variety of forms we identify as separate. The theistic spectrum, from Theistic Evolution to Special Creationism, recognises both ID and IC as relatively new kids on the block. Those advocating ID and IC often claim to be sympathetic to an evolutionary model for much of the big picture, but insist that there are many examples within the world of living things which cannot be accounted for along evolutionary lines. At this point an unidentified intelligence is needed. Thus it is a common mistake to simply see ID as Creationism in disguise. The ID community is a broad church and within it are scientists and other thinkers who would not count themselves as theists, though the majority probably believe in God.

## **[3] Different kinds of explanation**

Another issue concerns different kinds of explanation and the status accorded to them. Put simply, can God or another agent be considered as a legitimate direct or indirect cause of a phenomenon? A theist can conceive of Primary and Secondary causes and is readily sympathetic to Aristotle's Four Causes and other typologies of explanation which allow for more than one kind of explanation and for the possibility of more than one being valid. Others, not least those within more positivist traditions within science, tend to favour material explanatory causes and often deny the validity of, or need for, other modes of explanation. There is often a reductionist approach<sup>ii</sup> in all of this, which resists categories not normally found in scientific discourse. Thus the methodological naturalism<sup>iii</sup> that lies at the heart of modern science becomes a metaphysical or ontological naturalism for the atheist. A theist is usually happy not to invoke God in scientific work as such, but sees God as a necessary, continuing underpinning of the universe. The law-like regularity and intelligibility of the cosmos makes science possible. Miracles, in the Hume's sense of 'violations of laws of nature' are possible for a theist, but necessarily rare and not arbitrary.

Advocates of ID describe complex systems that at present resist reductionist evolutionary explanations as to their origin or development and label these 'irreducibly complex'. This gap in our ability to account for IC is then interpreted as requiring another kind of explanation, namely one which invokes some intelligent organizer or designer of the 'irreducibly complex' system. Clearly a naturalist will react to this by refusing to allow the gap in our understanding to be closed in this way. Naturalistic scientists will seek for

a better explanation in the future which does not have recourse to anything or anyone beyond nature itself.

Some theists are reluctant to make the move from perceived complexity to irreducible complexity and then to God as the agency responsible for the non-evolutionary creation of the complex entity. They prefer to avoid this so-called God-of-the-gaps approach and side with a long tradition of cautious scientists who are also believers in God. Charles Coulson was one such, coined the term 'God-of-the-gaps' and famously wrote, "When we come to the scientifically unknown, our correct policy is not to rejoice because we have found God: it is to become better scientists." Even Dembski admits that should every instance of biological complexity be explained without recourse to design, then ID would drop out of scientific discussion. Not that ID's detractors would allow ID as a legitimate player in the world of science anyway. Thus many will see the 'argument from ignorance' a dangerous procedure. Might a 'designer-of-the-gaps' end up with no role to play. Such a (mis)use of 'God' could also result in discrediting the valid uses of God-talk elsewhere. The so-called 'Conflict thesis' between science and religion has, over the years, played on the notion that God is no more than an alternative explanatory category to those used in science. Science will eventually triumph, leaving no place for God in our thinking.

Others distinguish between what they term 'good gaps' and 'bad gaps'. They argue that it is precisely our increasing scientific knowledge of the complexity of living things that drives us to say that reductionist science, which attempts to explain complexity in terms of lower level simpler processes, cannot in principle account for these things. In other words here is a 'good gap', in the sense that our detailed scientific investigation of nature points us to a designer beyond the operation of what natural laws can account for. Such thinkers often appeal to information sciences and systems approaches. Their critique is not just of detailed examples but of the whole paradigm of reductionist science. An accessible example of this would be the Oxford mathematician John Lennox's book, *God's Undertaker* (Lion Hudson 2007), which argues that the real issue here is how we account for the origin of information. Lennox argues that all we know from the relevant sciences leads us to recognise that it is more plausible, given what we know from the relevant sciences, to see a creator of complexity at work in the origin of life on earth. As Bernd-Olap Küppers puts it, "The problem of the origin of life is clearly basically equivalent to the problem of the origin of biological information." One could say that proponents of ID do not believe that an essentially semantic problem can be solved by considerations of syntax alone.

#### **[4] Is Intelligent Design science?**

A related strand in the debate concerns the status of ID as science. This issue was at the core of the now notorious test case of Kitzmiller versus the Dover Area School District in the US courts in 2005. The final ruling of Judge Jones was unequivocally opposed to the view that ID was science and as such ruled that ID should not be taught in science classes. Moreover, he characterised the ID backer's strategy that ID should be seen as a scientific alternative to evolutionary theory, as "at best disingenuous, and at worst a canard." Notwithstanding the particular constitutional issues in the USA regarding the Establishment Clause of the First Amendment, other nations have publically sided with the thrust of the Judge's findings, some with equal disdain. For instance, the Council of Europe's 2007 report, *The Dangers of Creationism in Education*, described the contents of creationism in any form including ID as "pathetically

inadequate for science classes” and elsewhere as “blatant scientific fraud... intellectual deception” and “anti-science”. Less trenchantly, the UK’s DfES position is, “Neither creationism nor intelligent design are taught as a subject in schools, and are not specified in the science curriculum.” But because RS is not only recognised as a legitimate subject area in publicly funded schools, but also a compulsory one, it is an appropriate place to explore ID amongst other beliefs about origins. Indeed the September 2007 guidance that was published on teaching about creationism went so far as to suggest that History and Citizenship might also be places where some work was done on this topic. In Science, the remit is limited to the following: “Questions about creationism and intelligent design which arise in science lessons, for example as a result of media coverage, could provide the opportunity to explain or explore why they are not considered to be scientific theories and, in the right context, why evolution is considered to be a scientific theory”. Similar stances are to be found in Australia.

Of crucial importance here is the oft-repeated observation that one of the cardinal failings of the ID movement is its almost total failure to generate a fruitful scientific research programme. Notwithstanding the conspiracy theory that says that all peer reviewed scientific journals set their faces against anything being published which smacks of ID, there is nothing in the published scientific literature that constitutes a new contribution to our scientific understanding. As Denis Alexander points out, ‘Simply pointing to presumed difficulties in Darwinian explanations does not in itself count as scientific theory construction.’

## **[5] Fundamentalism and ID**

Yet another strand could be characterised as a fear or disquiet about the power and increasingly public profile of fundamentalism in religion, particularly that of some forms of Protestant Christianity and some forms of Islam. The history of Creationism is firmly rooted within certain conservative Christian groups in the USA in particular. All this is well documented. What is of additional contemporary interest is the widespread adoption and advocacy of Creationism within some Islamic groups. Some of these have actively courted links with US Creationist organisations and utilise modified versions of their material, often with enviable production values. The two full-colour folio hardbacks, *Atlas of Creation, Volumes One and Two*, by Harun Yakha run to 800 and 760 pages respectively and have been widely disseminated. The same numerical strengths are found, without the glossy production, with the publishing house of the Jehovah’s Witnesses. The 1967 edition of the WatchTower book, *Did Man Get Here By Evolution Or Creation?* claims to be the ‘7,000,000 edition’. The massive numbers of these works, often in the hands of the scientifically less literate, is a cause for concern to orthodox science and many well informed non-fundamentalist religious bodies. This is not surprising, when within Yakha’s creationist text one finds a chapter heading such as the one on page 616 in Volume One, *The real ideological root of terrorism: Darwinism and Materialism*.

Not that this thesis is an exclusively Islamic one. It is of course reflected in a great deal of the twentieth century’s misidentification of Darwinism with social ills, in America in particular, according to many fundamentalists who are suspicious of various aspects of modernity. This is a common response of fundamentalist religious communities to whatever they see as a threat to their traditional ways of life and their networks of beliefs and values.

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<sup>i</sup> ***Tammy Kitzmiller, et al. v. Dover Area School District, et al.***, Case No. 04cv2688. Details are widely available on the internet.

<sup>ii</sup> A reductionist explanation is one where the complex phenomenon is explained in terms of the parts. The explanation reduces the problem to simpler components at a more basic level. It is believed that translating the problem to one at a more fundamental level effectively produces a sufficient explanation for the more complex phenomenon.

<sup>iii</sup> Methodological naturalism is where you assume, for the purposes of your scientific investigation, that there are only natural law-like events taking place. Reference to God or the supernatural is ruled out. The only explanations allowed are those that make reference solely to natural laws. To then say that there is no God, as opposed to assuming He is not 'messing with the apparatus' or to be invoked when we do not know what the answer is, is a stronger claim, known as ontological or metaphysical naturalism.