

The despairing nihilism of intelligent design - please keep away from schools



Oh dear.... the creationists have returned to planet earth and appear to be fanning out from their landing site in the United States. After a week away, I see a [Newsnight podcast on creationism in schools](#), following a [Guardian report, Revealed: rise of creationism in UK schools](#) stating that 59 schools are

apparently using new materials about 'intelligent design' that had been circulated by a British creationist group called [Truth in Science](#). The language of the proponents of intelligent design is infuriating: it appropriates the ideas of challenge and open-mindedness to counter-argument, testing theories by evidence and examination of paradoxes, opposition to dogma and even offers a scientific justification for intelligent design ('irreducible complexity'). In fact it is anything but scientific and anything but a useful or valid challenge to the alleged dogma of Darwinism and the theory of evolution. Let us examine this more closely. **Darwin's challenge to Darwin** The creationists' theory of intelligent design relies on Darwin's own formulation of a credible challenge to his theory of evolution (see [Origin of the Species p.90](#) - an admirable thing for a scientist to do, by the way, and completely lacking in formulation of intelligent design):

If it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down.

Irreducible complexity - the creationists' trump card This has given rise to the idea of 'irreducible complexity' - things found in nature that cannot have been formed through the process of evolution, namely incremental change brought about by mutation causing changed traits which face selection pressures which allow reproduction of traits that confer a survival advantage - see [Wikipedia on](#)

[evolution](#)). If something that we observe today cannot have formed gradually, then evolution fails as a theory – enter the triumphant intelligent designer, who wanted it that way from the start. Some have cited the human eye or winged flight as examples (what use is half an eye, so how could it have evolved?). But they are wrong... in both cases it is possible to show that gradual increases in the ability to see (eg. starting with recognising nearby movement) or to fly (falling out of a tree in a more controlled way) confer survival advantages and suggest that highly complex organs like the eye and wings could have evolved gradually starting from these basic traits. **A very strange organism - but is it evidence that it's all been designed intelligently...?** The current favourite of the intelligent designers to challenge evolution is the '[bacterial flagellum](#)' – a kind of pump and motor mechanism found in a single cell organism ([article](#) / [animation](#)). And it is indeed a remarkable microscopic structure! The school materials distributed to schools by 'Truth in Science' make much of this little machine. The [Teachers Manual part 3](#), gives the game away... notice how prescriptive it suddenly becomes. Students will:

- *Understand the concept of “irreducible complexity” – that some machines are made up of many parts, all of which are necessary for function*
- *Recognise the bacterial flagellum as an example of an irreducibly complex system*
- *Understand that irreducibly complex structures cannot evolve by slight, successive, advantageous variations, because at certain points in their evolution they will lose function altogether*

Note there is no question here of debating whether this mechanism *actually is* irreducibly complex – students will 'recognise' and 'understand' it to be irreducibly complex and 'understand' that it cannot have evolved. There are two problems here: first there are plausible explanations for how this amazing mechanism might have evolved gradually (see [Pallen & Matzke, Nature Reviews of Microbiology, 2006](#) / [more accessible account](#) / [blog devoted to this](#)). Second, is that the fact that something is difficult to explain, doesn't establish the counter theory – it means that it is difficult to explain and that it is a worthwhile challenge to test the dominant theory. Things I dislike about all this...

1. It's almost embarrassingly facile to point this out, but the intelligent design argument is circular – the intelligent designer (apparently labouring over the spec of everything from a strange bacteria to the human ability to

smell a rat) must be more complex than anything imaginable. Sorry, but where did this come from? Who or what is the designer and how did it emerge?

2. It denies the wonder of science and the power and elegance of Darwin's big idea, replacing inquiry with a form of defeatism. Rather than seeing gaps in knowledge or evidence as legitimate challenges to evolution it has immediate recourse to a bizarre supernatural explanation.
3. No evidence whatsoever is offered for intelligent design. Unlike evolution, its proponents offer no means by which the idea can be verified or falsified. It should not be dignified as a 'theory' as no test is offered to falsify it. Like an invasive weed, it just fills any gap in understanding of the world with a one-size-fits-all super-explanation. This is what religion has done through the ages - enabling priests to explain the unknown by invoking gods and the supernatural.
4. Whatever they say, it is religious propaganda. Numerous biases and assertions of 'truth' can be found on the 'Truth in Science' pages, despite the PR effort to argue that this is all healthy debate. Eg. the [news page](#) somehow omits [the Guardian's searing article](#) in favour of more favourable coverage.

Let me reserve some remaining concern for the attitude of Prime Minister Blair. In a recent [interview with New Scientist](#) he was asked about the teaching of creationism in schools. His reply...

If I notice creationism become the mainstream of the education system in this country then that's the time to start worrying. As I've said, it's really quite important for science to fight the battles it needs to fight. When MMR comes out, or stem cells, or GM, that's the time to have a real debate

Doh!! If it becomes the mainstream, **it's way too late 'to start worrying'**. Blair's complacency about the place in schools of one of the greatest ideas in human history is astonishing. Except as part of a discussion on bogus science and the failure of religion to offer any useful explanation for our origins, creationism and its slick alter-ego, intelligent design, have no place in schools.

