

Creationism and medicine

How will the rising tide of creationism around the world affect medical education? Christopher Hands reports

The theory of natural selection has recently found itself under attack from representatives of different religious and scientific groups. In the last few weeks, a book called *L'Atlas de la Création* has been arriving at French speaking schools and universities throughout Europe. The author of the atlas, Harun Yahya (pseudonym for Turkish intellectual Adnan Oktar) not only argues that Darwin's theory is false but also purports to find links between Darwinism and fascism, communism, and terrorism.

This follows the distribution of a DVD entitled *Unlocking the Mystery of Life* to every UK head of secondary school science in September of last year. It was sent by Truth in Science, a UK lobbying group. The film argues that the combination of complexity and purposeful function in some natural structures indicates that they have not evolved by Darwinian means, and that they show evidence of design. Twelve senior academics wrote to the UK prime minister and the education secretary at the beginning of 2007 to endorse the Truth in Science project and to advocate changes to the national science curriculum. Among them was Norman Nevin, professor emeritus of medical genetics at Queen's University, Belfast.

Steve Jones, a professor who teaches genetics at University College London and is also a popular and award winning science writer, is unimpressed by the spread of creationist and design theories. "I find it very baffling. The truth of evolution is so overwhelmingly clear, that if you make the facts available [people] will accept the truth of evolution. Why [creationism is] spreading like some kind of pox is simply a mystery to me." That said, he is willing to put forward a hypothesis: "People are spending money on it for political reasons, which are very similar in Turkey and in the United States. It's an attempt to push religion into schools, which in both countries is forbidden."

Richard Buggs, of Truth in Science, says that open-mindedness about design is not an attitude reserved only for the religious and that it will allow greater understanding of evolution. "Truth in Science wants more, not less, taught about evolution in science classes at school and university. We would like to see a more evidence based approach to the teaching of evolution, and acknowledgment that certain biological structures and systems may have been designed by intelligence." Mark Pickering, head of student ministries at the Christian Medical Fellowship, agrees that "Intelligent design should breed good science." He holds that recent discoveries relating to the proposed functions of "junk DNA" could have been made much earlier if researchers had worked with a design model as well as an evolutionary model.

First school then medical school

At one extreme of the creationist spectrum are young Earth biblical literalists, who believe that the world came into existence, fossils and all, thousands rather than millions of years ago. Their beliefs are enshrined at the Museum of Creation in Kentucky, where dinosaur animatronics walk the Earth with early biblical characters. Other creationists accept much of contemporary evolutionary theory, but say that a designer must have been at work on those biological structures that seem "irreducibly complex." A popular version of this theory is known as intelligent design.

When the Dover area school board, in Pennsylvania, United States, introduced intelligent design into the classroom as an alternative to evolutionary theory in 2005, 11 parents sued the school board and won

(*Kitzmiller v Dover Area School District*). The district court ruled that teaching intelligent design contravened the establishment clause of the first amendment of the US constitution.

Creationist ideas, and certainly not those influenced by Christianity alone, are gaining ground in some medical schools. During Islamic awareness week last year, students distributed leaflets at Guy's, King's, and St Thomas' Medical School, in London, claiming that Darwin's theories were false. Professor Jones has concerns about what effect these views might have on medical students' future practice. "Creationism is the tip of the irrationality iceberg, and the last place you want that is in medicine. It seems to me

because that would be the end of their career. This is despite them already proving themselves as good scientists."

Steve Fuller, professor of sociology at Warwick University, is one of the 12 academics who signed the Truth in Science letter. He was also an expert witness for the defence in the Dover court case. He thinks that intelligent design has been badly served. "At the moment I think the field is somewhat stereotyped by its anchor point in Christian fundamentalism in the US. And anyone who doesn't like that will not want to associate themselves with it."

Professor Fuller is also not convinced by the idea that creationist or design ideas might be detrimental to medical practice. In fact he sees Darwinism as removing some of the humanity from medicine. "If Darwinism becomes more part of our moral culture, people are going to say, 'Well, human beings are only worth so much, and if they can't really live full lives why should we spend money helping the sick or the disabled?' I think Darwinist thinking gives rise to easier abortions and easier euthanasia, where life is regarded as a transitional state in the transmission of genes."

He sees Darwinism as having a moral dimension, which ultimately promotes biodiversity ahead of everything else. "I would say human welfare ought to be the primary thing over how many species are surviving. I don't put any value in biodiversity if it means you have to get rid of half the human race."

However, a scientist's, and, therefore, a doctor's, job is to test ideas about the world by hypothesis and experiment, not to reason backward from moral outcomes. Ultimately, the weight of evidence to support any given theory will determine its success. In the light of this old truth, Professor Jones is hopeful about the future of evolutionary thought: "The answer always lies in the fact that the truth shall make you free."

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that they shouldn't become clinicians. It's like somebody becoming an airline pilot who doesn't believe in gravity."

However, many advocates of intelligent design feel that their ideas have been getting a bad press. Dr Pickering feels that there is systematic bias in the scientific world against these ideas: "I have academic colleagues who do not yet have tenure who cannot own up to their professors that they have sympathy with intelligent design