

# Understanding and teaching Intelligent Design

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## Abstract

The theory of Intelligent Design is a topic the general public has willingly debated because of strongly held opinions concerning both its validity and its suitability as a subject for students at school. Unfortunately there is a fairly high degree of confusion about a range of matters associated with ID. This paper discusses what intelligent design actually is and what it achieves as well as its difficulties and inadequacies. It also discusses the relationship of science to other disciplines and what it means for Australian public education to be 'secular' and the implications of teaching ID in public schools.

## Key words

Intelligent Design, cosmological argument, teleological argument, irreducible complexity, anthropic principle, specified complexity, evolution, education, secularism

Although the cluster of ideas known as the theory of Intelligent Design (ID) involves complex scientific, philosophical and theological principles it is a topic the general public has willingly debated because of strongly held opinions concerning both its validity and its suitability as a subject for students at school. Unfortunately there is a fairly high degree of confusion about a range of matters associated with ID. There is a lack of theological understanding about what intelligent design actually is and what it achieves; confusion about what it means to be 'scientific' and the relationship of science to other disciplines; uncertainty about what it means for Australian public education to be 'secular'; and a general difficulty in understanding the public role of Christianity in general, and evangelicalism in particular, especially when compared and contrasted with North American attitudes towards ID.

This paper clarifies a number of biblical and theological issues relating to the nature and validity of ID and then discusses the implications for the teaching of ID in public education in 'secular' Australia.

## **Biblical and theological issues**

The first area of confusion simply revolves around what 'intelligent design' actually is. Many people hold to a very general understanding of intelligent design which operates along the lines that certain aspects of the universe, especially living things, exhibit all the characteristics of something that has been designed by some intelligence. And for many people it makes sense for this intelligent designer to be known as 'God'. There is absolutely nothing new about the general form of this argument. Forms of it have been around since Aristotle and the Greek philosophers and it is found in traditional Islamic and Jewish as well as Christian theology. Many Christians would see reference to it in Paul's letter to the Romans when he justifies God's condemnation of the unrighteous because:

...what may be known about God is plain to them. For since the creation of the world God's invisible qualities – his eternal power and divine nature – have been clearly seen, being understood from what has been made, so that men are without any excuse.

Rom. 1:19–20

Historically, Christian theologians such as Thomas Aquinas have developed arguments based on the idea of apparent design and order in the world. Aquinas offered five versions of intelligent design arguments, although it is probably fair to say that the first four are really different forms of the same argument. Often known as the Cosmological argument it suggests that because nothing comes to be without a cause, one can trace back all events via a chain of causes until one comes to, by definition, the first cause. This first cause is necessarily without cause (otherwise it wouldn't be the first one) and is to be identified with God. It suffers seriously from the assumptions it involves (why, for instance could there not be an infinite chain of causes?) and the jump from a first cause to the notion of God.

The fifth of Aquinas's arguments, the so-called Teleological argument, is really a development of the cosmological argument and it has more credence with many people. It argues that the world reveals order, purpose, intelligence and design which implies the existence of some intelligent, even moral creator.

We see that things ... act for an end ... it is plain that they achieve their end, not fortuitously, but designedly. Now whatever lacks knowledge cannot move towards an end ... therefore some intelligent being exists by whom all natural things are directed to their end; and this being we call God.

Also associated with this argument is William Paley (1743-1805) whose form of the argument, often known as 'Paley's Watch' is noteworthy. He suggested that anyone finding a watch, who did not previously know of the existence of such a thing, would, after close investigation of it, inevitably conclude that it was an object that had been designed and that somewhere there was a designer. He argued that the same should be concluded about the world and that this designer is God.

So, for many other people ID is a reference to a fairly general notion that the world looks as though it was designed by God and that this really makes one think. For other people however, it is something much more precise.

There is a very specific form of ID, especially for those who are aware of recent debates and controversies in the USA. This form of ID is a cluster of ideas related to the work of theorists such as Phillip Johnson, Michael Behe, William Dembski and organisations such as the Center for Science and Culture. Intellectually, these ideas include, but are not restricted to, specific arguments concerning irreducible complexity (IC) as an alternative to evolutionary theory (ET), the anthropic principle (AP), specified complexity (SC) and assumptions about God as the intelligent designer. It is useful to understand the detail of these arguments but at this point it is sufficient to note that 'intelligent design' in this context is actually a cluster of scientific, philosophical and theological ideas and concepts that have been brought together but which can often operate separately.

Those familiar with the history of design arguments, which have long been an essential part of courses in theology and the philosophy of religion, are likely to be a little surprised at the way some people treat the present resurgence of the design argument as though it was a complete novelty. The theorists presenting it, of course, certainly know the history of the argument and there are some new features in the recent discussions (some of them perhaps unwelcome) which give rise to new aspects for debate. The polarisation of the debate in the USA, and, to some extent as imported into Australia, has produced arguments for and against which are simply too extreme. Part of the problem lies in the way ID arguments are often interpreted in our modernist, rationalist, 'scientific' and very secular context. This has led to many misunderstandings of what design arguments can achieve and what they are actually intended to do. It is unhelpful to assume that all forms of the argument are the same, or, for instance, that are all intended to be a 'scientific proof' of anything.

The various components of the arguments about ID, IC, AP and so forth have become the focus of vigorous debate in the US and, despite what some people think, it is *not* a two sided debate in which theists argue in favour of these arguments and atheists or secularists oppose them. It is much more complex than that. Many Christian scientists and theologians argue that some or all of the components of the program put forward as ID are defective and even potentially dangerous to either (or both) good theology or good science and some atheists have weighed in on the side of ID theorists suggesting that advanced alien life, rather than God, is responsible for designing and creating human life.

## **The old Intelligent Design – strengths and weaknesses**

Now it is well known that the general ID argument is subject to question and criticism. Difficult questions for ID include: Does evidence of design

prove the existence of a designer? Can design emerge within a system without an external designer? How does this account of the universe account for apparent flaws in the design: why is there suffering and pain in the world? If there is a designer can one conclude that this is God? And if so, what kind of God? Does it prove anything about God's nature, name or character? Is the attempt to 'prove' God contrary to the Christian notion of faith? Is there, in fact, any theological value in the notion of a God who can be proved by rational means?

However, although the general consensus is that the argument does not stand either logically or theologically as a 'proof' of God, this argument and a number of other arguments which seek to prove and disprove God, will not die. They continue to be discussed in theology and philosophy of religion classes. And for very good reason. It should be noted that the question 'should intelligent design be taught in schools' has already been answered in that it already does exist, very appropriately, in secondary school philosophy courses. The problem is that philosophy is such an undervalued subject that few people take it. This relates to the modernist division of disciplines, but more on that later.

The failure of the teleological argument to achieve the goal of proving God does not mean that it is, as some would then suggest, without value. It can be used to raise questions in the mind of those who do not believe in God or a designer who can reasonably be asked whether their explanation is more reasonable. Apart from anything else it is apparent that the apostle Paul was prepared to use one form of it. In fact, it can be argued that the attempt to see it as a definitive proof is misplaced and that it ought to be seen, as some of its proponents have insisted, not as a definitive proof but as a rational explanation of what is believed on other grounds. And there is nothing in principle wrong with this as human beings often act other than on the basis of previously considered and demonstrably rational grounds. A rational argument for acting in a particular way may subsequently be offered without anyone requiring that such a reason be completely thought out beforehand and without it being a comprehensive demonstration that it was the only action that should reasonably have been taken. The expression 'faith in search of understanding' is often associated with those notable Christian writers and defenders of the faith, Augustine of Hippo and Anselm of Canterbury, who both considered design arguments at length. Altogether, it is quite reasonable to understand faith in God as being supported, but not proved, by rational argument.

ID arguments also fulfil a useful function in the modern context in that they present a challenge to the assumption that scientific explanations are all that is needed to explain the world. There are those who want to keep ID out of the science class-room because they do not believe in any religious realm at all. They usually (though not always) are confused about the nature of causation and think that a purely physical explanation is sufficient to provide a basis for meaning, life, ethics and so on. They often do not realise that invoking evolution or chance as an ultimate cause and as a completely sufficient explanation which negates the need for God

is actually as much as 'religious' position as the claim that God is an intelligent designer. In other words they are keen on removing one particular religious position from the class-room while (often unconsciously but sometimes deliberately) promoting another. The belief that God is not needed as an explanation is a matter of 'faith' as much as the view that God is needed.

There are also those who want to keep ID out of the classroom because although they are believers their conviction is that these two different realms of thought need to be kept separate. One realm is scientific, which deals with matters of the physical world, and the other is the spiritual which deals with matters of faith and ethics and so forth. They integrate these realms in their personal lives and have no problem seeing, for example, faith as dealing with 'why' and science with 'how'. But these distinctions are reflected in the way they see science as quite separate from faith in, for example, school curricula. While this is an advance on the former position in that it recognises the reality of the spiritual world it is far from adequate and the overall effect of this position over a long period of time has not been entirely helpful.

Firstly, it allows the confusion of causes which many have to continue and does nothing to help people come to a clearer understanding of the situation with regard to the often unconscious confusion of scientific explanations with ontological ones. Secondly, it ignores the fact that the areas can and should be more integrated more as the world moves into an increasingly post-modern context. The world is changing and greater levels of integration of areas of knowledge are essential. The process of integration is difficult but it cannot be ignored. It is taking place in a number of areas and in each case it produces tensions. But there are many who think that the post-Enlightenment, modernist, secular form of education which separates or even excludes values, meanings and God-talk from education and which implicitly devalues 'non-scientific' approaches is not helpful or adequate. We need to find a better way.

In addition to those who want to keep God-talk completely out of the class-room there are those who want to be able to engage in such talk but who simply think that the current ID movement is neither good theology nor good science. The deficiencies of the latest form of ID must be explored.

## **The new ID and insurmountable difficulties**

It is only since the early 1990's that a more refined and precise set of arguments have come to be known in some quarters as 'Intelligent Design'. It has some distinctive arguments relating to irreducible complexity and sometimes the anthropic principle. For some people if you don't have irreducible complexity then you don't have ID. In fact, it is very likely that a good number of people (though not the ID theorists themselves) who are unaware of the longer history of intelligent design arguments think that irreducible complexity (IC) and the work of Behe,

Johnson and Dembski is all that there is to intelligent design. That is a problem when people wish to reject aspects of IC.

The IC argument suggests that evolution through mutation and natural selection cannot work in all situations via the gradual steps usually postulated by evolutionary theory because none of the component parts which develop prior to the formation of the final entity would be functional or advantageous until the entire system is in place. Therefore there would be no natural selection favouring those prior forms and their selection would be unlikely. There is some difference of opinion on precisely what the argument proves. The strong claim, usually associated with its original proponents, comes in two parts: (a) that it disproves evolution by being an alternative explanation and (b) that it therefore proves that a designer (i.e. God) exists. A weaker form of the argument is that it does not prove that God exists but that some designer exists (maybe alien life) or perhaps simply that it challenges the opposite, and equally unverifiable assumption held by some (but by no means all evolutionary theorists) that everything in life can be explained by a naturalistic form of science which excludes God and all transcendent meaning and purpose.

So far the specific examples used to demonstrate IC and the alleged difficulty of explaining why intermediate forms would be selected have completely failed to persuade the scientific community. No properly refereed scientific journal has an article which purports to demonstrate such a situation. This has led to accusations of scientific prejudice and bias in favour of naturalistic models but such a claim is difficult to sustain given the number of scientists that are actually believers.

Not only has IC failed to persuade the scientific community but it has produced a strong reaction from those who argue that it is dangerous if the idea of a designer is, by itself, a sufficient explanation for the existence of an entity and that further scientific research is unnecessary once a designer is postulated. Any such suggestion (and it is not one advanced by all theorists) should be rejected. It is an unscientific approach to examining the natural world which inhibits proper research. There is a sense in which scientific research must be 'methodologically atheist'. That is, in those areas accessible to scientific research the notion of God cannot become an *alternative* explanation to a scientific one. For example, it would be inappropriate to describe in scientific detail the processes involved in clouds becoming rain, and then the processes involved in the subsequent formation of streams and rivers moving to the sea, and then, in the absence of a full scientific understanding of evaporative processes to say simply that water becomes cloud again by the action of God. If that is taken as a satisfactory alternative to an understanding of evaporation and cloud formation it would not only inhibit further scientific research into the actual processes but it would suggest that God is involved in only some activities (the movement of water to cloud) but not in the rest of the processes of rain and the formation of water tables and so forth.

The same principles apply in the more controversial area of the origin of living entities. The action of God, the ultimate cause, should not be

confused with intermediate causes of a physical nature. When the action of God is used to fill in for scientific processes this usually known as a God-of-the-gaps approach. God only fills in the gaps where scientific understanding is limited. The result in such a situation is that when the scientific processes are actually discovered there appears to be no place for God at all. It is a scientifically inappropriate approach and a theologically deficient view of God. Thus it is a matter of some concern when the more recent proponents of ID and IC either directly advocate or suggest that scientific explanations are to be alternatives to theological ones. Interestingly, those who stand at the opposite ends of the spectrum on the matter of creation and evolution frequently make the same mistake. There is a form of scientific imperialism which believes that proving evolutionary theory disproves the existence of God, as well as a theological imperialism which does the reverse. Both are equally fallacious.

## **Social and educational issues**

Simple 'yes' and 'no' answers to the question 'should ID be taught in school' are often unhelpful. When considering an educational program one not only has to take into account the nature of the ID argument that is being talked about one has to take into account the level being considered, the manner of teaching and the class in which it takes place. Is one talking about primary school or a VCE subject? The way a subject is to be taught is critical. Is it presented as an unchallenged 'fact?' or as a debatable point of view? And the class in which it belongs is important. Is it science, philosophy or religion? At this point the options themselves may be inadequate.

Some of the more recent advocates of IC have been emphatic that ID is science and there has been a move to have it included in science classes, especially in America. Others have sharply objected on the grounds that IC is intrinsically 'unscientific' in approach. There is no doubt that the methodological error of equating God with a specific cause (rather than as the fundamental cause of all things) and any suggestion that scientific research is negated by reference to a designer are to be avoided. They are mistakes and should be treated as such.

Saying 'no' to certain aspects of some forms of intelligent design argument should not be construed as the rejection of all aspects and forms of design arguments. Intelligent design arguments usually compose a blend of argument and ideas which can be characterised as scientific, philosophical and theological. What is actually needed is a more integrated system of education than we generally have at present. In the debate some people use the question 'Is it scientific?' as though everything that is not 'scientific' has no value. But many things are taught that are not scientific. Is art scientific? What about literature and economics?

At this point we need to note the non-religious nature of education in the Australian context. Education is to be 'free, compulsory and secular'. Classic scientific, secular modernism prefers the clear demarcation of

areas of study, referred to above, as the power of scientific analysis is enhanced by specialisation. The separation of areas is particularly pronounced when it comes to theological matters. The system separates disciplines in general but particularly separates religion and ethics from other areas of study. Values of all kinds, including and religion and ethics have been traditionally been treated scantily and usually separately from other fields of study. The re-introduction of specific systems of values into educational programs which is taking place at the present is very positive but they tend to be very 'personal' values and do not deal with the issues raised within other areas of study. These modest changes have not yet overcome the fundamental, long-standing separation of values from the other disciplines. When it comes to relating theology and values to specific areas - whether science, economics, business, geography, history or art - there is a long way to go. As it generally stands at the moment those engaged in science or the study of science either try to integrate ethics and faith through their own personal endeavours or not at all. With some notable exceptions, formal, corporate reflection on such matters has usually been neglected.

But social changes are occurring, though the process is complex. In the educational realm interdisciplinary studies and integration and religious studies are becoming more acceptable, while at the same time on the other hand there are those working very hard to ensure that the various areas (such as science and theology) are kept apart. The issues there are a reflection of the more general trends which are taking place in community debates. The general notion of what is meant in a secular society is under discussion. Some are concerned about what they see as the illegitimate intrusion of religious issues into the public arena and, in response, are pushing for a harder form of secularism which excludes all religious thought and reflection from the public arena. Recent calls for Muslim headscarves to be banned indicate a hardening attitude. It indicates the presence of more extreme attitudes towards what is acceptable in the community. It is a shift away from the more tolerant positions of the past. It is possible that the present ID debate will become polarised and less helpful than it should be.

## **Conclusions: the nature of a secular society**

It is important that Australian retain and perhaps even extends a softer form of secularism which preserves the best elements of a liberal, democratic, politically secular society. This is the view that does not try to exclude religious viewpoints from the public arena but which does refuse to preference one above another, or even preference no religion ahead of religion, and which does not assume that the majority can dominate the minority but which allows a comprehensive freedom of religion. In such a context the presentation and discussion of credible worldviews including Christian, Islamic and Jewish as well as Secularist takes place. They are discussed and debated. This kind of examination of values and worldviews necessarily includes issues such as belief in God. This is a very legitimate and necessary component of a secular education. Any education which



excludes such views will inevitably have deficient understanding of the world.

Consequently, education about the origin of all things - living beings and the universe as a whole - should present the main historical, cultural and religious points of view. This may not all take place in a science class but nor should it be completely excluded from science classes. Those that have been educated in a system that comprehensively isolates faith and science may find this difficult but the perpetuation of the problems of the past is not appropriate either. The examination of worldviews, including theistic ones (Christian, Islamic, as well as secular and scientific) is a legitimate enterprise.

A lot of work is involved in working through the detail of this. Having an open, liberal educational system which deals with theological and religious worldviews is not an excuse for the teaching *of* (though it perhaps allows for the teaching *about*) views that are inherently flawed. And, as noted above, not all aspects of ID are defensible. For some advocates of design arguments at the moment one does not have ID without IC and IC is irrevocably opposed to evolutionary theory. The scientific, logical and theological problems inherent in this view should be recognised and it should not be introduced on the basis that it is *the* Christian or even evangelical point of view. The idea that evolutionary theory cannot explain certain complex systems has not been demonstrated scientifically. Logically the notion that one has to choose between an ultimate designer and a scientifically examinable process is not necessary. And the notion that IC or anti-evolutionary perspectives are intrinsically part of a Christian or evangelical world-view is not sustainable.

## **An addendum on cultural differences**

Given the level of overseas influence in this debate it is important to distinguish between Australian and North American contexts. The alleged connection of IC and ID with politically right wing, neo-conservative movements in the North American church should not be allowed to influence the debate in Australia. Australian Christians should not allow any such connection to influence them in such a way that they think that being 'right' is being more faithful than being 'left'. Any such connections have, traditionally in Australia been far more peripheral to faith than they presently appear to be in the USA. Moreover, in the USA the nature of church - state relationships is different to Australia. Despite the higher level of traditional, Christian religiosity in the North American community as a whole, the formal policy of the separation of church and state has been sharper and more distinct than in Australia. The positions have tended to be more polarised in the USA. Although people are free to adopt whatever political position they like it is probably not helpful to automatically adopt North American positions with regard to the connection of faith, politics and ID.

It is not helpful for others to assume that ID or IC proponents in Australia are all crypto-neo-conservatives. There has already been some 'guilt-by-

association' by which certain people and organisation in Australia have been assumed to be associated with the political right when they have no such connection. Thomas Aquinas put forward a design argument but it would be wrong to characterise him as a politically right-wing, theologically fundamentalist and politically neo-conservative North American. Generally, Australian Christians, including evangelicals, are far more laid-back about religious and political identifications and resemble the European situation more than the North American.

Finally, it must be noted that although there are similarities between Australia and the USA in terms of educational processes, there are also differences. In the USA 'democratic' processes extend much further than in Australia. They are likely to public votes for people to become chief of police or a judge or magistrate in a way that we do not do here. Consequently, lobbying for votes takes place more frequently. This can also affect educational processes. While parental choice is an important factor in education we are a little further away from direct voting for educational policies. It is not my intention to enter into a debate about the merits of any particular approach but the present difference is worth noting and the existing notion in the development of Australian curricula that for something to be taught as 'science' (or 'art', business or anything else) that it has to demonstrate intellectual and academic recognition is appropriate. On the other hand, when it comes to world-views (as with art, literature, music and ethics) 'scientific standards' are not the only measure of truth.