ANSWERS TO OBJECTIONS raised against Intelligent Design in the Concepts section of the Wikipedia article (see http://en.wikipedia.org/wiki/Intelligent_design#Concepts)

By Dr Aw Swee Eng, 12 Jan 07

Irreducible complexity

Intelligent Design has been illustrated using the 'mousetrap', bacterium flagellum, and blood clotting cascade as examples of irreducible complexity. Other examples may be quoted.

Critics assume that 'something' is 'preexisting' which is then altered or removed. There is nothing unusual, they say, in that complexity cannot be derived from that which had been there beforehand, and which in turn arose from ‘something’ of a simpler design.

First, this objection suffers from not explaining how the many 'something's (proteins, membranes, organelles) that make up even a simple organism came into existence. I know that the standard explanation is that they evolved by mutation and natural selection! (What else?) It is not illogical (indeed, more logical) to assume that the 'something's’ which are so functionally exquisitely designed (admitted by all sides) should have a designer. That would be a logical conclusion in any other situation - except in the ID debate.

Second, we have the statement of 'altering preexisting parts or by removing them from a system'. Mark the word 'system'. You don't disturb a finely tuned 'system' without drastic repercussions. Medical science is replete with systems that are 'altered' by disease. How did we get to a situation where we have fully functional finely tuned organisms in the first place, seeing that so many things could have gone wrong with the components of the systems or with the way they were assembled? Furthermore, in the real world, a function is governed not by one gene, nor is a gene usually changed by altering one nucleotide (the alphabet of the DNA message). The standard answer is that natural selection took care of all that. The unfit just got eliminated. What has been discovered by science is the way an organism keeps itself humming by many strategies, including those wonderful enzymes that correct errors in the DNA code when it is damaged. That is how it is done today. How was it done before these enzymes took over, seeing that the code has always been susceptible to damage from its inception?

A gene is made up of many alphabets. For all these to change fortuitously to the advantage of the organism requires a miracle. And it is no use saying that 'Well, here we are - so the miracle must have occurred' - a standard reply.

It is more logical to say that such incomprehensibly unlikely events do not occur in the real world by chance and to admit to some kind of intervention. But as God does not play dice, He made everything good and perfect from the beginning.
(That last statement obviously for believers only!)

There is also the theory of the duplication of genes as part of the evolutionary process. That is, a gene is duplicated and nature experiments with one of them until something advantageous occurs for the new gene to be adopted. The other gene meanwhile carries on its normal function. This is a favourite story but it brings up a hornet's nest of whether the more complicated adjustment in the controls of transcription of the duplicated gene could evolve parri passu with the duplication without 'cross-talk' confounding the 'system'. Furthermore a particular trait can be controlled by genes located in different parts of the chromosome or even over different chromosomes and duplication with ploidy has to be invoked. Occam's razor is nowhere in sight.

The statement that Behe's 'claim for irreducible complexity has been refuted in peer-reviewed research papers 'and has been rejected by the scientific community at large' requires us to examine the bases of the refutation. If these are the ones summarised in this section of the Wikpedia article which I am reviewing - it does not carry that much credibility. The problem is that the general public is really not in a position to examine the details of the arguments put forward by ID proponents and their critics.

Specified complexity

Advocated by Dembski - mathematician, philosopher and theologian. Understandably Dembski should deal with the utter unlikelihood of functional biological molecules arising by pure chance. Since his academic qualifications are sound, the way his argument is dismissed is to say that he is dealing with tautology - that is, arguing in a circle. 'Complex specified information (CSI) cannot occur naturally because Dembski has defined it thus', is the line of argument.

This is a curious way of removing Dembski from useful debate. He has proposed a statistical figure to show how unlikely 'natural' complex specified information is - i.e. 1 followed by 150 zeros. The rational way to argue is either to show that there is no such entity as complex specified information or that his statistics are faulty.

Which, of course, his critics have not done. What they then say is that Dembski is using an 'explanatory filter', finally 'defaulting to design'. These high-sounding phrases notwithstanding, is that not the function of statistics? To eliminate the statistically impossible? His model is also said to be flawed because of its 'asymmetric' treatment of different possible explanations. Another high-sounding word. Do not scientists begin with assumptions that a certain position is true, the position held by the investigator, and therefore avidly pursued to prove its validity - an 'asymmetric' enterprise, if ever there is one! Dembski's 'asymmetry' is his acceptance of statistics as an arbiter of the probability of whether something is feasible/probable or otherwise.

Fine-tuned universe

This proposal is held by many, even outside the ID movement. The proposal is that many fundamental physical constants must have the values that they now have or life would not be possible. The counter arguments are weak, namely, that, firstly, the proposal 'cannot be tested'. On the scale of the Universe and with so many fundamental constants - yes - as a practical bench-type experiment the anthropic principle cannot be tested. But this principle is based on physical constants that are

measureable and testable and the calculations show the improbability of all of these values coexisting as they do .This implies strongly that some fine-tuning is needed and has been done. Why is this considered not 'scientifically productive' or the proposal as 'mere speculation'? It is a conclusion arrived at by using the mathematics of probability which have been applied to such diverse fields as economics and clinical trials.

Intelligent designer

Critics often accuse proponents of ID and the anthropic principle of 'question-begging' . Critics say that the anthropic principle is a tautology, like ID. They are not tautologies. For ID, the tautology would be: this Universe has a designer therefore it is designed. The critics themselves, ironically, appear to operate on a tautology of their own, which says: **Intelligent design is a tautology and any complexities found are subjective constructs (by people with religious axes to grind.)**

Those who hold ID and anthropic principles do not argue in a circle but a straight line. They **do not have to begin** with a notion that a Designer exists and then set out to prove that. They discover what is in the nature of organisms. Anyone else can do likewise. It is the interpretation of what has been discovered that is at issue.

True, Christians who hold ID views are happy to see that their faith in a Creator is substantiated by the findings of, say, specified complexity. They have the same satisfaction that a physicist experiences when his or her theories are shared by colleagues working in the same field who have come up with supporting findings. Would this shared satisfaction compromise or invalidate their scientific integrity? There are ID and anthropic principle supporters among those who have no religious inclinations and openly say so. It is just that they are not believed because of the tautology held by their critics, refered to above. Critics must explain why there is such a mixed company of proponents for ID and the anthropic principle.

All of them arrive at the startling conclusions that they hold after examining the following raw data.

(a) Natural biological phenomenae are complex and the scientific journals substantiate this by publications revealing more and more the underlying controls that mesh with each other in intricate systems of living creatures.

(b) ID people and those who hold anthropic views of the Universe are drawn to their conclusions of design or fine-tuning respectively, after considering how likely or otherwise these observable phenomenae should occur in the real world.

A more relevant example of a tautology is the evolutionary dictum: survival of the fittest. All it really says it that what survives must be fit and what is fit, survives. Mathematical studies of populations are published based on this assumption and used to prove its validity.

The statement of Coyne that in the light of the evidence 'the intelligent designer is a cosmic prankster who designed everything to make it look as though it had been evolved' is a facetious remark. It is his choice to consider that the evidence points to evolution or a designer. For others, the evidence points clearly to a designer. Don't blame the designer for misleading him! The statement: "Asserting the need for a

designer of complexity also raises the question ‘What designed the designer?'". This is a red herring in the argument against ID or the anthropic principle. Many questions in biology and physics are pursued for their scientific interest. Ultimate causes or an Ultimate Cause, by their very nature, are not accessible. One man wants to give meaning to his labours by assuming that he is thinking a designer's thoughts after him. Another man wants to just investigate without reference to anyone or anything 'out there’. These are personal choices. There is no hindrance to scientific pursuits whatever spiritual values a man has or does not have. Why should it bother (interesting thought!) anyone that a person should think that there is a designer,or that there is no designer, as long as he or she demonstrates credible investigative abilities like everybody else in the same field? Why should it be taken against that person in a negative sense?