

# **Creation and Evolution: A Brief Critique**

## **(With a Response from Dr. Behe)**

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### **Author Biography**

*Doctor Doyle is Professor Emeritus of Biology at the University of Windsor in Windsor, Canada. In this article he comments on the Proceedings of the October 1997 Workshop, Creation and Evolution, critiquing some aspects of that Workshop. Doctor Doyle is a very longtime member of ITEST. We thank him for his expertise and for writing this critique.*



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*Creation and Evolution* is extremely informative and highly evocative, even to this ex-Biology teacher and occasional amateur philosopher. I have some comments to make about a few of the issues raised in *Creation and Evolution*. I will focus first on Dr. Behe's paper and later raise a couple of general matters.

Behe's concept of "irreducible complexity" as implying "design" is I'm sure you're hearing simply another form of the "god-of-the-Gaps" argument; i.e., whatever we don't understand, we attribute to the direct intervention of God. (He feels that bacterial flagella and membrane passage are then directly caused by God.)

Readers should also be aware that other branches of Biology (i.e., bacteriology, virology, cell biology and the like) have established literally dozens of forms of bacteria, radically different from the "Typical Cell" of Biology texts. There are more than thirty different methods of getting energy, at least, five forms of photosynthesis, sheaths, shells, etc. and, above all, an incredible range of biochemical pathways. These fairly recent discoveries provide an enormous basis for the evolution Behe wants to deny. In any case, it's pretty clear that the ability to move to an area of higher concentration of nutrient or to selectively import certain chemicals while excluding others etc., is extremely "advantageous."

Above the bacteria, but still microscopic, are a group of organisms which have some resemblances to the "typical" Biology class cell. We used to call these "Protozoa" but we now know they probably evolved from a variety of original roots. If the bacteria developed into a wildly variable biochemistry, these creatures are the masters of structural diversity. Among them are organisms with and without flagella, cilia, testes, spines, chloroplasts, mitochondria (energy generators), several new forms of cell division, appendages of various kinds, and many others. Many of evolution's experiment here did not survive; others evolved no further, some continued to develop into the higher cells---plants, animals, fungi---we are more familiar with.

On the issue of the Origins of Life "gap," "irreducible complexity" is yielding to an explanation involving a series of possible steps from self-reproducing nucleic acids through prions (mentioned in a separate section of *Creation and Evolution*), through subviruses and viruses to primitive bacteria.

Behe deplores the lack of evolutionary education in biochemistry. I agree with his position. But Behe's specialty precludes time to read the numerous journals in the fields relating to cellular evolution and, regrettably, a biochemist's education requires a large dose of chemistry.

Furthermore, his analogy comparing the typing of monkeys and the shuffling of letters to compose a make-sense message is improperly applied, Behe has presumed from the very beginning the outcome of these random processes. (This is similar to presuming the result of an experiment, which, as a scientist, I'm sure he would not do).

### **Now for some general remarks:**

I am concerned about an occasional failure to understand the meaning of the phrase "Survival of the Fittest." It is more than a tautology! If it is instantiated, it implies "This type of organism has survived and therefore must be fitter in some way." The evolutionary biologist then must ask, "What advantage does this creature have?" (i.e., resistance to antibiotic, thicker shell, more active enzyme of some kind, slightly darker pigment, and so on). In addition, the word "fitness" should be interpreted somewhat more broadly. Fitness may take many forms. But especially neglected here is the role of cooperation (including symbiosis). The human species, wolf packs, bees and the like are good examples of the advantage of cooperation. The typical cell of first-year biology, with its mitochondria, plastids, centrosomes, and so on is a many-times-over symbiotic entity. The word "theory" is also frequently used incorrectly. It has two meanings in science. In one meaning, it indicates something conjectural, speculative, based on minimal evidence and logical leaps. In the other sense, it means an explanation which has been extensively demonstrated. The Germ Theory of Disease, the Atomic Theory, Quantum Theory, the Theory of Continental Drift, the Gene Theory and many others are examples of this latter use.

Having grappled with the creation-evolution problem for a long time, my personal solution I urge “debaters” to reveal theirs up front---is an epistemological one. I argue that theology, philosophy, mathematics, science, the performing and plastic arts, athletics, and so on, are all “ways of knowing.” Sometime they address the same subject and may come into apparent conflict. Like the wave-particle anomaly, the mind-body issue, the three-body problem, and so on, we have to reserve judgment at this time in history. After all, we are creatures of “darkened (if seemingly improvable) intellect.” I call it “suspended judgment.”

The only difficulty I have with my position is reconciling my too-human mind with this vagueness. Which is probably the way it should be.

### **Dr. Behe Responds**

In his critique of *Creation and Evolution*, Professor Robert Doyle remarks that the concept of irreducible complexity is “simply another form of the ‘god-of-the-Gaps’ argument; i.e., whatever we don’t understand we attribute to the direct intervention of God.” I disagree. Irreducible complexity is a positive criterion that is strongly correlated with intelligence, as I tried to show in my essay by using the cartoon of the jungle-trap (page 14). The argument to design is based not on ignorance, but on simple inductive reasoning: Whenever we see systems of a certain type of complexity, we always find they were designed. In the past few decades we have unexpectedly discovered such complexity in cellular systems. Therefore, from past experience we have reason to think those systems have been designed too.

Features of life that result from intelligent design are not necessarily “directly caused by God,” a view Professor Doyle incorrectly ascribes to me. Even Minnesota Fats could aim a shot that sank a dozen billiard balls after ricocheting several times. He didn’t have to place the balls in the pockets by hand. If ordinary intelligent agents can use indirect means to achieve their purposes, certainly God can also.

Professor Doyle also believes that “On the issue of the Origin of Life ‘gap,’ irreducible complexity’ is yielding. . . I must say that he is considerably more optimistic than most scientists. For example, in his recent book, *What Remains to Be Discovered*, John Maddox, former editor of *Nature*, lists the origin of life as one of the unsolved problems facing science in the coming millennium.