

# Darwin's Black Box – a Review

Frank A. Nemeč, Jr.

October 27, 2010

In October 2010, I finished reading Darwin's Black Box: The Biochemical Challenge to Evolution, by Michael J. Behe. I've also read reviews of his work by people more knowledgeable in the field than I. One of the best and most comprehensive is at <http://www.cbs.dtu.dk/staff/dave/Behe.html>. He effectively conveys the complexity of several biological systems. He correctly observes that science does not know how these systems and process came into being. Irreducible complexity is indeed his only argument. But he leaps from there to the conclusion that it could not have happened. He claims that scientists are not writing about the evolutionary basis for these systems. Yet even a cursory search of PubMed shows hundreds of relevant articles published before his book. His own words reveal a reason less is written in the scientific literature about how these mechanisms came about. On p. 127, "The following is a brief description of work that has taken many investigators many years to accomplish." They didn't have time to try to figure out how it happened. Though we want to know how life started, figuring out how it works is much more important and practical. Science is just beginning to understand these phenomena. They first appeared long, long ago. Behe discusses the most difficult area of science, complaining that it isn't completely solved, then claiming there is no solution.

From p. 25, "Yet for the Darwinian theory of evolution to be true, it has to account for the molecular structure of life. It is the purpose of this book to show that it does not." But it will. Even without that, Behe's argument is incorrect. Evolution can be true even if cannot (yet) account for the molecular structure of life. There's also a very new field of study called quantum evolution. Its premise is that biology happens on the molecular scale, and that phenomena on that scale are very much subject to quantum constraints. Once molecular biologists realize that their education must include a working knowledge of quantum physics, this field will begin to blossom. That, in turn, will begin to shed light on how these biological processes might have come about, and how self-organizing systems can facilitate what otherwise seems improbable. Behe dismisses that on p. 178. The reverse Zeno effect alone adds a lot of explanatory value.

His claim is false for another reason. Evolution is about how life changes over time, not how it came about in the first place. His challenge is less to evolution than to abiogenesis. Abiogenesis is extremely speculative. It must be, since apparently no evidence of the first life survives to today. This is hardly surprising.

Science considers Darwinism true but incomplete. If Einstein were not willing to 'criticize' Newtonian mechanics, we would not have relativity. The simple principles of historical Darwinism are adequate to explain most of the development of life that we observe. I don't expect them to explain all of it. In my opinion, other mechanisms are in play as well. I believe that, in the course of time and scientific research, we will discover more of them. They will render evolution obsolete no more than Einstein rendered Newtonian mechanics obsolete.

Internal criticism of evolution is intended to drive refinement, not abandonment. In fact, we may never acquire the evidence necessary for us to answer our questions about the origin of life on earth.

He features the most complex flagellum, yet neglects to mention all the other, less complex ones.

The disclaimer on his faculty web page: <http://www.lehigh.edu/~inbios/faculty/behe.html> admits that "most of my colleagues in the Department strongly disagree with them [his ideas about irreducible complexity and intelligent design]." He has failed to convince even his co-workers.

On p. 78 (suggesting Darwin couldn't have figured out blood clotting), Behe states, "Darwin was an intellectual giant and a great innovator, but no one can guess the future, especially in its critical details." With this sentence, Behe completely undermines the entire premise of his book: irreducible complexity. Why should Behe be surprised that the complete evolutionary history of the planet is not yet understood?