

## **A Swan Song for Neo-Darwinism**—a review of Edward Larson's *Evolution—The Remarkable History of a Scientific Theory*. Modern Library, 2004.

*Evolution—The Remarkable History of a Scientific Theory* is a superbly written book by Edward J. Larson, a young professor of history and law at the University of Georgia.

It is dedicated to neo-Darwinist Ernst Mayr, who celebrated his 100<sup>th</sup> birthday on July 5, 2004. A belated “Happy Birthday,” Ernst.

Mayr praises the book highly, calling it “an intellectual delight,” which is readily understandable as the book portrays neo-Darwinism as the “mainstream” in evolutionary science. Had this book been published thirty years ago, and I had reviewed it back then, I would have been almost as enthusiastic as Mayr. It is not 1975, however. It is 2005, and from the perspective of the present, neo-Darwinism is looking more like a backwater than a mainstream.

The contemporary critique of neo-Darwinism began in 1968, with the publication of Arthur Koestler's scathing attack in *The Ghost in the Machine*. It gained momentum in the early eighties, when the late Stephen Jay Gould, America's premier evolutionist, declared that neo-Darwinism, as represented by Mayr, was defunct, despite its persistence as textbook orthodoxy.

The central dogma of neo-Darwinism is, in Mayr's words, “The road from the DNA to the proteins is a one-way street.” With the discovery of “reverse transcription” (RNA writing DNA), this dogma became obsolete. Nevertheless, neo-Darwinism retained the title of “The Orthodoxy.” Several years ago, the eminent molecular immunologist Edward J. Steele remarked: “At the end of a turbulent and violent century neo-Darwinism apparently remains unimpregnable—much like Communism just prior to its dramatic implosion. Are neo-Darwinism and Weismannism [precursor of neo-Darwinism], which reached their zenith during the Cold War, on the verge of a similar collapse?”

The answer is yes. What today's *in-the-know* biologists know is that neo-Darwinism is finished—as science. Its continuing honorific status is a result not of its scientific merit, but of its commercial value: It is the ideological basis underlying the GMO industry, a very large, influential industry. [GMO = Genetically Modified Organism]

Though Larson's book is superbly written, as indicated, it is also terribly flawed. The major flaws are as follows:

\*There are a number of excellent books on Jean-Baptiste Lamarck's *Transformism*, the foundational theory in evolutionary science. Apparently, Larson availed himself of none of these!—as indicated by the fact that none are cited in his footnotes. Instead of delving into available scholarship on Lamarck and Transformism, Larson relied rather

exclusively on the *Lamarck-unfriendly* views of Mayr and other neo-Darwinists.

How serious is Larson's failure here? Let us suppose an historian writes a book about the American presidency that gives only a passing mention to George Washington and six chapters to Herbert Hoover. Would you consider that a minor failure?—or a major?

\*Larson repeats, uncritically, the charge that Stephen Jay Gould was a Marxist, as in the following paragraph:

“‘Culture is acquired, not transmitted through genes,’ [Theodosius] Dobzhansky assured anthropologists in 1963. Beginning in 1975, Dobzhansky's former student ... Richard Lewontin ... led the scientific assault on sociobiology. Another distinguished Harvard evolutionist with a popular following, paleontologist Stephen Jay Gould, joined the attack. *Both acknowledged that genetic determinism offended their Marxist ideology* [Itals mine] ... but they focused their criticism on [E.O.] Wilson's science. Likening sociobiological explanations of human behavior to Rudyard Kipling's 'just so' fables of how primitive peoples account for animal origins, Lewontin and Gould damned sociobiology as scientifically flawed and socially dangerous....” [276]

Where, pray tell, does Gould “acknowledge” that genetic determinism is offensive to his “Marxian ideology”? Larson offers no proof of his allegation.

Gould's father was a Marxist, and Gould once said that he had learned his Marxism on his father's knee. He also said that his political views were “very different” from his father's—and that he regarded those views as a private matter. What one learns on one's father's knee is not necessary what one believes as an adult.

“Gould was no stranger to Marxism,” writes his lifelong friend Jeff Mackler in an obituary, “but essentially remained aloof from any active participation in socialist or any other political organizations.” Why did Gould remain “aloof”? Gould himself answers this question in *Bully For Brontosaurus*: “Scientists have power by virtue of the respect commanded by the discipline. We may therefore be sorely tempted to misuse that power in furthering a personal prejudice or social goal ... But we cannot, lest we lose the very respect that tempted us in the first place.”

Gould was unwilling to compromise what he considered his responsibility as a scientist, to remain impartial—non-partisan. The compromisers of scientific impartiality are those colleagues of Gould who have falsely labeled him a Marxist. Why did they do so? Gould was an immense irritant to Mayr and other neo-Darwinists.

*Time and again, he challenged the complacency of an orthodoxy “mired down” in the foggy bottom premises of 19<sup>th</sup> century uniformitarianism, evolutionary gradualism, and 20<sup>th</sup> century genetic determinism.*

Stephen Jay Gould stood head and shoulders above all his detractors, and this fact will become increasingly obvious as the next few years roll by. His work in general and his

last work in particular (*The Structure of Evolutionary Theory*, 2002) are foundational to the emerging post-Darwinian evolutionary science.

\*The great importance of evolutionary science lies in the fact it is the ideological basis for the life sciences and social sciences, and the policy basis of government. Gary Null recently reported that he has statistical evidence the number one killer in America today is *medicine*. Does the failure of conventional Western medicine have something to do with the inadequacies of neo-Darwinism? Yes, indeed. In politics, we Americans seem to be following the war drums of a strange bunch of imperialists who call themselves “neo-cons.” Does the hegemonic program of the neo-cons have something to do with the vision of life set forth by neo-Darwinists? Most certainly.

Professor Larson does a very good job of representing the abominable social theories and medical “sciences” that arose as extensions and applications of classical Darwinism. However, he makes little or no mention of what we might call “Social neo-Darwinism,” the application of neo-Darwinian biology and evolution to social theory. Great though this omission is, Larson offers us one ever greater....

\*If evolutionary science were depicted as a tree, the tree would have two trunks. One trunk would represent the idea that evolution is the product of competition, the other trunk the idea evolution is the product of co-operation. Darwinism is, of course, the competition trunk. The original name for the co-operation trunk was “mutualism.” Best current book on this trunk is Frank Ryan’s *Darwin’s Blind Spot*.

Larson’s *Evolution* is, strange to say, a one-trunk book, and this is its greatest failure. Nevertheless, I recommend the book to any who are interested in the still-evolving science of evolutionary science. It’s a beautifully written book filled with interesting information, some quite startling (such as T.H. Huxley’s formation of the conspiratorial “X-Club” to further the cause of Darwinism), some quite poignant, such as the suicide of FitzRoy in 1865.

FitzRoy was captain of the famous *Beagle* when it sailed forth with the young Charles Darwin as “gentleman companion.” Larson tells us that suicide was a sort of regular occurrence in FitzRoy’s family. In my own research, I learned that FitzRoy has taken the young naturalist along in the fond hope of finding a proof of *Genesis*. Talk about a plan gone wrong! Poor FitzRoy.

As *Evolution*’s a beautiful book celebrating a branch of evolutionary science that will soon be no more, I think of it as a literary *swan song*. By all means, stop and listen to the song. And then, for a far more enlivening experience, get and read *The Biology of Belief* by Dr. Bruce H. Lipton, a pioneer of future evolutionary science.