

Over the Bones of the Dead

Evolutionary Science—Past, Present & Future

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Chapter 3

The Selection and De-Selection of Natural Selection

“The struggle for existence holds as much in the intellectual as in the physical world. A theory is a species of thinking, and its right to exist is coextensive with its power of resisting extinction by its rivals.”

—Thomas H. Huxley

As the title of his 1859 opus indicates, Darwin theorized that the principal agency of speciation (evolution) is “natural selection.”

The concept of natural selection received early and widespread acclaim, as it provided, or seemed to provide, a scientific alternative to the long-prevailing view that mankind and the world are governed by *divine* selection.

Darwin defined natural selection in these terms: “Natural selection is daily and hourly scrutinizing, throughout the world, the slightest variations [of species]; rejecting that which is bad, preserving and adding up all that are good; silently and insensibly working ... at the improvement of each organic being in relation to its organic and inorganic conditions of life....” (Appleman, 123)

Rhetorically, this definition is rather ingenious, as it provided Darwin’s typical (Bible-steeped) reader with a tolerable substitute for God. “His eye is upon the sparrow,” the Holy Bible says; natural selection, Darwin saith, eyeballs each and every variation of the sparrow species and, what’s more, works silently and insensibly at the improvement of the species.

Sorcerer & Apprentice

Darwin's personification of natural selection led several turn-of-the-century critics to conclude that his theory had simply replaced one anthropomorphism with another. In fact, the natural selection concept did not depend upon the personification. The analogy was offered metaphorically and served two purposes, the rhetorical one indicated above, and a thematic purpose—to diminish the ordinary reader's high estimation of "mind" as a formative agency.

To judge by its products, Darwin observed, natural selection is infinitely superior to the "artificial selection" of man. Natural selection is a sorcerer and man nothing more than a poor apprentice: "Under Nature, the slightest differences of structure or constitution may well turn the nicely balanced scale in the struggle for life, and so be preserved. How fleeting are the wishes and efforts of man! How short his time! And consequently how poor will be his results, compared with those accumulated by Nature during whole geological periods! Can we wonder, then, that Nature's productions should be far 'truer' in character than man's productions, that they should be infinitely better adapted to the most complex conditions of life and should plainly bear the stamp of higher workmanship?" (Appleman, 123)

In all, the analogy of natural with artificial selection played a critical role in Darwin's argument. If nature could be reckoned a sorcerer, albeit a mighty slow-working sorcerer, then it would be reasonable to suppose that extremely complex organs, such as the eye, could have been produced by the means of evolution he proposed—a means that did not include *mind*.

Sorcerers can create anything; nature is a sorcerer; therefore, nature can create anything. This was the silent syllogism underlying Darwin's theory.

Darwin's Bulldog

Before publication of the *Origin*, Darwin was, I presume, convinced of the correctness of his *uni-cause* theory of speciation. "As early as 1862," however, "he had begun to waver, and by 1865 he talked increasingly of the direct action of the environment and of use and disuse [a Lamarckian concept] as factors of change...." In the last revised edition of the *Descent of Man*, Barzun notes, Darwin "had to express again his indecision about the factors causing evolution...." (Barzun, 60-61)

If Darwin the Indecisive had had sole responsibility for the promotion of his theory, in all likelihood Darwinism would have fizzled out in a decade or two. The fact Darwinism spread like wildfire throughout the world was due largely to the passionate promotion of a man who styled himself “Darwin’s bulldog.” His name was Thomas H. Huxley.

Huxley (1825-1895) was a notable naturalist who achieved world fame as a polemicist. In the arena of intellectual battle, he had few peers, and none of these were anxious to stand up against him.

The inventor of agnosticism, Huxley regarded theology as a curse on mankind and the great enemy of science. It seemed to him abominable that “nine-tenths of the civilized world” regarded the writings of the “rude inhabitants of [ancient] Palestine” as “the authoritative standard of fact and the criterion of the justice of scientific conclusions, in all that relates to the origin of things, and, among these, of species....” (Huxley, 51-52) He yearned to see the day when (in his own words) Science would place its foot on the neck of Theology.

In Huxley’s rather severe view, any assertion which “outstrips evidence” is “not only a blunder but a crime.” In his reading of the *Origin*, he could not have missed the point that Darwin’s personified definition of natural selection implied what we call today “implicate intelligence” or “intelligent design.” Undoubtedly, Huxley viewed this implication as a problem with the theory, a criminal tendency as it were. His response to the problem was immediate....

Soon after publication of the *Origin*, Huxley published an exposition of Darwin’s theory called “The Darwinian Hypothesis.” In this essay, Huxley describes natural selection in simple and strictly materialistic terms, beginning his discourse with mention of Darwin’s problematical definition: “Before admitting the possibility of natural species having originated in any similar way [to man’s breeding of plants and animals], it must be proved that there is some power which takes the place of man, and performs selection *sua sponte*. It is the claim of Mr. Darwin that he professes to have discovered the existence and *modus operandi* of the ‘natural selection,’ as he terms it; and, if he be right, the process is perfectly simple and comprehensible, and irresistibly deducible from very familiar but well nigh forgotten facts.”

Huxley goes on to affirm the “Malthus doctrine” that life is incessant struggle, a doctrine underlying Darwin’s theory: “Who had not duly reflected upon all the consequences of the marvelous struggle for existence which is daily and hourly going on among living beings? Not only does every animal live at the expense of some other animal or plant, but the very plants are at war. The ground is full of seeds that cannot rise into seedlings; the seedlings rob one another of air, light, and water, the strongest robber winning the day, and extinguishing his competitors....”

“Such being unquestionably the necessary conditions under which living creatures exist,” Huxley continues, “Mr. Darwin discovers in them [the conditions themselves] the instrument of natural selection. Suppose that in the midst of this incessant competition some individuals of a species ... present accidental variations which happen to fit a little better than their fellows for the struggle in which they are engaged, and the chances are in favour, not only of those individuals being better nourished than the others, but of their predominating over their fellows in other ways, and of having a better chance of leaving offspring, which will of course tend to reproduce the peculiarities of their parents....” (Huxley, 18-19)

What is the nature of the “power” that performs natural selection? It is nothing more than the *power of circumstance*, Huxley replies. The same wind that ruffles the feathers of the strong fledgling blows the weak fledgling out of the nest.

Huxley’s strictly materialistic definition of natural selection (rather than Mr. Darwin’s ambiguous definition) became the official “classical Darwinism” definition—for the simple reason that most readers learned their Darwin by way of Huxley. The *Origin* was, by all accounts, a very difficult read. It still is. Huxley’s presentation of Darwinism was very understandable—and enjoyable as well.

Natural Selection De-selected

There matters stood until 1870, when Alfred Russel Wallace threw a monkey wrench into the smoothly running Darwin-Huxley theory machine. The wrench was in the form of a book titled *Contributions to the Theory of Natural Selection*. In this book, Wallace stated objections to, and placed limits on, the principle of natural selection.

No one could question his right to do so. Mr. Wallace was, after all, the acknowledged co-discoverer of the theory of speciation by means of natural selection. Indeed, the first name for Darwinism was “the Darwin-Wallace theory.”

Wallace postulated that the evolution of mankind had been accomplished through intelligent design. In his own words: “The inference I would draw from this class of phenomena [anomalies in the case of man] is that a higher intelligence has guided the development of man in a definite direction, and for a special purpose, just as man guides the development of many animal and vegetable forms....” (Wallace, 8)

Thus Wallace opened the *theology door* that Huxley thought he had closed—forever. It is not difficult to imagine what Huxley’s response was. After hitting the ceiling, Mr. Huxley sat down to write a very long essay....

In 1871, Huxley published this essay, which was titled “Mr. Darwin’s Critics.” Though there were many critics around and about at the time, Huxley chose to write about only two—St. George Mivart, author of a book titled *The Genesis of Species*, and “A.R. Wallace.” Mivart is dealt with at length. Wallace is given cursory treatment and dismissed as a befuddled scientist who “thinks it necessary to call in an intelligent agent—a sort of supernatural Sir John Sebright—to produce even the animal frame of man....” (Huxley, 122)

Issued by the Bulldog of Darwinism, this essay had the force of a papal bull. Mr. Alfred Russel Wallace, co-discoverer of the principle of natural selection, was excommunicated from Darwinism.

What was Darwin’s response to the book? In the fifth edition of the *Origin*, which was completed in January 1872, Darwin uses, for the first time, the famous phrase “survival of the fittest”—a phrase coined by Herbert Spencer circa 1853. (Appleman, 99) In the sixth and final edition, Darwin states that “survival of the fittest” is a “more accurate” expression of what he previously called natural selection. (Macbeth, 65)

In short, Darwin’s response was to abandon, so far as he could, the doctrine of natural selection, replacing it with survival of the fittest. The term “survival of the fittest” is, unlike natural selection, unambiguous.

What is “Classical Darwinism”?

In current textbooks, classical Darwinism is defined as the theory of Charles Darwin that evolution is the product of natural selection acting upon accidental variations.

Official priority for the discovery of natural selection was awarded to Darwin by his peers in the Royal Society. However, the historical record indicates that Wallace has a far greater claim to priority. The issue of priority is dealt with at length in a fascinating book by Arnold C. Brackman titled *A Delicate Arrangement—The Strange Case of Charles Darwin and Alfred Russel Wallace*.

Among the points Brackman makes:

—Darwin’s claim to have found an important key to this theory while reading Malthus, “for amusement,” in 1838, is not substantiated by Darwin’s pre-1858 literary record. In 1858, Darwin received a manuscript of the Wallace theory, which was based on the Malthus doctrine. The following year he published his own theory—based on Malthus.

—Further, Brackman states, Wallace encouraged Darwin to take the lead in publishing his version of their common theory, as he believed Darwin had a far better chance than he of triumphing over the forces of reaction. Darwin was an upper class celebrity; Mr. Wallace was a little known commoner.

In all, the Brackman book underscores, in various ways, the fact that Darwinism was the product of two naturalists, not just one.

Is the textbook definition of classical Darwinism correct? Yes, and no. Yes, it is correct—as a revisionist definition of classical Darwinism. It is Huxley’s definition based on his reading of Darwin (and upon his complete disdain for anything smacking of supernaturalism).

No, it is not correct—as an authoritative definition of classical Darwinism. An *authoritative* definition of a concept is that which is provided by the author, or authors, of the concept.

What would be the authoritative definition of classical Darwinism? A definition that would include the speculations of both Darwin and Wallace,

such as: “Classical Darwinism is the theory that speciation is the agency of evolution; that speciation is the product of natural selection and other material factors acting upon variations (Darwin, Wallace); and that certain anomalies (as evidenced in the case of man) can be explained only as the result of intelligent design, *supernatural selection*” (Wallace).