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Author(s): James Allen Rogers

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DARWINISM AND SOCIAL DARWINISM

BY JAMES ALLEN ROGERS

Horace remarks in one of his letters that the wine jar retains for a long period the scent of the first wine which it contained. Intellectual concepts share this trait, among many other pleasant ones, with the classical amphora. They often evoke clusters of ideas with which they were once associated. Mention Darwinism, for example, and many will find lingering on the threshold of their sensibility concepts of "struggle for existence" and "survival of the fittest." These concepts associated with Darwin's theory of natural selection were not original with Darwin. But they are generally attributed to Darwin's theory rather than to the ideologies which produced them. Later they became major slogans of the Social Darwinists who wanted to view human society through Darwin's vision of the animal world.¹

Much has been written about Darwinism and about Social Darwinism. Neither has been neglected by the genealogist working in the history of ideas. Yet for all that is known about the origins and antecedents of Darwinism and Social Darwinism, little has been written on the interrelationship between Darwin and Social Darwinism. Whether historians take at face value Darwin's often repeated comment that he was incompetent to discuss the social application of his theory, they tend to disassociate him from Social Darwinism on the grounds that his biological theory does not lead inevitably to any social theory.² Overlooking Darwin's possible role in the rise of what was later called Social Darwinism is misleading. It suggests that Darwin's theory of natural selection was simply another discovery in the natural sciences misused to rationalize social preconceptions, that any other equally substantiated and compatible biological theory of evolution might have served as well. The effect of Darwin on the cluster of ideas later called Social Darwinism thus becomes coincidental rather than instrumental.

But this reasoning leaves an important question unanswered. Why did the so-called Social Darwinists select Darwin's theory of natural selection to rationalize their diverse creeds of individual and collec-

¹Social Darwinism is the application of Darwin's theory of natural selection to the evolution of human society. The term, Social Darwinism, came into popular usage in the early part of the twentieth century. The reviewers of Peter Kropotkin's *Mutual Aid* (London, 1902) saw his book as an attack upon "Social Darwinism." *The Athenaeum*, 1 (1903), 41-42. The term also appeared in J. Novikov's *La Critique du darwinisme social* (Paris, 1910).

²R. J. Wilson, *Darwinism and the American Intellectual* (Homewood, 1967), 94.

tive competition? Other theories of biological evolution arose in the years preceding the publication of *The Origin of Species* in 1859 that would have served as well. Robert Chambers published in 1844 a theory of biological evolution which could have been used by the later Social Darwinists. But his theory won him notoriety rather than fame.³ Herbert Spencer used the phrase "survival of the fittest" as early as 1852 in writing on biological evolution.⁴ It later became a major slogan of the Social Darwinists. But it is significant that they attributed the concept to Darwin rather than to Spencer. The same fate awaited the idea of the struggle for existence which Malthus popularized more than half a century before the publication of the *Origin of Species*.⁵

The question of why the so-called Social Darwinists chose Darwin's theory rather than other compatible theories to rationalize their social preconceptions raises a more complex problem. Why was Darwin's theory of natural selection able to organize a school of influential social thought while similar theories were either rejected or died in obscurity? It would be inaccurate to say that Darwinism became the model for social theory because of its undisputed triumph in biology. Investigators in biology and related fields continued to have serious reservations about essential aspects of Darwin's theory of natural selection long after the theory was accepted as social gospel by many.⁶ It only begs the question to say that the time was ripe for Darwinism as a social theory. The question is precisely why the time was ripe for Darwinism but not for other theories that might have served as well. Richard Hofstadter in his study of Social Darwinism and American thought concludes that the competitive American society of the latter half of the nineteenth century saw its own image in the tooth-and-claw version of Darwin's theory of natural selection. For Hofstadter, consequently, the time in America was ripe for Darwinism.⁷ Other historians such as Irvin Wyllie and R. J. Wilson have challenged Hofstadter's interpretation. They find that very few businessmen justified their actions by references to Darwinism. If businessmen bothered to rationalize their life style at all, it was by reference to the tenets of

³Chambers published his *Vestiges of the Natural History of Creation* (London, 1844) anonymously. A full study of the book is in Milton Millhauser, *Just Before Darwin, Robert Chambers and Vestiges* (Middletown, 1959).

⁴"A Theory of Population, Deduced from the General Law of Human Fertility," *Westminster Review*, 57 (1852), 468-501.

⁵*An Essay on the Principle of Population as it affects the Future Improvement of Society with remarks on the Speculation of Mr. Godwin, M. Condorcet, and Other Writers* (London, 1926), a reprint of the original edition of 1798.

⁶Bernard Barber, "Resistance by Scientists to Scientific Discovery," *Science*, 134 (1961), 596-602.

⁷Richard Hofstadter, *Social Darwinism in American Thought* (Boston, 1955), 201.

classical economics or Christian morality. Only a few intellectuals and publicists popularized the terminology of Social Darwinism and they were not imitated by the business community.⁸

Hofstadter and his revisionists do agree, however, that Darwin's theory of natural selection was a "neutral" theory which did not have any inherent social application. Hofstadter wrote that "Kropotkin's interpretation of Darwinism was as logical as Sumner's."⁹ But does that prove the neutrality of Darwinism? Peter Kropotkin redefined Darwin's theory of natural selection to fit the ethical standards of Russian populist-anarchist morality with its emphasis on human solidarity and cooperation. Moreover, Kropotkin interpreted the *Origin of Species* within the context of Darwin's later books and work by others in biology. Kropotkin could quote Darwin against Darwin to make his interpretation plausible.¹⁰ William Graham Sumner, by contrast, derived his interpretation of Darwinism largely from the *Origin of Species*. It was not Darwinism, however, but only the theory of Malthus which he applied directly to the evolution of human society. His social philosophy, which Hofstadter calls Social Darwinist, was not, in fact, derived from Darwinism but from the study of Malthus and Spencer.¹¹ To contrast Kropotkin's and Sumner's views on Darwinism does not prove the neutrality of Darwinism but only that the later "Reform Darwinism"¹² of Kropotkin, like the "Social Darwinism" Hofstadter attributes to Sumner, was not based primarily on the *Origin of Species*.

If Hofstadter's argument fails to convince us of the "neutrality" of Darwin's theory, his revisionist, R. J. Wilson, fares no better. Wilson suggests that nothing in Darwin's theory of natural selection makes a direct application of it to social theory inevitable.¹³ This overlooks the metaphorical concepts through which Darwin expressed part of his biological theory of natural selection. These metaphorical concepts epitomized the views of Malthus and Spencer on human society, and particularly on English society. It would be superficial, however, to

⁸R. J. Wilson, 93-106; Irvin G. Wyllie, "Social Darwinism and the Businessman," in Carl Degler, ed., *Pivotal Interpretations of American History* (2 vols., New York, 1966), II, 157-70.

⁹Hofstadter, 201.

¹⁰*Mutual Aid, A Factor in Evolution* (London, 1902).

¹¹Hofstadter, 51-66. For Sumner's own account of the strong influence of Spencer and Malthus upon his developing social philosophy, see his *The Challenge of the Facts and Other Essays* (New Haven, 1914), 9. Sumner applied Darwinism only to the animal and plant world. See A. G. Keller and M. R. Davie, eds., *Essays of William Graham Sumner* (2 vols., New Haven, 1934), I, 142; II, 56.

¹²Reform Darwinism was the attempt to use Darwinism against the Social Darwinists or against any system espousing individual or collective competition.

¹³R. J. Wilson, 94.

conclude that Darwin had built his theory of natural selection upon the metaphysics of *laissez-faire* capitalism. The situation is far more complex. Darwin's theory included much more than the Malthusian struggle for existence and the Spencerian survival of the fittest. As Darwin was careful to state in each of the six editions of the *Origin of Species*, natural selection was the main but not the exclusive means of modification of species.¹⁴ Although Darwin emphasized the element of competition in the evolutionary process in the *Origin of Species*, he did not ignore the important aspect of cooperation.¹⁵ Moreover, when he came to write specifically on man and evolution, he strongly emphasized the progressive role of cooperation within the human species in raising it to its present level.¹⁶

The central problem in the relation of Darwin to what was later called Social Darwinism lies in the highly metaphorical concepts in which Darwin expressed the theoretical aspects of natural selection. Morse Peckham has put the pertinent question very succinctly: "Is it true that what Darwin said had very little impact, but that what people thought he said, that is, what they already believed and believed to have been confirmed by Darwin, had an enormous impact?"¹⁷ Darwin, as discoverer, had the usual difficulty of transforming an established vocabulary to describe a new vision of the process of evolution. By using metaphorical concepts from Malthus and Spencer, Darwin made it more difficult to disassociate his new discovery in biology from older patterns of social thought. It was not what Darwin said that had little impact, but it was the manner in which he said it that led those, who were looking for scientific support for opinions already held, to infer that he meant what they already believed.¹⁸

Darwin obviously cannot be held responsible for the later interpretations of his theory of natural selection advocated by proponents of various social philosophies. His theory of natural selection described

¹⁴Morse Peckham, ed., *The Origin of Species by Charles Darwin. A Variorum Text* (Philadelphia, 1959), XIV, 183.2:f. In the sixth and last revised edition (1872) of the *Origin of Species*, Darwin admitted that he had formerly underrated the role played by factors other than natural selection, such as the direct action of external conditions and variations which seemed to arise spontaneously. But he noted that he had always mentioned these other factors from the very first edition: *Origin of Species*, XIV, 183.1-4:f. (All future references to Morse Peckham's edition of the variorum text of the *Origin of Species* will follow this model. The Roman numeral after the title denotes the chapter. The following number(s) are those of the sentences of each chapter. Numbers attached to those sentence-numbers by a period (e.g. above 183.1-4) denote the sequence of sentences added by Darwin in later editions. The letters "b" through "f" stand for editions two through six; no letter indicates the first edition.)

¹⁵See, for example, *Origin of Species*, IV, 57.

¹⁶*The Descent of Man* (New York, n.d.) Chapter IV. Originally published in 1871.

¹⁷"Darwinism and Darwinisticism," *Victorian Studies*, 3 (1959), 40.

¹⁸G. Himmelfarb, *Darwin and the Darwinian Revolution* (N.Y., 1962), 379-452.

a biological process and not a social philosophy. Two months after the publication of the first edition of the *Origin of Species* (1859), Darwin wrote to his friend, Charles Lyell, "I have received, in a Manchester newspaper, rather a good squib, showing that I have proved 'might is right,' and therefore that Napoleon is right, and every cheating tradesman is also right."¹⁹ Darwin was apparently as much amused as annoyed at such gratuitous interpretations of his theory. No evidence exists that he ever made any reply to such interpretations. He may have considered them the price of attempting to introduce a new idea to the public. Although Darwin in no way encouraged such social interpretations of his theory, his use of metaphorical concepts from Malthus and Spencer made possible the social interpretation of what Darwin intended only to be a biological theory of evolution. The investigation of the interrelationship between Darwin and what was later called Social Darwinism consequently must begin with the question of why Darwin expressed part of his theory of natural selection in those metaphorical concepts of Malthus and Spencer.

Darwin tells us in his autobiography that it was the reading of Malthus in October 1838 that led him to see that under the circumstance of a struggle for existence in nature among plants and animals, favorable variations would tend to be preserved and unfavorable ones to be destroyed.²⁰ The established view has been to take Darwin's statement literally and to credit Malthus with furnishing Darwin with the clue to the theory of natural selection.²¹ A newer interpretation, based on a closer examination of Darwin's earlier notebooks, offers strong evidence that Darwin had already arrived at a rudimentary theory of natural selection by February 1838 before reading Malthus.²² What then did Malthus offer to Darwin in the development of his theory of natural selection? It was not simply the idea of the struggle for existence. That idea was not original with Malthus and in one form or another had been a commonplace in Western thought. In applying that idea to human society, Malthus devised a theory of population which had a specific historical and geographical context. Once elaborated, however, the theory was applied universally by Malthus and others. The theory was originally an attack upon the idea of human perfectibility put forth by Godwin. In a larger context, it was a reflection of English fears of the consequences of the French Revolution upon their own English poor. Malthus attempted to prove in his theory that human nature made poverty among the masses not only inevitable but impossible to allevi-

¹⁹Francis Darwin, ed., *The Life and Letters of Charles Darwin* (3 vols., London, 1887), II, 262. (Letter of Jan. 4, 1860.)

²⁰*Ibid.*, I, 68.

²¹Hofstadter, 39.

²²Sir Gavin de Beer, "The Origins of Darwin's Ideas on Evolution and Natural Selection," *Proceedings of the Royal Society of London*, B, 155 (1962), 321-38, reprinted in *Streams of Culture* (New York, 1969), 46-66. See esp. 57-58.

ate. Misery and want were the result of nature which no man nor institution could change.²³

In his first essay of 1798, Malthus had put forth two propositions: "First, that food is necessary to the existence of man. Second, that the passion between the sexes is necessary, and will remain nearly in its present state. These two laws ever since we have had any knowledge of mankind, appear to have been fixed laws of our nature. . . . Assuming, then, my postulata as granted, I say, that the power of population is indefinitely greater than the power in the earth to produce subsistence for man. Population, when unchecked, increases in a geometrical ratio. Subsistence only increases in an arithmetical ratio."²⁴

The Malthusian argument rested upon two different sets of assumptions. The first, contained in the two propositions concerning food and sex, is self-evident. The second, in the ratio series contrasting the differential reproduction rate between men and plants and animals, Malthus also thought to be self-evident. He failed to see, however, that if human populations increased at a geometrical ratio, animals and plants increased as rapidly, if not more so. If food increased at an arithmetical ratio, then human populations could not have, and had not, ever increased at a geometrical ratio since the food did not exist to support the increase at that ratio. The Malthusian ratios were a misinterpretation of a simple arithmetical correspondence: human population and subsistence increase roughly in the same proportions until the limits of food production restrict the growth of population.²⁵

Darwin was forcibly struck by the Malthusian quantitative demonstration of the inevitable pressure of population on subsistence. According to Malthus this pressure must result in a struggle for existence. Before Darwin read Malthus he had come to see that species undergoing changes that favored their adaptation to the environment would proliferate and form new species. Although Darwin understood that "natural selection" was the principle of such adaptation, Beer maintains that Darwin "had not recognized how nature enforced this principle until he read Malthus."²⁶ There Darwin found a quantitative demonstration of why the struggle for existence was inevitable in nature which he introduced into his theory of natural selection: "A struggle for existence inevitably follows from the high rate at which all organic beings tend to increase. Every being, which during its natural lifetime produces several eggs or seeds, must suffer destruction during some period of its life, and during some season or occasional year, otherwise, on the principle of geometrical increase, its numbers would quickly become so inordinately great that no country could support the product. Hence, as more individuals are produced than can possibly survive,

²³Malthus, 204.

²⁴*Ibid.*, 11-13.

²⁵Kenneth Smith, *The Malthusian Controversy* (London, 1951), 234 has an interesting table of the Malthusian ratios.

²⁶De Beer, 58.

there must in every case be a struggle for existence, either one individual with another of the same species, or with the individuals of distinct species, or with the physical conditions of life. It is the doctrine of Malthus applied with manifold force to the whole animal and vegetable kingdom."²⁷

Unlike Malthus, who saw the struggle for existence leading to misery and vice for the greater part of mankind, Darwin saw struggle in the plant and animal world as part of the process of natural selection by which the biologically unadapted are weeded out: "When we reflect on this struggle, we may console ourselves with the full belief, that the war of nature is not incessant, that no fear is felt, that death is generally prompt, and that the vigorous, the healthy, and the happy survive and multiply."²⁸ Although Darwin accepted the struggle for existence as only one basis for biological progress among animals and plants, the Social Darwinists made it the principal basis of social progress among human beings. They revived the Malthusian theory concerning human population out of the Darwinian struggle for existence. To this they added Darwin's conclusions about biological progress in the animal and plant world which they applied to human society. *Darwin was not responsible for this interpretation of his theory.* He had carefully qualified his description of the struggle for existence in the original edition: "I should premise that I use the term Struggle for Existence in a large and metaphorical sense, including dependence of one being on another, and including (which is more important) not only the life of the individual, but success in leaving progeny."²⁹ By the fourth edition of the *Origin of Species* (1861), Darwin tried to impress this qualification even more strongly upon his reader. He inserted a subtitle before the quotation above which read: "*The Term, Struggle for Existence, used in a larger sense.*"³⁰

Darwin's debt to Malthus was still at this point in the realm of biology. What his relationship was to the social assumptions of the Malthusian theory did not become clear until after the 1859 publication of the *Origin of Species*. The milieu in which Darwin moved took it for granted that Darwinism was as relevant to human society as to the plant and animal world. Joseph Hooker saw in Darwinism a splendid proof for a *human* theory of population. Hooker wrote to Darwin in 1862 that the *Origin of Species* had done more to enhance the value of an aristocracy in his eyes than any social, political, or other argument: "I cannot see how either a Democracy or Republican form of Govt. can resist the effects of Natural Selection. In short, I regard a pure Democracy as visionary as a country peopled by one invariable species. This

²⁷*Origin of Species*, III, 33–36.

²⁸*Ibid.*, III, 165.

²⁹*Ibid.*, III, 25.

³⁰*Ibid.*, III, 24.1:d.

with me is no question of what is good or bad, but of what must ever be, and I do hold that a Govt. must always eventually get into the hands of an individual, or a family, or a class, or there is no truth in Natural Selection.”³¹ Darwin was amused by Hooker’s earnest belief in the social application of the theory of natural selection but significantly he seems to have shared Hooker’s basic assumptions: “The ‘Origin’ having made you in fact a jolly old Tory, made us all laugh heartily. I have sometimes speculated on this subject; primogeniture is dreadfully opposed to selection; suppose the first-born bull was necessarily made by each farmer the begetter of his stock! On the other hand, as you say, ablest men are continually raised to the peerage, and get crossed with the older Lord-breeds, and the Lords continually select the most beautiful and charming women out of the lower ranks; so that a good deal of indirect selection improves the Lords.”³² Darwin did not apparently see any democratic implications in the theory of natural selection applied to human society. When Rudolph Virchow attempted to find the natural roots of socialism in Darwinism, Darwin found this ridiculous: “What a foolish idea seems to prevail in Germany on the connection between Socialism and Evolution through Natural Selection.”³³ But the conservative Thomas Huxley thought otherwise: “Have you considered that State Socialism (for which I have little enough love) may be a product of Natural Selection? The societies of Bees and Ants exhibit socialism *in excelsis*.”³⁴

In Darwin’s own house the discussion often turned on the human implications of the theory of natural selection. Once during a visit of Sir Charles Lyell and his wife, the conversation touched on ancient Greece and the difficulty it presented for Darwin’s theory of natural selection. If the Athenians were so eminently superior in the bright days of Pericles, why did they not continue to advance? Darwin had no answer at hand for this difficulty, but after the Lyells had departed, the solution suddenly came: “It has just occurred to me that in fact the case harmonises perfectly with our views. The case would be a decided difficulty on the Lamarckian or Vestigian doctrine of necessary progression, but on the view which I hold of progression depending on the conditions, it is no objection at all, and harmonises with the other facts of progression in the corporeal structure of other animals.”³⁵ Darwin explained that in a state of anarchy, despotism, or invasion of

³¹Leonard Huxley, ed., *Life and Letters of Sir Joseph Dalton Hooker* (2 vols., London, 1918), II, 42. It is significant that Hooker also found the Malthusian ratios convincing: “His arguments seem incontrovertible to me.” *Ibid.*, II, 43.

³²*Life and Letters of Darwin*, II, 385.

³³*Ibid.*, III, 237. Letter of Dec. 26, 1789.

³⁴Leonard Huxley, ed., *Life and Letters of Thomas Huxley* (2 vols., New York, 1901), II, 284.

³⁵*Life and Letters of Darwin*, II, 295. Letter of Mar. 12, 1860.

barbarians, it would be force, strength, or ferocity rather than intellect that would triumph. Darwin did not seem to realize that natural selection applied to human history in this manner meant that the conclusion was predetermined by the methodology. The only question was how the survivors were best adapted to the conditions of the time, a one-dimensional question which ignored all other aspects of the problem. A decade later, when he was writing *The Descent of Man*, Darwin may have come to realize the simplistic nature of this approach because he then gave quite different reasons for the fall of Greek civilization: "The Greeks may have retrograded from a want of coherence between the many small states, from the small size of their whole country, from the practice of slavery, or from extreme sensuality; for they did not succumb until 'they were enervated and corrupt to the very core.'"³⁶

In the *Origin of Species* Darwin had avoided a direct discussion of the significance of the theory of natural selection for human history. But in his letters he was more candid. He wrote to Alfred Wallace in 1864: "Our aristocracy is handsomer (more hideous according to a Chinese or Negro) than the middle classes, from [having the] pick of the women; but oh, what a shame is primogeniture for destroying Natural Selection!"³⁷ In his *Descent of Man* (1871), Darwin came directly to the point: "With savages, the weak in body or mind are soon eliminated; and those that survive commonly exhibit a vigorous state of health. We civilised men, on the other hand, do our utmost to check the process of elimination; we build asylums for the imbecile, the maimed, and the sick; we institute poor-laws; and our medical men exert their utmost skill to save the life of everyone to the last moment. There is reason to believe that vaccination has preserved thousands, who from a weak constitution would formerly have succumbed to small-pox. Thus the weak members of civilised societies propagate their kind. No one who has attended to the breeding of domestic animals will doubt that this must be highly injurious to the race of man. It is surprising how soon a want of care, or care wrongly directed, leads to the degeneration of a domestic race; but excepting in the case of man himself, hardly anyone is so ignorant as to allow his worst animals to breed."³⁸ Darwin added, however, that even if men could restrain their sympathy for the less fortunate members of society, it would only be by a deterioration of the most noble part of their nature. But Darwin did not expect all men to act in such a noble manner. This and the increase in human population meant that men would never escape the evils arising from the struggle for existence. But this was not a bad thing, Darwin assured his readers: if men had not been subject to natural selection in former

³⁶*Descent of Man*, 507.

³⁷Francis Darwin and A. Seward, eds., *More Letters of Charles Darwin* (2 vols., New York, 1903), II, 34.

³⁸*Descent of Man*, 501.

times, they would not have attained their present eminence in the world.³⁹

Darwin's strong belief in the importance of natural selection for the development of human society by eliminating the "unfit" continued to the end of his life. A year before his death, he complained to W. Graham that natural selection did more for the progress of civilization than Graham wanted to admit: "Remember what risk the nations of Europe ran not so many centuries ago of being overwhelmed by the Turks, and how ridiculous such an idea now is! The more civilized so-called Caucasian races have beaten the Turkish hollow in the struggle for existence. Looking to the world at no very distant date, what an endless number of the lower races will have been eliminated by the higher civilized races throughout the world."⁴⁰

The analogy which Darwin drew in his letters and in *The Descent of Man* between evolution among plants and animals and among civilized men is not at first glance implausible. The biological process of evolution allows both men and animals to pass on biological information from one generation to the next by similar processes. Both store the transmitted biological information in the fertilized egg, which in interaction with the environment, sets limits to the development of the individual. In Darwin's time the mechanism of heredity was not understood, but the fact of hereditary variation was obvious.⁴¹

Reasoning by such analogy is fruitful if it is clearly understood that the comparison is not between similar things but between different things which have similar relations. Men and animals have similar relations because they share the common experience of evolution. They are essentially different, however, because men also experience a process of social evolution qualitatively different from biological evolution. The potentialities of social evolution are richer than biological evolution because its transmission of information from generation to generation is emancipated from the limitations of space and time imposed by biological evolution. It is not limited to direct contact between two individuals at a given time, nor is its information stored in a fertilized egg, nor does it depend on information from only two individuals. The potentialities for transmitting information from generation to generation in social evolution are so adequate for adapting to the environment, as well as for modifying it, that social evolution may make biological evolution superfluous for survival.⁴²

³⁹*Ibid.*, 508.

⁴⁰*Life and Letters of Darwin*, I, 316. Letter of July 3, 1881.

⁴¹Darwin's theory of natural selection encouraged biologists to identify the unit of inheritance and to discover the process of heredity through which natural selection worked.

⁴²C. H. Waddington, "The Human Evolutionary System," in M. Banton, ed., *Darwinism and the Study of Society* (London, 1961), 63-81.

What Darwin wrote in his letters concerning the applicability of the struggle for existence to the social evolution of man was of no consequence for the interpretation of the *Origin of Species*. These letters contained his private speculations and were not necessarily a logical extension of his work on the theory of natural selection. But Darwin's failure in his letters to make a consistent distinction between biological and social evolution did carry over into his *Descent of Man*: "Natural selection follows from the struggle for existence; and this from a rapid rate of increase. It is impossible not to regret bitterly, but whether wisely is another question, the rate at which man tends to increase; for this leads in barbarous tribes to infanticide and many other evils, and in civilized nations to abject poverty, celibacy, and to the late marriages of the prudent. But as man suffers from the same physical evils as the lower animals, he has no right to expect an immunity from the evils consequent on the struggle for existence."⁴³ Here Darwin, like Malthus before him and the Social Darwinists after him, did not inquire to what degree the struggle for existence in human society grows directly out of the conditions of nature (a biological question), and to what degree out of those conditions as they have been developed by men (a social and historical question).

The confusion of biological and social evolution lies at the heart of the relationship between Darwin and later "Social Darwinism." It is the legacy of the Malthusian theory of human population. Darwin shared with Malthus three erroneous assumptions about the Malthusian struggle for existence: 1) that there is necessarily a differential rate of reproduction between an organism (geometrical rate of reproduction) and its subsistence (arithmetical rate of reproduction)⁴⁴; 2) that the resulting population pressure on subsistence should be characterized as a struggle for existence even in a large and metaphorical sense;⁴⁵ 3) that this biological problem lies at the basis of certain human social problems such as poverty. (Darwin shared this last assumption only in the *Descent of Man* and he was not consistent in his application of it.)⁴⁶

⁴³*Descent of Man*, 508.

⁴⁴*Origin of Species*, III, 33–36.

⁴⁵*Ibid.*, III, 25. The idea of struggle even in a large and metaphorical sense distorted rather than clarified the meaning of natural selection. A modern biologist has written of natural selection: "Struggle is sometimes involved, but it usually is not, and when it is, it may even work against rather than towards natural selection. Advantage in differential reproduction is usually a peaceful process in which the concept of struggle is really irrelevant. It more often involves such things as better integration into the ecological situation, maintenance of a balance of nature, more efficient utilization of available food, better care of the young, elimination of intragroup discords (struggles) that might hamper reproduction, exploitation of environmental possibilities that are not the objects of competition or are less effectively exploited by others." George Gaylord Simpson, *The Meaning of Evolution* (New York, 1954), 95–96.

⁴⁶*Descent of Man*, 501–08.

It has already been shown that Darwin had worked out a rudimentary theory of natural selection before reading Malthus. Consequently neither the Malthusian struggle for existence nor Darwin's assumptions about it were necessary to his theory of natural selection.⁴⁷

Darwin's assumptions about Malthus' concept eventually led him to see in Herbert Spencer's survival of the fittest a supporting description of his theory of natural selection. Darwin had originally been very fond of the term natural selection. He had come across it in works on breeding (artificial selection) and he liked the term because it implied a connection between variation of species under domestication and in nature.⁴⁸ Darwin defined natural selection as follows: "Let it be borne in mind how infinitely complex and close-fitting are the mutual relations of all organic beings to each other and to their physical conditions of life. Can it, then, be thought improbable, seeing that variations useful to man have undoubtedly occurred, that other variations useful in some way to each being in the great and complex battle of life should sometimes occur in the course of thousands of generations? If such do occur, can we doubt (remembering that many more individuals are born than can possibly survive) that individuals having any advantage, however slight, over others, would have the best chance of surviving and of procreating their kind? On the other hand, we may feel sure that any variation in the least degree injurious would be rigidly destroyed. This preservation of favorable variations and the rejection of injurious variations, I call Natural Selection."⁴⁹

Darwin received many objections from men of science to his use of natural selection. He complained to Lyell in 1860: "I suppose 'natural selection' was a bad term; but to change it now, I think, would make confusion worse confounded, nor can I think of a better; 'Natural Preservation' would not imply a preservation of particular varieties, and would seem a truism, and would not bring man's and nature's selection under one point of view. I can only hope by reiterated explanations finally to make the matter clearer."⁵⁰ But the objections to natural selection continued to arrive in reviews and letters, and a little more than three months later Darwin reversed his position and admitted to Lyell that "if I had to commence *de novo*, I would have used 'natural preservation'."⁵¹ Darwin decided to answer all the critics of the term, natural selection, in the revised third edition of the *Origin of Species* (1861). He admitted that in a literal sense natural selection

⁴⁷Evolutionary theory since Darwin's time has not found it necessary to rely on the Malthusian struggle for existence; e.g., Theodosius Dobzhansky, *Evolution, Genetics, and Man* (New York, 1955), 112.

⁴⁸*Life and Letters of Darwin*, II, 153 and 278.

⁴⁹*Origin of Species*, IV, 9-13.

⁵⁰*Life and Letters of Darwin*, II, 318. Letter of June 6, 1860.

⁵¹*Ibid.*, II, 346. Letter of Sept. 28, 1860.

was a misnomer but he suggested that his readers should not take the term so literally. Darwin also admitted that he might seem to have portrayed natural selection as though it were an active power, a deity, or nature personified. He reminded his readers that it was difficult to avoid personifying the aggregate action and product of many natural laws. In summarizing his answer, Darwin suggested that his critics study his theory more closely: "With a little familiarity such superficial objections will be forgotten."⁵²

Alfred Wallace wrote to Darwin in 1866 that natural selection was only a metaphorical expression of Herbert Spencer's survival of the fittest. Moreover, natural selection as a term was inadequate because the process of evolution was not so much the selection of favorable species as the elimination of unfavorable ones. Besides, Darwin used natural selection to mean not only the survival of the fittest but also the change produced by the survival of the fittest.⁵³ Darwin agreed with Wallace on this last point: "Your criticism on the double sense in which I have used Natural Selection is new to me and unanswerable; but my blunder has done no harm, for I do not believe that any one, excepting you, has ever observed it."⁵⁴ This was typical of Darwin in replying to such criticisms of his theory: to agree and yet to find reasons why it was unnecessary to change the terminology of the theory. "The term Natural selection has now been so largely used abroad and at home," Darwin added, "that I doubt whether it could be given up, and with all its faults I should be sorry to see the attempt made."⁵⁵

But Darwin did come to believe, with regard to the term, natural selection, that "the expression often used by Mr. Herbert Spencer of the Survival of the Fittest is more accurate, and is sometimes equally convenient."⁵⁶ It is not surprising that Darwin should see in Spencer's phrase a more accurate way of describing natural selection. Following Malthus, Darwin believed that the result of population pressure on subsistence could be described as a struggle for existence. Spencer had made the same assumption in 1852 and had decided to call the result of that struggle the survival of the fittest. Consequently when Spencer's phrase came to Darwin's attention, it seemed to him to

⁵²*Origin of Species*, IV, 14.1-9:c.

⁵³*More Letters of Darwin*, I, 267-70. Letter of July 2, 1866.

⁵⁴*Ibid.*, 270-71. Letter of July 5, 1866. Joseph Hooker wrote to Darwin in 1860: "You certainly make a hobby of Natural Selection, and probably ride it too hard." *Ibid.*, I, 135.

⁵⁵*Ibid.*, I, 271. The unwillingness to have *a priori* reasoning replaced by facts was apparently not absent in the Darwin family. Darwin's brother Erasmus wrote to him concerning the *Origin of Species*: "For myself I really think it is the most interesting book I ever read. . . . In fact the *a priori* reasoning is so entirely satisfactory to me that if the facts won't fit in, why so much the worse for the facts is my feeling." *Life and Letters of Darwin*, II, 233.

⁵⁶*Origin of Species*, III, 15.1:e.

describe more directly the result of the Malthusian struggle for existence than did the controversial term, natural selection. Darwin's only hesitation about the term, survival of the fittest, was grammatical: "It cannot be used as a substantive governing a verb; and that this is a real objection I infer from H. Spencer continually using the words, Natural Selection."⁵⁷ From the fifth edition (1869) of the *Origin of Species*, the chapter on natural selection was entitled, "Natural Selection; or The Survival of the Fittest."⁵⁸ Darwin revised the last sentence in the definition of natural selection to read: "This preservation of favorable variations and the rejection of injurious variations, I call Natural Selection or the Survival of the Fittest."⁵⁹ Although Darwin professed to see in Spencer's phrase the equivalent of natural selection, he henceforth stopped referring to natural selection as merely a misnomer and flatly called it a "false term."⁶⁰

Thomas Huxley, the fearless defender of Darwinism, believed that the use of Spencer's phrase was most unfortunate: "The unlucky substitution of 'survival of the fittest' for 'natural selection' had done much harm in consequence of the ambiguity of 'fittest'—which many take to mean 'best' or 'highest'—whereas natural selection may work toward degradation. . . ."⁶¹ Although Huxley did believe with the Social Darwinists that natural selection was an operating force in human society, he did not share their belief that it offered the foundation for a moral code: "We commonly use 'fittest' in a good sense, with the understood connotation of 'best'; and 'best' we are apt to take in its ethical sense. But the 'fittest' which survives in the struggle for existence may be, and often is, the ethically worst."⁶²

Darwin's decision to make survival of the fittest the equivalent of natural selection was important in the development of Social Darwinism because it seemed to link his belief in biological progress with Spencer's belief in social progress. Spencer had used survival of the fittest to describe the "beneficial" effect of population pressure *only* on human society. Darwin used the term in the *Origin of Species* to describe *only* biological progress: "It leads to the improvement of each creature in relation to its organic and inorganic conditions of life; and consequently, in most cases, to what must be regarded as an advance in organization."⁶³ Spencer's phrase in Darwin's theory consequently reinforced the Social Darwinists' tendency to think of the struggle for existence in social rather than biological terms. They read into Darwin's discussion of biological progress in the animal world Spencer's assumption of inevitable progress in human society. Moreover, Darwin's adoption of Spencer's concept seemed to asso-

⁵⁷*More Letters of Darwin*, I, 270. Letter of July 5, 1866. ⁵⁸*Origin of Species*, IV, 2:e.

⁵⁹*Ibid.*, IV, 13:e.

⁶⁰*Ibid.*, IV, 14.5:c and e.

⁶¹*Life and Letters of Huxley*, II, 284.

⁶²*Ibid.*, II, 322.

⁶³*Origin of Species*, IV, 386.

ciate Darwin's scientific theory with Spencer's social philosophy. Darwin did not shrink altogether from that association. In the sixth and last edition (1872) of the *Origin of Species*, Darwin told his readers that his own work only opened the way to far more important research, such as in psychology "based on the foundations already well laid by Mr. Herbert Spencer."⁶⁴ Earlier, while working on the *Origin of Species*, Darwin had written to Spencer that his general argument on evolution was admirable: "I am at present preparing an abstract of a larger work on the changes of species; but I treat the subject simply as a naturalist, and not from a general point of view; otherwise, in my opinion, your argument could not have been improved on, and might have been quoted by me with great interest."⁶⁵

While Darwin admired Spencer's philosophy, he found distasteful Spencer's habit of generalizing from insufficient evidence. After reading Spencer's *Principles of Biology*, Darwin commented that "it is wonderfully clever, and I dare say mostly true. I feel rather mean when I read him; I could bear, and rather enjoy feeling that he was twice as ingenious and clever as myself, but when I feel that he is about a dozen times my superior, even in the master art of wriggling, I feel aggrieved. If he had trained himself to observe more, even if at the expense, by the law of balancement, of some loss of thinking power, he would have been a wonderful man."⁶⁶ If Spencer's generalizations were useless for Darwin's own research in biology, they still commanded Darwin's respect in 1870 in philosophy: "I suspect that hereafter," Darwin wrote, "he will be looked at as by far the greatest living philosopher in England, perhaps equal to any that have lived."⁶⁷

Spencer's social philosophy was far more important in winning him eminence in Victorian England than were his ideas on evolution. It was Darwin, after all, who triumphed by his theory of natural selection in the field crowded with theories of evolution. But it was Spencer who had promulgated the idea of the survival of the fittest and who interpreted for the public what Darwin's theory of natural selection meant in terms of human society. Spencer had been a believer in evolution long before the publication of the *Origin of Species*. Applying biological theory to social problems, he had concluded that population pressure was "beneficial" because it assured the inevitable progress

⁶⁴*Ibid.*, XIV, 256:f.

⁶⁵*Life and Letters of Darwin*, II, 141. Letter of Nov. 25, 1858.

⁶⁶*Ibid.*, III, 55-56. Letter to Joseph Hooker of Dec. 10, 1866. It should not be surprising that Darwin was both astonished and vexed at Spencer's prodigious talent to put forth generalizations without supporting evidence. Darwin, after all, had consumed much of his lifetime in attempting to support one masterly generalization.

⁶⁷*Ibid.*, III, 120.

of the human race: only the most intelligent and adaptable of each generation would survive. If intense competition worked against some individuals in the present, it must be accepted as necessary for the attainment of the ultimate good. Men, like animals, were subject to the severe discipline of nature which often had to be cruel to be ultimately kind: "The poverty of the incapable, the distresses that come upon the imprudent, the starvation of the idle, and those shoulderings aside of the weak by the strong, which leave so many 'in shallows and in miseries' are the decrees of a large far-seeing benevolence."⁶⁸

The Social Darwinists followed Spencer in seeing the role of society and government as essentially negative: to preserve the conditions which allowed *laissez-faire*. Survival became the ultimate touchstone of value and all social values were a function of it. This confusion of the Social Darwinists arose from their misunderstanding of Darwin's theory of natural selection. That theory contained unnecessary concepts derived from the theories of human population of Malthus and Spencer. The Social Darwinists accepted these auxiliary and unnecessary concepts as the essence of Darwin's theory. When that theory was applied to human society, these concepts of Malthus and Spencer evoked, besides their purely biological meaning within Darwin's theory, a social context irrelevant to that theory. They revived the earlier Malthusian confusion about the interrelationship between nature and human society. When Malthus found the reason for human poverty in population pressure on subsistence, he gave a biological answer to what was also a social problem. That confusion was perpetuated by those who were to be called Social Darwinists some years after Darwin's death. The term, Social Darwinism, was extremely unfortunate because it linked Darwin's theory of natural selection with various theories of human social evolution for which Darwin was in no way responsible. Moreover, the so-called Social Darwinists were not even consistent Darwinists. They combined Darwin's theory of biological progress among animals and plants with Malthus' concept of a struggle for existence in human society. Although their resulting doctrine of inevitable human social progress (Spencer's survival of the fittest) contradicted both Malthus' and Darwin's views on human society, the Social Darwinists preferred to see their doctrine as a necessary consequence of Darwin's scientific theory. For those who could not distinguish between biological and social evolution, Darwin's theory offered the public authority of science by which they could attempt to legitimize their private vision of human progress.

Claremont Men's College.

⁶⁸Spencer, *Social Statics* (London, 1851), 322-23.