DARWIN AND RELIGION

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The purpose of this paper is to view Darwin and his writings in the broad perspective of the historical conflict between science and religion. The modern history of that conflict may be divided into three overlapping stages. In the first stage, the new physics and cosmology of the seventeenth century, combined with scientific, technological, and economic progress in the eighteenth, gave rise to natural religion, or deism, as a competitor of revealed religion. In the second stage, reaching its climax with Darwin, the further progress of science undermined the traditional conception of nature as a stable framework of rationally contrived structures, a view which had underlain both Christian natural theology and deism. In the third stage, beginning in Darwin’s day and extending to the present, the methods of natural science were applied to the study of human nature and society, and these methods came to be regarded by many as the only methods which could yield knowledge of man and nature.

The first of these stages was already well underway by the time Darwin began to think seriously about religion. The Newtonian conception of nature as a law-bound system of matter in motion, when pushed to its logical conclusion, proved irreconcilable with belief in miracles, special providences, prophecies, and the like. These had provided the “external evidences” of the divine origin of the Bible and hence of Christianity. With respect to the “internal evidences,” the spread of humanitarian feeling and of optimism concerning the prospects of human life in this world produced a moral revulsion against the God of the Old Testament and the pessimistic view of human nature expressed in traditional Christian doctrines. Finally, the very notion of revealed truth ran counter to the growing demand that all knowledge be based upon clear and distinct ideas derived from experience by reason and observation.

In Germany the beginnings of the “higher criticism” made further inroads on belief in the plenary inspiration of the Bible, that is, the belief that everything in the Bible, properly interpreted, is substantially true. Darwin’s account of the considerations which led him in the years 1836–1839 to abandon the Christian faith in which he had been reared will serve as a brief summary of these intellectual trends:

... I had gradually come, by this time, to see that the Old Testament from its manifestly false history of the world and from its attributing to God the feelings of a revengeful tyrant, was no more to be trusted than the sacred books of the Hindoos, or the beliefs of any barbarian. The question then continually rose before my mind and would not be banished,—is it credible that if God were now to make a revelation to the Hindoos, would he permit it to be connected with the belief in Vishnu, Siva, &c, as Christianity is connected with the Old Testament. This appeared to me utterly incredible.

By further reflecting that the clearest evidence would be requisite to make any sane man believe in the miracles by which Christianity is supported,—that the more we know of the fixed laws of nature the more incredible do miracles become,—that the men at that time were ignorant and credulous to a degree almost incomprehensible by us,—that the Gospels cannot be proved to have been written simultaneously with the events,—that they differ in many important details, far too important as it seemed to me to be admitted as the usual inaccuracies of eyewitnesses;—by such reflections as these, which I give not as having the least novelty or value, but as they influenced me, I gradually came to disbelieve in Christianity as a divine revelation. ... This disbelief crept over me at a very slow rate, but was at last complete. The rate was so slow that I felt no distress, and have never since doubted even for a single second that my conclusion was correct.1

One suspects that the painlessness of the process was not only due to its slowness but also because Darwin had never felt that deep anguish of the spirit to which Christianity ministers and which caused many of his contemporaries to cling to it

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despite growing intellectual difficulties. This point will be amplified in connection with Darwin’s anthropology.

What role did Darwin’s writings play in the further transformation of attitudes toward the Bible and the idea of revealed religion? Most importantly they had the effect of bringing the Biblical narrative of the early history of man into doubt. Not that Darwin was the first to suggest that man’s origins had been crude and bestial. Rousseau and Lord Monboddo had sketched the evolution of human nature from brutelike beginnings, and Lamarck had plainly implied man’s apelike emergence in a long course of organic evolution. But Darwin converted the scientific community to this view. He thereby raised it from the status of a subversive speculation to that of a scientific theory strenuously defended by scientists in an age when the prestige of science was growing steadily. In this sense, Darwin’s writings may be said to have acted as a catalyst, hastening a series of reactions which would have taken place eventually from other causes, such as the progress of Biblical criticism and new discoveries of fossil remains, but which now came rapidly.

Darwin himself avoided attacking the Bible, but for Huxley, his doughty champion against all comers, the battle against the doctrine of inspiration, whether plenary or otherwise, was the crucial engagement in the fight for evolution and for freedom of scientific inquiry.

I am very glad that you see the importance of doing battle with the clericals, [he wrote to Joseph Dalton Hooker]. I am astounded at the narrowness of the view of many of our colleagues on this point. They shut their eyes to the obstacles which clericalism raises in every direction against scientific ways of thinking, which are even more important than scientific discoveries. I desire that the next generation may be less fettered by the gross and stupid superstitions of orthodoxy than mine has been. And I shall be well satisfied if I can succeed to however small an extent in bringing about that result.

Surveying the polemical situation in 1893, Huxley felt that the battle against Biblical authority had largely been won.

The doctrine of biblical infallibility [he wrote] . . . was widely held by my countrymen within my recollection: I have reason to think that many persons of unimpeachable piety, a few of learning, and even some of intelligence, yet uphold it. But I ventured to entertain a doubt whether it can produce any champion whose competency and authority would be recognised beyond the limits of the sect, or theological coterie, to which he belongs. On the contrary, apologetic effort, at present, appears to devote itself to the end of keeping the name of “Inspiration” to suggest the divine source, and consequently infallibility, of more or less of the biblical literature, while carefully emptying the term of any definite sense. For “plenary inspiration” we are asked to substitute a sort of “inspiration with limited liability,” the limit being susceptible of indefinite fluctuation in correspondence with the demands of scientific criticism.

This Parthian policy is carried out with some dexterity; but, like other such manoeuvres in the face of a strong foe, it seems likely to end in disaster.

Actually, the response to evolutionary biology within the Christian camp has been rather more varied than Huxley’s words suggest. In some churches, notably the Roman Catholic, a slow but definite accommodation to evolutionary biology has taken place within the context of traditional doctrines concerning the inspiration of Scripture. According to the Reverend E. C. Messenger of Louvain, writing in 1949:

Most [Catholic] theologians down to very recent times repudiated any form of evolutionary theory, even of plants and animals. Wiser counsels now seem to prevail, and a decided modification of the attitude of theologians is now being witnessed on the possibility of applying some restricted form of evolution to man. Theologians still seem to hold fast to the absolutely literal interpretation of the narrative of the formation of Eve. But the day may come when it will be more generally recognised that, in addition to the core of historical truth, the narrative contains figurative elements. Inevitably this presents the appearance of a losing battle, and of a rearguard action, in which successive positions are defended to the last, only to be abandoned under the pressure of necessity. A different attitude is surely desirable, and it would at least have the merit of a more wholehearted recognition that Science as well as Theology reveals to us truth concerning God and the world which He has made.


4 Messenger, E. C., Theology and evolution, 211, London and Glasgow, Sands & Company, 1949. This book is a useful compendium of Catholic opinion, including papal pronouncements on the question of evolution. In connection with Messenger’s call for a new attitude toward evolution, it is worth noting the favorable interest recently shown by the Vatican in a lecture in Rome by Professor Johannes Hurzeler, curator of vertebrate
In Protestant circles the rise of evolutionary biology and of the higher criticism produced the opposing reactions known as modernism (or liberalism) and fundamentalism. Modernism abandoned the doctrine of plenary inspiration in favor of an evolutionary conception of the growth of religious ideas and sentiments; fundamentalism reaffirmed plenary inspiration in its narrowest form and rejected whatever in biology could not be reconciled with the letter of Scripture. This conflict of opinions is too familiar to require description here. Of more recent interest is the development of new conceptions of revelation and inspiration in the Protestant fold.

In recent Protestant theology [Walter M. Horton writes] the old scholastic distinction between natural and revealed theology is generally questioned, and a new conception of revelation has appeared, based upon a less rationalistic theory of religious knowledge. According to this view, religious revelation does not consist of the communication of propositions about God to be believed; it consists of the confrontation of God and man through actual historical events, such as the Flight from Egypt, the Babylonian Captivity, and the Life of Christ. What is disclosed in such events is “not truth concerning God, but the living God Himself”. Since God confronts us through the meaning of events, any report or comment which powerfully conveys that meaning may be divinely inspired, whether or not it is factually inerrant. The Bible can thus convey a true revelation of God, and its writers can be God’s inspired interpreters, while at the same time they are thoroughly human and fallible.

Again Horton writes:

For Niebuhr (as indeed for Barth himself . . .) the Word of God is something contemporaneous, or rather something eternal, which impinges upon our age through a human and fallible historic medium. Literal faith in the ipsissima verba of Scripture is a form of idolatry which God will punish as he will punish the idolatrous State-worship of our nationalistic contemporaries. But let the words of Scripture be taken as what Niebuhr calls “myths” and Barth calls “tokens”—symbolic expressions of truths too

paleontology at Basle University. Hurzeler described a skeleton four feet in height recently unearthed in a coal mine in Tuscany. He indicated that this creature must have lived more than ten million years ago and that it represented a high degree of “humanization.”


transcendent for human science to grasp, on which nevertheless our human fate depends—and they will lead us back to a fresh appreciation of Christian orthodoxy.

At the same time, say the advocates of this view, the historic conflict between science and religion will be greatly mitigated, since religion and revelation are conceived to deal with those aspects of reality, especially the value aspect, which are inaccessible to science.

It would appear, then, that, although evolutionary biology has done much to stimulate a rethinking of the doctrines of revelation and inspiration, it has by no means relegated them to the limbo of exploded ideas.

In the second stage of the modern conflict between science and religion further scientific progress undermined the static conception of nature which had informed both Christian natural theology and deism. Here again, traditional views had begun to disintegrate before Darwin published, but his influence was nonetheless decisive. In the static version of the doctrine of creation, set forth in such works as John Ray’s The Wisdom of God Manifested in the Works of the Creation (1691) and William Paley’s Natural Theology (Darwin said he knew it almost by heart), nature was conceived as a framework of rationally contrived structures fitted as a stage for the activities of intelligent beings. The basic structures of nature—stars, seas, mountains, species, etc.—were thought to be permanent and wisely contrived to fulfill certain functions in the general economy of nature. Change, though ever present, was superficial; it could not alter the fundamental aspect of things. Structure was perfectly adapted to function; harmony and balance prevailed in all the operations of nature. The lower forms of existence ministered to the needs of the higher.

In the eighteenth and early nineteenth centuries this view of nature was seriously shaken by the


7 For a fuller analysis of the static view of nature and the factors involved in its decline I my article, Objectives and methods in intellectual history, Miss. Valley Hist. Rev. 44 : 58–74, 1957; also, my forthcoming book The death of Adam: evolution and its impact on western thought, scheduled for publication by the Iowa State College Press in October, 1959.
development of the nebular hypothesis in astronomy, by uniformitarian geology, by paleontology with its long catalogue of extinct species, and by the evolutionary speculations of Erasmus Darwin and Lamarck. Charles Darwin's contribution to the further disintegration of the traditional view was twofold. On the one hand, by converting the scientific community to belief in organic evolution he multiplied a thousand-fold the impact of evolutionary ideas on the traditional faith in the stability and wise design of the fundamental structures of nature. Secondly, in his emphasis on natural selection as the primary mechanism of evolution he knocked the last remaining prop from under the static view. Lamarck had recognized that the perpetual mutability of the inorganic environment implied the perpetual mutability of organic forms, but he believed that living matter was endowed (presumably by the Creator) with a capacity to undergo adaptive transformations in response to changing environmental requirements. Hence he was inclined to doubt the real extinction of species. For him, organic change was progressive precisely because it was adaptive. In Darwin's view, however, the variations which determined the survival or extinction of plants and animals were largely unconnected with their efforts to survive. Those organisms which happened to vary in such a way as to gain a competitive advantage in the struggle for existence survived; those which happened to vary in less fortunate directions dwindled in numbers and eventually became extinct. Thus, struggle and chance, the antitheses of pre-established harmony and wise design, became the engines of organic change and the architects of such adaptation as could be discerned in nature. This was the last and harshest blow to the traditional view of nature, a blow from which natural theology has not yet fully recovered.

Most of Darwin's contemporaries evaded the full force of the blow by transferring the element of wise design from the structures of nature themselves to the general system of matter in motion which had produced those structures in the course of time. This maneuver gave rise to precisely the kind of evolutionary theism which Immanuel Kant had foreshadowed a hundred years earlier, when, in propounding his theory of cosmic evolution, he declared:

Matter, which is the primitive constituent of all things, is . . . bound to certain laws, and when it is freely abandoned to these laws it must necessarily bring forth beautiful combinations. It has no freedom to deviate from the perfect plan. Since it is thus subject to a supremely wise purpose, it must necessarily have been put into such harmonious relationships by a First Cause ruling over it; and there is a God, just because nature even in chaos cannot proceed otherwise than regularly and according to order.

Applied to geology, biology, and eventually to history, this view of things harmonized with the nineteenth-century faith in progress and appealed to a wide variety of men and women, ranging from Christian liberals like John Fiske and Asa Gray to out-and-out agnostics like Herbert Spencer.

Darwin himself took a much less cheerful view of the theological consequences of his theory of natural selection. To those who achieved peace of mind by minimizing the role of natural selection and assuming some kind of directive agency or progressive tendency in the process of hereditary variation, Darwin replied that natural selection was the only means which could bring about the adaptation of organisms to their changing environments. To those who, like Asa Gray and Charles Lyell, proposed that God providentially supplied streams of variation in the right directions from which the environment could select, Darwin was equally unresponsive. If God provided the variations which were selected, did He also provide those which were eliminated? Did He also provide the variations which pigeon fanciers selected to please their own or other people's fancy? Did He determine the shape of Darwin's nose? If so, it amounted to saying that all variations were predetermined, those which resulted in beautiful adaptations and those which did not.

As Darwin saw all too clearly, the conception of nature as a law-bound system of matter in motion, when pushed to its ultimate conclusion, eventuated in stoicism. "The old argument of design in nature, as given by Paley, which formerly seemed to me so conclusive, fails, now that the law of natural selection has been discovered," he wrote. "There seems to be no more design in the variability of organic beings and in the action of natural selection, than in the course which the wind blows. Everything in nature is the result of fixed laws." But Darwin could not look...
on the production of order and adaptation through the operation of natural laws with Immanuel Kant's optimistic enthusiasm. Presumably the laws of nature implied a law-giver, but what kind of law-giver would achieve the adaptation of structure to function by proliferating millions of variations at random and leaving it to the environment to eliminate those which did not happen to fit? What kind of law-giver would permit the enormous amount of suffering evident in nature? "What a book a devil's chaplain might write on the clumsy, wasteful, blundering, low, and horribly cruel works of nature!" Darwin exclaimed in a letter to Hooker. To Asa Gray he confessed like bewilderment:

There seems to me too much misery in the world. I cannot persuade myself that a beneficent and omnipotent God would have designedly created the Ichneumonidae with the express intention of their feeding within the living bodies of caterpillars, or that a cat should play with mice. Not believing this, I see no necessity in the belief that the eye was expressly designed. On the other hand, I cannot anyhow be contented to view this wonderful universe, and especially the nature of man, and to conclude that everything is the result of brute force. I am inclined to look at everything as resulting from designed laws, with the details, whether good or bad, left to the working out of what we may call chance. Not that this notion at all satisfies me. I feel most deeply that the whole subject is too profound for the human intellect. A dog might as well speculate on the mind of Newton. Let each man hope and believe what he can.10

And so it went, around and around, in Darwin's head—law and chance, chance and law. The difficulty was that, when nature was conceived as a law-bound system of matter in motion, chance was but the other side of a coin stamped law. In the old view of nature, chance and change had been the antitheses of design and permanence. The forms of the species were regarded as designed by God; varieties were products of time and circumstance, of chance, not in the sense of being uncaused or not subject to law, but in the sense of not being a part of the original plan of creation. Now, in the evolutionary view of nature, change was everywhere, and everything


was either chance or law depending on how one chose to look at it. Adaptation of structure to function was a chance outcome of the operations of nature in the sense of not being specifically arranged in terms of a preconceived plan for the economy of nature, but it was certainly not chance in the sense of being uncaused or spontaneous. Thus, Huxley answered the charge that Darwin had introduced chance into nature by pointing out that "chance variations" must result from the operation of definite laws. Darwin, he declared, had in no way destroyed the teleological view of nature, since the element of design was simply transferred from the present structures of nature to the hidden system of laws, elements, and forces which had produced them. Yet he, like Darwin, asserted repeatedly that he could see no purpose in nature. But what was a teleological view of nature which denied purpose, or telos, in nature? The old terms had taken on new meanings. Confusion was rampant.

Oddly enough, it was precisely the element of chance variation (taking chance not as the obverse of law but rather as its opposite) which recommended Darwin's theory to the American pragmatists Charles Peirce and William James as a means of deliverance from the mechanical determinism of nineteenth-century physics and chemistry—"the block universe eternal and without a history," as William James described it. Peirce's interpretation of the theory of natural selection was totally at variance with Darwin's conception of nature as a law-bound system of matter in motion. "In biology," wrote Peirce, "that tremendous upheaval caused in 1860 by Darwin's theory of fortuitous variations was but the consequence of a theorem in probabilities, namely, the theorem that if very many similar things are subject to very many slight fortuitous variations, as much in one direction as in the opposite direction, which when they aggregate a sufficient effect upon any one of those things in one direction must eliminate it from nature, while there is no corresponding effect of an aggregate of variations in other directions, the result must, in the long run, be to produce a change of the average characters of the class of things in the latter direction."11 Peirce then went on to sub-

stitute a statistical conception of natural law for the traditional idea of natural law as a rigid pattern of behavior imposed on matter by the Creator, and to envisage the world process as a gradual growth of concrete reasonableness in the universe at large. In his opinion, a cosmogonic philosophy capable of representing the state of knowledge at which the West had arrived in his day

would suppose that in the beginning—infinitely remote—there was a chaos of unpersonalized feeling, which being without connection or regularity would properly be without existence. This feeling, sporting here and there in pure arbitrariness, would have started the germ of a generalizing tendency. Its other sportings would be evanescent, but this would have a growing virtue. Thus, the tendency to habit would be started; and from this, with the other principles of evolution, all the regularities of the universe would be evolved. At any time, however, an element of pure chance survives and will remain until the world becomes an absolutely perfect, rational, and symmetrical system, in which mind is at last crystalized in the infinitely distant future.12

Or, as he put it in another place:

... the coalescence, the becoming continuous, the becoming governed by laws, the becoming instinct with general ideas are but phases of one and the same process of growth of reasonableness. This is first shown to be true with mathematical exactitude in the field of logic, and is thence inferred to hold good metaphysically.18

Likewise, William James, Henri Bergson, A. N. Whitehead, and others, each in his own way, found in the idea of organic evolution the key to a new cosmology in which spontaneity, novelty, and purpose had a place, a place which had been denied them in the cosmology inherited from the seventeenth century. The influence of these new ideas may be seen in the writings of modern students of evolution, as when Professor Dobzhansky writes, somewhat mystically: “In producing life, cosmic evolution overcame its own bounds; in giving rise to man, biological evolution transcended itself. Human evolution may yet ascend to a superhuman level.” 14

To summarize concerning Darwin’s role with respect to the second stage of the conflict between science and religion: On the one hand, he gave the death blow to traditional natural theology by drawing out the ultimate implications for biology of the conception of nature as a law-bound system of matter in motion. On the other hand, he helped to precipitate a cosmological revolution (developing independently within physics itself) which threw into doubt the Newtonian cosmology Darwin and Huxley had taken for granted. Nature was open once more to the elements of value, purpose, and novelty which Newton and his contemporaries had extruded from it except in so far as they thought to find them in the wise design of the structures of nature.

We come now to the third stage of the conflict between science and religion, the stage in which the methods and attitudes of natural science were extended to the study of men, his history and institutions, political, economic, religious, and moral. The hope for a natural science of man and society had been voiced in the seventeenth and eighteenth centuries, but it was Herbert Spencer, in the mid-nineteenth century, who first proposed that the evolution of human history and human institutions be viewed as a simple extension of cosmic and organic evolution, continuous with them and subject to the same general laws. In his essay entitled “Progress: Its Law and Cause,” published in 1857, Spencer discerned in the whole universe a progressive development from homogeneity to heterogeneity. Progress seemed written into the structure of things. It was “not an accident, not a thing within human control, but a beneficent necessity.” In human history, said Spencer, progress had come about primarily through a competition of individuals and races. Those who were best adapted to the changing requirements of the environment won out over those less well-adapted, thus setting the stage for still further progress.15

The relation between Darwin and Spencer is an interesting one. On the one hand, Darwin was highly suspicious of Spencer’s intellectual methods. “My mind,” he wrote Spencer’s American disciple John Fiske, “is so fixed by the inductive method, that I cannot appreciate deductive reasoning . . . such parts of H. Spencer as I have read with care impress my mind with the

12 Peirce, Charles, Collected papers of Charles Sanders Peirce 6: paragraph 33, quoted in Wiener, op. cit., 84.
13 Ibid. 5: paragraph 4, quoted in Wiener, op. cit., 91.
15 For a fuller account of Spencer’s ideas as well as those of Auguste Comte, see my article Biology and social theory in the nineteenth century: Auguste Comte and Herbert Spencer, Critical problems in the history of science (Paper No. 14), scheduled for publication by the Wisconsin University Press in the fall of 1959.
idea of his inexhaustible wealth of suggestion, but never convince me." 16 On the other hand, there can be no question that Darwin shared Spencer’s belief in necessary, if somewhat sporadic, improvement in both nature and history and regarded natural selection as the chief engine of progress in both. The modern reader is rather surprised to see how frequently Darwin uses the terms “improve” and “improvement” in discussing natural selection. When Lyell protested that natural selection need not imply natural improvement unless there were some “principle of improvement” at work in nature independently of natural selection, Darwin replied:

When you contrast natural selection and “improvement,” you seem always to overlook... that every step in the natural selection of each species implies improvement in that species in relation to its conditions of life. No modification can be selected without it be an improvement or advantage. Improvement implies, I suppose, each form obtaining many parts or organs, all excellently adapted for their functions. As each species is improved, and as the number of forms will have increased, if we look to the whole course of time, the organic condition of life for other forms will become more complex, and there will be a necessity for other forms to become improved, or they will be exterminated; and I can see no limit to this process of improvement, without the intervention of any other and direct principle of improvement. All this seems to me quite compatible with certain forms fitted for simple conditions, remaining unaltered, or being degraded. 17

But what was the criterion of “improvement”? Not simply survival, for Darwin was quick to concede that natural selection might bring about developments which constituted “reversion” when viewed against the trend of development as a whole. Improvement in the latter sense seemed to imply some notion of “higher” forms of life capable of surviving in a wider range of environments. But Darwin and his colleagues Hooker and Huxley could never decide just what they meant by “higher” and “lower” forms. “I do not think zoologists agree in any definite ideas on this subject and my ideas are not clearer than those of my brethren,” Darwin wrote Hooker. 18

But, if there was no precise criterion of “higher” and “lower,” there could be no precise meaning to general improvement as distinct from competitive advantage in a specific situation. Ironically enough, Wallace and Darwin both thought that much of the ambiguity in this respect might have been avoided if instead of using the term “natural selection,” loaded with implications of intelligent choice, Darwin had used instead Spencer’s term “survival of the fittest.” Nowadays, on the contrary, biologists lament that Spencer’s term was ever adopted, even secondarily, because of the difficulty of defining a criterion of fitness and of stripping it of value implications. The moral of the story would seem to be that biologists can neither live with nor live without normative concepts implying standards of excellence. Thus, G. S. Carter, in his recent survey A Hundred Years of Evolution, struggles with the “problems raised by the element of progress in evolution.” “These,” he declares, “are the most fundamental of all, for it is the progressive nature of biological evolution, its progress from the simple to the complex, towards a ‘better’ organism and more ‘efficient’ life, that is the most outstanding characteristic of evolution in living nature.” 19 Professor Carter’s liberal use of quotation marks in this passage betrays his uneasiness at introducing what are essentially normative concepts into a science which he regards as “necessarily mechanistic.”

Whatever the difficulties involved in the notion of progressive improvement by natural selection in the realm of nature, they were as nothing compared to those which Darwin and Spencer encountered when they attempted to carry the idea over into human history. That mankind had progressed and would continue to progress Darwin seldom doubted. “I cannot explain why,” he wrote to Lyell in 1860, “but to me it would be an infinite satisfaction to believe that mankind will progress to such a pitch that we should [look] back at [ourselves] as mere Barbarians.” Again he wrote: “I am sorry to say that I have no ‘consolatory view’ on the dignity of man. I am content that man will probably advance, and care not much whether we are looked at as mere savages in a remotely distant future.” “To believe that man was aboriginally civilised and then suffered utter degradation in so many regions,” he declared in The Descent of Man, “is to take a pitifully low view of human nature. It is appar-

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16 Darwin to John Fiske, Down, December 8, 1874, Life and letters 2: 371.
17 Darwin to Charles Lyell, Ilkley, Yorkshire, October 25, 1859, Life and letters 1: 531.
18 Darwin to J. D. Hooker, Down, 1854, More letters 1: 76.
ently a truer and more cheerful view that progress has been much more general than regression; that man has risen, though by slow and interrupted steps, from a lowly condition to the highest standard as yet attained by him in knowledge, morals and religion.” 20 This progress, he added, gave hope for “a still higher destiny in the distant future.”

A very comforting, even inspiring, view of things this, but there were ambiguities in it, both as to the criterion of improvement and as to the method by which it had taken place and would take place. These difficulties may be illustrated with respect to Darwin’s account of the origin and progress of the moral sense, which he regarded as the chief attribute distinguishing man from the lower animals. In Darwin’s view, the moral sense sprang from the interaction of the social instincts with man’s superior intellectual powers, the whole process being guided by natural selection.

It must not be forgotten [he wrote in The Descent of Man] that although a high standard of morality gives a slight or no advantage to each individual man and his children over the other men of the same tribe, yet . . . an increase in the number of well-endowed men and an advancement in the standard of morality will certainly give an immense advantage to one tribe over another. A tribe including many members who, from possessing in a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, were always ready to aid one another, and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection. At all times throughout the world tribes have supplanted other tribes; and as morality is one important element in their success, the standard of morality and the number of well-endowed men will thus everywhere tend to rise and increase. . . . But as man gradually advanced in intellectual power, and was enabled to trace the more remote consequences of his actions; as he acquired sufficient knowledge to reject baneful customs and superstitions; as he regarded more and more, not only the welfare, but the happiness of his fellow-men; as from habit, following on beneficial experience, instruction, and example, his sympathies became more tender and widely diffused, extending to men of all races, to the imbecile, maimed, and other useless members of society, and finally to the lower animals,—so would the standard of his morality rise higher and higher. . . . Looking to future generations, there is no cause to fear that the social instinct will grow weaker, and we may expect that virtuous habits will grow stronger, becoming perhaps fixed by inheritance. In this case the struggle between our higher and lower impulses will be less severe, and virtue will be triumphant.21

But, it may be asked, if human sympathies become extended to all mankind, to all races and nations, to the imbecile and the maimed, the so-called useless members of society, what becomes of the competitive struggle and hence of the progress of man? Here, indeed, was a dilemma, and Darwin was caught squarely on the horns of it.

Man, like every other animal, [he wrote] has no doubt advanced to his present high condition through a struggle for existence consequent on his rapid multiplication; and if he is to advance still higher it is to be feared that he must remain subject to a severe struggle. Otherwise he would sink into indolence, and the more gifted men would not be more successful in the battle of life than the less gifted. Hence our natural rate of increase, though leading to many and obvious evils, must not be greatly diminished by any means. There should be open competition for all men; and the most able should not be prevented by laws or customs from succeeding best and rearing the largest number of offspring.22

This would seem a frank enough avowal of Spencer’s “Every man for himself, and the devil take the hindmost,” but Darwin immediately adds that the moral qualities, though developed in part by the struggle for existence, are developed even more “through the effects of habit, the reasoning powers, instruction, religion, &c.” than through natural selection.

Darwin’s reference to the elevating influence of religion on the moral sense is interesting in view of the precarious state of his own religious beliefs. Speaking as an anthropologist, he thought to find the origin of religious ideas in the fears and dreams of primitive peoples. Presumably it was only in the later stages of social advance that religion exercised a beneficial influence on morality. “The idea of a universal and beneficent Creator,” he noted, “does not seem to arise in the mind of man, until he has been elevated by long-continued culture.” Yet the latest advances


21 Darwin, Descent of man, 124–125, 132.

22 Ibid., 618. See also pages 133–134.
in science, to which Darwin himself had contributed mightily, seemed to undermine belief in such a Creator. Science, in discovering the secret of man’s lowly origin and the equally humble origin of his highest thoughts and aspirations, seemed to Darwin to have destroyed confidence in man’s reason and in his deepest intuitions when confronted with the ultimate questions of human existence. Darwin himself confessed to an “inward conviction” that the universe was not the result of chance. “But then,” he added, “with me the horrid doubt always arises whether the convictions of man’s mind, which has been developed from the mind of the lower animals, are of any value or at all trustworthy. Would any one trust in the convictions of a monkey’s mind, if there are any convictions in such a mind.”

Here, indeed, was agnosticism, an agnosticism which trusted in the power of science to trace the origin of stars and planets, mountains and species, morality and religion, but which to all the deepest questions of the human spirit returned an Ignorabo, followed by an Ignorabu. These were gloomy thoughts, and they were but little relieved by Darwin’s rather ambiguous belief in the progress of man. For over human progress lay a dark shadow—“the idea,” he wrote to Hooker, “or rather I presume the certainty of the sun some day cooling and we all freezing. To think of the progress of millions of years, with every continent swarming with good and enlightened men, all ending in this, and with probably no fresh start until this our planetary system has been again converted into red-hot gas. Sic transit gloria mundi, with a vengeance...”

There was, however, an even more dreadful thought which never occurred to Darwin because he assumed that the progress of science and civilization necessarily brought moral improvement in its wake. This was the thought, all too familiar to the present generation, that man might perish not through some natural catastrophe but by his own hand, because the progress of science and technology, of man’s intellectual powers, had outrun the progress of human sympathy and understanding.

These difficulties and ambiguities in Darwin’s reflections on nature, man, and God would not be worth rehearsing at such great length if they had been his difficulties alone. After all, he was primarily a biologist and a very great one. It would perhaps be too much to expect any biologist since Aristotle to be simultaneously a great moral philosopher and social thinker. But Darwin’s difficulties and inadequacies were those of his age and of the age which succeeded. They entered deeply into biological and social thought and still do. The genetic fallacy which led Darwin to suppose that the religious beliefs of mankind were adequately accounted for in terms of the dreams and fears of primitive peoples was to permeate sociology and cultural anthropology for many years to come. The sociological positivism which identified Kant’s categorical imperative as the voice of society built into the individual by a long course of social training was to reappear in Freud and Durkheim. The anti-metaphysical bias which relegated to the realm of the unknowable everything which could not be formulated scientifically was to become even more pronounced. The conception of human progress as an outcome of competitive struggle between individuals, nations, and races was to wreak incalculable havoc in the custody of men less deeply humanitarian than Darwin. Finally, the confident assumption that the progress of intellect, especially of science and the scientific attitude, is necessarily accompanied by moral and cultural progress still lingers on despite the shattering events of our own age and the threat of atomic destruction. “Judged by any reasonable criteria,” Professor Dobzhansky writes in his recent book The Biological Basis of Human Freedom, “man represents the highest, most progressive, and most successful product of organic evolution. . . . Most remarkable of all, he is now in the process of acquiring knowledge which may permit him, if he so chooses, to control his own evolution. He may yet become ‘business manager for the cosmic process of evolution,’ a role which Julian Huxley has ascribed to him, perhaps prematurely.”

What should a sane man think of this? Should he conclude with Sir Julian that the cosmic process, after billions of years of labor, has finally brought forth a creature, man, who is ready or nearly ready to direct the future course of things? Or should he rather regard the very entertaining of such an idea as a symptom of the madness with

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which the gods afflict those whom they would destroy?

To summarize: With respect to revealed religion, Darwin’s writings helped to precipitate a rethinking of traditional doctrines concerning inspiration and revelation, a rethinking which has proceeded in several directions and is still going on.

With respect to natural religion, Darwin shattered its traditional basis by exhibiting the adaptation of structure to function in the organic world as a necessary outcome of random variation, struggle for existence, and natural selection. For many of his contemporaries the blow was softened by the indomitable faith of the nineteenth century in progress, a faith which enabled them to view the world-machine as a divinely contrived mechanism for insuring perpetual improvement in nature and history. But Darwin found little comfort in this view. Progress was too slow, too sporadic and haphazard, too precarious to reflect much credit on the Creator, if there was one. But though Darwin remained a prisoner of the law-bound system of matter in motion which he had extended to biology, others found in his theory of organic evolution a way of escape from the gloomy confines of that system. The revolution in biology was soon followed by a revolution in physics and cosmology.

With respect to the third stage of the conflict, in which the methods of natural science were applied to the study of man and society, Darwin played a pioneer role. His writings in this field are valuable not so much for their scientific content as for the light they throw on the difficulties inherent in the concept of social science. Like Spencer, Darwin attempted to apply the concepts of biology to human history; like Spencer, he wound up in hopeless contradictions. Biology afforded no criterion of progress for a creature like man, and Darwin was forced to bring in other criteria, imported surreptitiously from his Christian background. To the very end, he failed to appreciate the morally ambiguous character of human progress. He failed because, like many social scientists today, he had no adequate conception of man. Whatever his origin, man is a very peculiar creature, whose inmost being eludes the abstractions of science. For science, since it adopts the point of view of the detached observer, has no access to those aspects of reality which can be known only from the point of view of the actor. Yet, ultimately, the scientist himself is an actor in the difficult human situation, and science becomes pointless and even destructive unless it takes on significance and direction from a religious affirmation concerning the meaning and value of human existence.