

The religious views of Stephen Gould and Charles Darwin.

Special Issue: Science and Religion: Conflict or Conciliation?

by Martin Gardner

Rocks of Ages is the clever title of the latest book by Stephen Jay Gould, Harvard's famous paleontologist and best-selling author. One of the title's two "rocks" is religion. The other is science, typified by the fossil-rich rocks that support the fact of evolution.

Professor Gould strongly opposes the notion that science and religion are irreconcilable, a claim defended in two classic works: *The Conflict Between Religion and Science* (1877) by the American scientist John William Draper, and the two-volume *History of the Warfare of Science and Theology* (1894), by Cornell historian and first president Andrew Dickson White. Both books, which Gould discusses at length, regard science and religion, especially Roman Catholicism, as locked in eternal combat.

Although Gould calls himself an agnostic inclined toward atheism, his book is a passionate plea for tolerance between the two realms. Science and religion, he contends, are examples of a principle he calls NOMA, or Non-Overlapping Magisteria. There is indeed a conflict between the two if religion is taken in the narrow sense of a creed that requires God's miraculous interventions in history, and refuses to accept the overwhelming evidence for evolution. Such superstitions, by entangling the two magisteria, generate mutual enmity. If, however, religion is taken in a broader sense, either as a philosophical theism free of superstitions, or as a secular humanism grounded on ethical norms, then Gould sees no conflict between the two magisteria. Not that they can be unified in a

single conceptual scheme, but that they can flourish side by side like two independent nations at peace with one another.

Science, Gould reminds us, is a search for the facts and laws of nature. Religion is a spiritual quest for ultimate meaning and for moral values that science is powerless to provide. To echo Kant and Hume, science tells us what is, not what ought to be. "*To cite the usual cliches,*" Gould writes, "*we get the age of the rocks, and religion retains the rock of ages; we study how the heavens go, and they determine how to go to heaven.*" There is no mention of John Dewey, but Gould's theme is not far from the essence of Dewey's little book *A Common Faith*.

Gould quotes liberally from the letters of Charles Robert Darwin, who, together with Thomas Henry Huxley, are two of his greatest heroes. These quotations sent me to *The Life and Letters of Charles Darwin (1887)* by his botanist son Francis. One chapter deals entirely with Darwin's slow disenchantment with Christianity, and his eventual decision to call himself an agnostic. The term had been coined by Huxley, known in his day as "Darwin's Bulldog" for his vigorous defense of natural selection, and his unremitting attacks on the crude protestant fundamentalism of England's prime minister William Ewart Gladstone.

As a youth Darwin firmly believed the Bible to be the inspired word of God. His Anglican father wanted him to become a clergyman, and Charles actually spent three years at Cambridge preparing for ordination. Although he gradually lost his faith, he always remained tolerant and respectful of the views of his Christian friends and associates, especially of the devout beliefs of his wife.

Darwin married his cousin Emma Wedgwood, who bore him ten children. They loved each other deeply, but throughout their otherwise happy marriage each agonized over their irreconcilable religious differences. Janet Browne, in her splendid biography *Charles Darwin (1995)*, reprints one of Emma's letters to Charles, written before they married, in which she implores him to give up his habit of "*believing nothing until it is proved.*" Darwin called it a

"beautiful letter," and wrote on its envelope, "When I am dead, know how many times I have kissed and cried over this."

The death of their daughter Anne intensified Darwin's antipathy toward Christianity, and widened the religious rift between Emma and himself. She never abandoned her faith. As a widow she may have died still tormented (as Browne puts it) by the thought that "she might not meet him [Charles] in heaven." Some biographers have even speculated, though without evidence, that Darwin's chronic illnesses were the psychosomatic consequences of the theological divide between himself and his beloved wife.

Darwin's religious tolerance is at the heart of Gould's book. He even praises Pope John Paul for his 1996 statement that evolution is no longer just a theory, but a well-established fact that Catholics should accept provided they insist that immortal souls were infused into the evolved bodies of the first humans. Gould sees this as a major step on the part of Rome's magisterium toward accepting the NOMA principle.

"Nature is amoral," Gould writes, "not immoral. . . . [It] existed for eons before we arrived, didn't know we were coming, and doesn't give a damn about us. . . . Nature betrays no statistical preference for being either warm and fuzzy, or ugly and disgusting. Nature just is - in all her complexity and diversity, in all her sublime indifference to our desires. Therefore we cannot use nature for our moral instruction, or for answering any question within the magisterium of religion."

Although science is powerless to furnish ethical rules or proofs of God, neither is it capable of ruling out the possibility of a deity or the existence of moral imperatives based on a common human nature. Here is how Gould accurately summarizes Darwin's acceptance of NOMA:

Darwin did not use evolution to promote atheism, or to maintain that no concept of God could ever be squared with the structure of nature. Rather, he argued that nature's factuality, as read within the magisterium of science, could not resolve, or even specify, the existence or character of God, the ultimate meaning of life, the proper foundations of morality, or any other question within the different magisterium of religion. If many Western thinkers had once invoked a blinkered and indefensible concept of

divinity to declare the impossibility of evolution, Darwin would not make the same arrogant mistake in the opposite direction, and claim that the fact of evolution implies the nonexistence of God.

Let's turn now to how Darwin himself, in carefully chosen words, expressed his religious opinions, with great humility and honesty, in correspondence quoted by his son. Here is a paragraph from a letter of 1860:

One word more on "designed laws" and "undesigned results." I see a bird which I want for food, take my gun and kill it, I do this designedly. An innocent and good man stands under a tree and is killed by a flash of lightning. Do you believe (and I really should like to hear) that God designedly killed this man? Many or most persons do believe this; I can't and don't. If you believe so, do you believe that when a swallow snaps up a gnat that God designed that that particular swallow should snap up that particular gnat at that particular instant? I believe that the man and the gnat are in the same predicament. If the death of neither man nor gnat are designed, I see no good reason to believe that their first birth or production should be necessarily designed.

In another 1860 letter, written to botanist Asa Gray, Darwin had this to say:

With respect to the theological view of the question. This is always painful to me. I am bewildered. I had no intention to write atheistically. But I own that I cannot see as plainly as others do, and as I should wish to do, evidence of design and beneficence on all sides of us. 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. Certainly I agree with you that my

views are not at all necessarily atheistical. The lightning kills a man, whether a good one or bad one, owing to the excessively complex action of natural laws. A child (who may turn out an idiot) is born by the action of even more complex laws, and I can see no reason why a man, or other animal, may not have been aboriginally produced by other laws, and that all these laws may have been expressly designed by an omniscient Creator, who foresaw every future event and consequence. But the more I think the more bewildered I become; as indeed I probably have shown by this letter.

From a letter of 1873:

What my own views may be is a question of no consequence to any one but myself. But, as you ask, I may state that my judgment often fluctuates. . . . In my most extreme fluctuations I have never been an Atheist in the sense of denying the existence of a God. I think that generally (and more and more as I grow older), but not always, that an Agnostic would be the more correct description of my state of mind.

From a letter of 1879:

It is impossible to answer your question briefly; and I am not sure that I could do so, even if I wrote at some length. But I may say that the impossibility of conceiving that this grand and wondrous universe, with our conscious selves, arose through chance, seems to me the chief argument for the existence of God; but whether this is an argument of real value, I have never been able to decide. I am aware that if we admit a first cause, the mind still craves to know whence it came, and how it arose. Nor can I overlook the difficulty from the immense amount of suffering through the world. I am, also, induced to defer to a certain extent to the judgment of the many able men who have fully believed in God; but here again I see how poor an argument this is. The safest conclusion seems to me that the whole subject is beyond the scope of man's intellect.

In 1876 Darwin wrote a candid autobiography intended to be read only by his wife and children.(1) Francis, in the biography of his father, gives a series of excerpts from this autobiography in which Darwin writes about his religious opinions. I quote this section in its entirety:

Whilst on board the Beagle I was quite orthodox, and I remember being heartily laughed at by several of the officers (though themselves orthodox)

for quoting the Bible as an unanswerable authority on some point of morality. I suppose it was the novelty of the argument that amused them. But I had gradually come by this time, i.e., 1836 to 1839, to see that the Old Testament was no more to be trusted than the sacred books of the Hindoos. 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, he would permit it to be connected with the belief in Vishnu, Siva, etc., 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, - and 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 eye-witnesses; - 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. The fact that many false religions have spread over large portions of the earth like wild-fire had some weight with me.

But I was very unwilling to give up my belief; I feel sure of this, for I can well remember often and often inventing day-dreams of old letters between distinguished Romans, and manuscripts being discovered at Pompeii or elsewhere, which confirmed in the most striking manner all that was written in the Gospels. But I found it more and more difficult, with free scope given to my imagination, to invent evidence which would suffice to convince me. Thus disbelief crept over me at a very slow rate, but was at last complete. The rate was so slow that I felt no distress.

Although I did not think much about the existence of a personal God until a considerably later period of my life, I will here give the vague conclusions to which I have been driven. The old argument from 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. We can no longer argue that, for instance, the beautiful hinge of a bivalve shell must have been made by an intelligent being, like the hinge of a door by man. 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. But I have discussed this subject at the end of my book on the "Variations of Domesticated Animals and Plants," and the argument there given has never, as far as I can see, been answered.

But passing over the endless beautiful adaptations which we everywhere meet with, it may be asked how can the generally beneficent arrangement of the world be accounted for? Some writers indeed are so much impressed with the amount of suffering in the world, that they doubt, if we look to all sentient beings, whether there is more of misery or of happiness; whether the world as a whole is a good or bad one. According to my judgment happiness decidedly prevails, though this would be very difficult to prove. If the truth of this conclusion be granted, it harmonizes well with the effects which we might expect from natural selection. If all the individuals of any species were habitually to suffer to an extreme degree, they would neglect to propagate their kind; but we have no reason to believe that this has ever, or at least often occurred. Some other considerations, moreover, lead to the belief that all sentient beings have been formed so as to enjoy, as a general rule, happiness.

Everyone who believes, as I do, that all the corporeal and mental organs (excepting those which are neither advantageous nor disadvantageous to the possessor) of all beings have been developed through natural selection, or the survival of the fittest, together with use or habit, will admit that these organs have been formed so that their possessors may compete successfully with other beings, and thus increase in number. Now an animal may be led to pursue that course of action which is most beneficial to the species by suffering, such as pain, hunger, thirst, and fear; or by pleasure, as in eating and drinking, and in the propagation of the species, etc.; or by both means combined, as in the search for food. But pain or suffering of any kind, if long continued, causes depression and lessens the power of action, yet is well adapted to make a creature guard itself against any great or sudden evil. Pleasurable sensations, on the other hand, may be long continued without any depressing effect; on the contrary, they stimulate the whole system to increased action. Hence it has come to pass that most or all sentient beings have been developed in such a manner, through natural selection, that pleasurable sensations serve as their habitual guides. We see this in the pleasure from exertion, even occasionally from great exertion of the body or mind, - in the pleasure of our daily meals, and especially in the pleasure derived from sociability, and from loving our families. The sum of such pleasures as these, which are habitual or frequently recurrent, give, as I can hardly doubt, to most

sentient beings an excess of happiness over misery, although many occasionally suffer much. Such suffering is quite compatible with the belief in Natural Selection, which is not perfect in its action, but tends only to render each species as successful as possible in the battle for life with other species, in wonderfully complex and changing circumstances.

That there is much suffering in the world no one disputes. Some have attempted to explain this with reference to man by imagining that it serves for his moral improvement. But the number of men in the world is as nothing compared with that of all other sentient beings, and they often suffer greatly without any moral improvement. This very old argument from the existence of suffering against the existence of an intelligent First Cause seems to me a strong one; whereas, as just remarked, the presence of much suffering agrees well with the view that all organic beings have been developed through variation and natural selection.

At the present day the most usual argument for the existence of an intelligent God is drawn from the deep inward conviction and feelings which are experienced by most persons.

Formerly I was led by feelings such as those just referred to (although I do not think that the religious sentiment was every strongly developed in me), to the firm conviction of the existence of God, and of the immortality of the soul. In my Journal I wrote that whilst standing in the midst of the grandeur of a Brazilian forest, "it is not possible to give an adequate idea of the higher feelings of wonder, admiration, and devotion, which fill and elevate the mind." I well remember my conviction that there is more in man than the mere breath of his body. But now the grandest scenes would not cause any such convictions and feelings to rise in my mind. It may be truly said that I am like a man who has become colour-blind, and the universal belief by men of the existence of redness makes my present loss of perception of not the least value as evidence. This argument would be a valid one if all men of all races had the same inward conviction of the existence of one God; but we know that this is very far from being the case. Therefore I cannot see that such inward convictions and feelings are of any weight as evidence of what really exists. The state of mind which grand scenes formerly excited in me, and which was intimately connected with a belief in God, did not essentially differ from that which is often called the sense of sublimity; and however difficult it may be to explain the genesis of this sense, it can hardly be advanced as an argument for the

existence of God, any more than the powerful though vague and similar feelings excited by music.

With respect to immortality, nothing shows me [so clearly] how strong and almost instinctive a belief it is, as the consideration of the view now held by most physicists, namely that the sun with all the planets will in time grow too cold for life, unless indeed some great body dashes into the sun, and thus gives it fresh life. Believing as I do that man in the distant future will be a far more perfect creature than he now is, it is an intolerable thought that he and all other sentient beings are doomed to complete annihilation after such long-continued slow progress. To those who fully admit the immortality of the human soul, the destruction of our world will not appear so dreadful.

Another source of conviction in the existence of God, connected with the reason, and not with the feelings, impresses me as having much more weight. This follows from the extreme difficulty or rather impossibility of conceiving this immense and wonderful universe, including man with his capacity of looking far backwards and far into futurity, as the result of blind chance or necessity. When thus reflecting I feel compelled to look to a First Cause having an intelligent mind in some degree analogous to that of man; and I deserve to be called a Theist. This conclusion was strong in my mind about the time, as far as I can remember, when I wrote the "Origin of Species"; and it is since that time that it has very gradually, with many fluctuations, become weaker. But then arises the doubt, can the mind of man, which has, as I fully believe, been developed from a mind as low as that possessed by the lowest animals, be trusted when it draws such grand conclusions?

I cannot pretend to throw the least light on such abstruse problems. The mystery of the beginning of all things is insoluble by us; and I for one must be content to remain an Agnostic.

When Bertrand Russell was sent to prison for opposing England's entrance into the first World War, the warden asked him what his religion was. Russell replied "agnostic." After asking Russell how to spell it, the warden sighed and said, "Well, there are many religions, but I suppose they all worship the same God." "This remark," Russell adds in his autobiography, "kept me cheerful for about a week."

Note

1. *An unexpurgated edition of Darwin's autobiography, edited by his granddaughter Nora Barlow, was published in 1958 and is currently available as a Norton paperback. Earlier editions of the autobiography had been heavily censored by Darwin's family, mainly to remove Darwin's biting criticisms of some of his contemporaries.*

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