

## Asa Gray, "Darwiniana" (1876)

While religious leaders assaulted Darwin's theory for calling into question the literal accuracy of the Bible, several prominent American scientists defended the English researcher. Asa Gray (1810-1888) was a professor of natural science at Harvard University who corresponded with Darwin for four years. In numerous speeches and articles, Gray applauded Darwin's scientific method and his startling conclusions. He also insisted that Darwinian evolution did not conflict with Judeo-Christian beliefs; instead, he contended that God was responsible for evolutionary development.

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Whatever Mr. Darwin's philosophy may be, or whether he has any, is a matter of no consequence at all, compared with the important questions, whether a theory to account for the origination and diversification of animal and vegetable forms through the operation of secondary causes does or does not exclude [design](#);<sup>1</sup> and whether the establishment by adequate evidence of Darwin's particular theory of diversification through variation and natural selection would essentially alter the present scientific and philosophical grounds for theistic views of Nature. . . .

After full and serious consideration, we are constrained to say that, in our opinion, the adoption of a derivative hypothesis, and of Darwin's particular hypotheses, if we understand it, would leave the doctrines of final causes, utility, and special design, just where they were before. We do not pretend that the subject is not environed with difficulties. Every view is so environed; and every shifting of the view is likely, if it removes some difficulties, to bring others into prominence. But we cannot perceive that Darwin's theory brings in any new kind of scientific difficulty, that is, any with which philosophical naturalists were not already familiar.

Wherefore, Darwin's reticence about efficient cause does not disturb us. He considers only the scientific questions. As already stated, we think that a theistic view of Nature is implied in his book, and we must charitably refrain from suggesting the contrary until the contrary is logically deduced from his premises.

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. . . To our minds the argument from design always appeared conclusive of the being and continuous operation of an intelligent First Cause, The Ordainer of Nature; and we do not see that the grounds of such belief would be disturbed or shifted by the adoption of Darwin's hypothesis. We are not blind to the philosophical difficulties which the thoroughgoing implication of design in Nature has to encounter, nor is it our vocation to obviate them. It suffices us to know that they are not new nor peculiar difficulties—that, as Darwin's theory and our reasonings upon it did not raise these perturbing spirits, they are not bound to lay them. Meanwhile, that the doctrine of design encounters the very same difficulties in the material that it does in the moral world is just what ought to be expected.

So the issue between the skeptic and the theist is only the old one, long ago argued out—namely, whether organic Nature is a result of [design](#);<sup>2</sup> or of chance. Variation and natural selection open no third alternative; they concern only the question how the results, whether fortuitous or

designed, may have been brought about. Organic Nature abounds with unmistakable and irresistible indications of design, and, being a connected and consistent system, this evidence carries the implication of design throughout the whole. On the other hand, chance carries no probabilities with it, can never be developed into a consistent system, but, when applied to the explanation of orderly or beneficial results, heaps up improbabilities at every step beyond all computation. To us, a fortuitous Cosmos is simply inconceivable. The alternative is a designed Cosmos.

It is very easy to assume that, because events in Nature are in one sense accidental, and the operative forces which bring them to pass are themselves blind and unintelligent (physically considered, all forces are), therefore they are undirected, or that he who describes these events as the results of such forces thereby assumes that they are undirected.

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As to all this, nothing is easier than to bring out in the conclusion what you introduce in the premises. If you import atheism into your conception of variation and natural selection, you can readily exhibit it in the result. If you do not put it in, perhaps there need be none to come out. . . .

It is evident that the strongest point against the compatibility of Darwin's hypothesis with design in Nature is made when natural selection is referred to as picking out those variations which are improvements from a vast number which are not improvements, but perhaps the contrary, and therefore useless or purposeless, and born to perish.

But even here the difficulty is not peculiar; for Nature abounds with analogous instances. Some of our race are useless, or worse, as regards the improvement of mankind; yet the race may be designed to improve, and be actually improving. Or, to avoid the complication with free agency—the whole animate life of a country depends absolutely upon the vegetation, the vegetation upon the rain. The moisture is furnished by the ocean, is raised by the sun's heat from the ocean's surface, and is wafted inland by the winds. But what multitudes of raindrops fall back into the ocean—are as much without a final cause as the incipient varieties which come to nothing! Does it therefore follow that the rains which are bestowed upon the soil with such rule and average regularity were not designed to support vegetable and animal life? Consider, likewise, the vast proportion of seeds and pollen, or ova and young—a thousand or more to one—which come to nothing, and are therefore purposeless in the same sense, and only in the same sense, as are Darwin's unimproved and unused slight variations. The world is full of such cases; and these must answer the argument—for we cannot, except by thus showing that it proves too much.

Finally it is worth noticing that, though natural selection is scientifically explicable, variation is not. Thus far the cause of variation, or the reason why the offspring is sometimes unlike the parents, is just as mysterious as the reason why it is generally like the parents. It is now as inexplicable as any other origination; and, if ever explained, the explanation will only carry up the sequence of secondary causes one step farther, and bring us in face of a somewhat different problem, but which will have the same element of mystery that the problem of variation has now. Circumstances may preserve or may destroy the variations; man may use or direct them; but selection, whether artificial or natural, no more originates them than man originates the power which turns a wheel, when he dams a stream and lets the water fall upon it. The origination of

this power is a question about efficient cause. The tendency of science in respect to this obviously is not toward the omnipotence of matter, as some suppose, but toward the omnipotence of spirit.

So the real question we come to is as to the way in which we are to conceive intelligent and efficient cause to be exerted, and upon what exerted. Are we bound to suppose efficient cause in all cases exerted upon nothing to evoke something into existence—and this thousands of times repeated, when a slight change in the details would make all the difference between successive species? Why may not the new species, or some of them be designed diversifications of the old?

There are, perhaps, only three views of efficient cause which may claim to be both philosophical and theistic:

1. The view of its exertion at the beginning of time, endowing matter and created things with forces which do the work and produce the phenomena.
2. This same view, with the theory of insulated interpositions, or occasional direct action, engrafted upon it—the view that events and operations in general go on in virtue simply of forces communicated at the first, but that now and then, and only now and then, the Deity puts his hand directly to the work.
3. The theory of the immediate, orderly, and constant, however infinitely diversified, action of the intelligent efficient Cause.

It must be allowed that, while the third is preeminently the Christian view, all three are philosophically compatible with design in Nature. The second is probably the popular conception. Perhaps most thoughtful people oscillate from the middle view toward the first or the third—adopting the first on some occasions, the third on others.

1. I.e., providential design. (Return to [text](#))

2. I.e., providential design. (Return to [text](#))

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[From Asa Gray, *Darwiniana*, (New York: D. Appleton, 1876), pp. 10-15, 20-21, 53-58.]