

AN ESSAY ON NON-MIRACLES

BY E. T. BREWSTER

NOT all people who believe that miracles occur, will agree as to what a miracle is. Still less will they agree as to the nature of non-miracle. Nevertheless, everybody seems to take it for granted that "non-miraculous" events are completely understood. All we have to do is to accounts for events of the other sort which we call "miraculous." But the problem is by no means so simple.

One point, however, everybody seems agreed on. A miracle is always "a violation of Natural Law," or else it is a case of a "higher Natural Law" "interfering with" or "setting aside" a "lower." But a non-miracle is thought to occur "by the operation of Natural Laws" and so does not have to be discussed at all.

It all sounds very simple—until one reflects that "natural law" is itself a highly ambiguous term, that has at least three distinct meanings. If one confuses these meanings, still more if one jumps back and forth rapidly from one meaning to another, one can spin out a long argument either for or against "miracles," according to the side he happens to choose. So the whole problem really turns on what one really means when he says "law of nature."

He may have in mind—though commonly he does not—an old pre-scientific folk sense, an epigrammatic summing up of folk experience: All men are mortal; water seeks its level; a straight line is the shortest distance between two points; honesty is the best policy. All these statements are true as a matter of general commonplace observation. But nobody maintains that they are in any wise universally or absolutely true, so that, for example, dishonesty might not prove efficient under some conditions and a straight line take on unexpected properties in non-Euclidean space.

This is the sense of "law of nature" in Hume's *Essay on Miracles*. And of course, there goes with it the corresponding sense of "mir-

acle." It has always been a simple matter to refute "St. David" by pretending that he is using the two words in some other of their various meanings. But "law of nature," in this sense has neither scientific nor philosophical nor theological standing. It simply is a formulation of folk experience; the perfectly *naive* interpretation of things as they appear. Such laws of nature are necessarily "violated" whenever anything unusual happens.

In sharp contrast to this meaning is another, which like a good many of our important ideas we owe chiefly to Roman stoicism.

The universe, for the Stoic, is an original and self-existent chaos, which, at least in part, has been subdued to order by the divine *logos*. In other words, God orders the affairs of the cosmos very much as the Roman emperor orders the affairs of the civilized world. The Emperor issues edicts, and men obey. God lays down "laws" which "govern" the operations of nature. So far, then, as nature is rational and orderly it obeys these specific regulations of the divine reason.

But this idea of "law" as something imposed upon "matter" by the word of God, is evidently a very long step beyond the folk meaning of the same word. This says merely: things commonly happen thus and so. Probably they will happen the same way again. But maybe they will not. Who knows? As Hume put it, in effect, things have happened thus and so, with so few exceptions, if any, that it becomes the safer bet that people who think they happen otherwise are mistaken. But there is nowhere any idea of necessity or compulsion or any will of God to make anything happen one way or another. But the Stoic idea makes the whole affair much more serious. God has laid down the "law." The universe obeys. Only he who made the law can alter it. This is a noble idea; but like the other, it is quite pre-scientific.

It has persisted unchanged all down through the Christian ages to the present time. St. Augustine, for example, has "God the maker of all natures . . . from whom is all the law and number and order of nature." Spinoza especially played up the idea. Kepler is quoted as saying of his three Laws of Planetary Motion, "I think God's thoughts after him." Kepler was pre-Newtonian, and having virtually no idea at all of what we now call "mechanical causation," thought that the planets are carried round the sun by angels. His three famous laws, therefore, were literally verbal orders issued to the angels of the moon and earth and planets to act precisely so and so, until further notice.

One sees the same idea daily in all sorts of forms. "The laws of nature presuppose a Law-Giver." "God cannot be bound by his own laws." "The reign of Natural Law." Or as an eminent Modernist preacher puts it—he does not believe in miracles, but he has the pre-scientific idea of "law"—"I cannot believe that the laws of nature were ever violated; for the simple reason that God himself has taught me, as he is teaching all our sons and daughters in every modern university of the western world today that these laws are immutable throughout eternity. . . ."

The fallacy is, of course, obvious. Nobody has any possible way of finding out whether "these laws" in the *scientific sense of "law"* are or are not "immutable throughout eternity." The oldest of them has been checked up for only about three hundred years, which is a long way short of eternity. No law of science is known to hold exactly, and not a few of them have had to be abandoned because they have proved not to work at all. The trouble is that our eminent divine, like many another of his fellows, uses "law of nature" in the old Stoic sense; and then transfers this idea to scientific people, as if they use "law" in this Stoic sense—as they never do.

For the scientific meaning of "law of nature" ties up with the folk meaning of the word, not with the Stoic. A law of science, in the modern sense, is a formula, usually in mathematical terms, by means of which we can predict, often with a high degree of accuracy, what is most likely to happen in the future. "The entire task of science," writes the great chemist Ostwald, "is to establish such relations between measurable quantities that, some of these quantities being given, the others may be deduced." The laws of science are the technical devices, continually being expanded and improved, by which this end is more and more completely attained. Or as an uncommonly clear-headed theologian puts it, "Where as law was once thought of as a restraint imposed upon the universe from without and wielding an absolute power over nature, it is now thought of simply as our description of the behavior of phenomena."

See, then, what nonsense it makes when one attributes to scientific people the theological meaning of "natural law," and then interprets their language as if they really did ever use the term in that sense! The divine quoted above, having occasion to rebuke his bishop for his ignorance of modern ideas, went on to point out the impossibility that a human body which "weighed, let us say, one hundred and fifty pounds," could promenade the surface of the Sea of Galilee, "in utter defiance of the law of gravitation."

But the only "law of gravitation" that science knows anything about is the algebraic formula $F = \frac{G m m'}{d^2}$. The great Sir Isaac first wrote this out, and it proves most convenient for reckoning the time of the next eclipse, and the dates of Easter, and the weight of distant binary stars, and various other things that various persons want to know. But it does not cause eclipses nor Easter Sundays nor make the stars spin round. Therefore nobody can "defy" it. In fact, one does not "defy" anything algebraic. One defies bishops. Besides, the Relativists think the law of gravitation isn't true anyway!

What the Doctor of Divinity really means is that everybody, as a matter of folk experience, has to reckon with the *force of gravity*. Nobody really knows in the least why a human body which weighs, "let us say, a hundred and fifty pounds"—or even two hundred and fifty, for that matter—commonly sinks when it tries to walk on water, nor why it commonly does not sink when it walks on ice. But there is the general experience of the force of gravity. Newton analyzed, mathematically, our primitive folk idea of *force*. He set forth his highly important *theory* of Universal Gravitation, which has proved to fit a considerable number of facts, is part of conventional science, and may very well be true. He also formulated and tested his *law* of Gravitation, for the convenience of people who want to predict eclipses, date Easter Sunday, and the rest. But the "Law of Gravitation" has nothing to do with anybody's sinking in water. That misfortune can be accurately described in terms of gravity and Archimedes' Law and Pascal's Law, and various other scientific technicalities, none of which have the slightest bearing on the practical question. One simply sinks. Nobody knows why. All the "laws" do is to enable scientific people to tell without trying just what will sink and what will not, and how fast and how far. None of them have any "control" over anything. Our Modernist divine merely dragged in his Law of Gravitation by the ears, to make himself sound scientific, and to add another zest to the popular but cruel sport of bishop bating.

Miracles, in short, are "violations of natural law" only in the Stoic and theological sense of "natural law." The "laws of science" have no bearing on the matter at all. Questions of "force" in the scientific sense, may be involved. So also may questions of "matter," also in the scientific sense. We are continually discovering new properties of "matter" and we are continually gaining new con-

trol over "force." So one has always to use his judgment when confronted with a story of a new scientific achievement or an old miracle. But "law" in the scientific sense, is never involved in the credibility of any alleged "miracle" but only "law" in the theological sense.

Many a time, then, has the scientific world wished it had taken some other word than "law" for its predictive formulas, and let the clergy have the term to themselves. But the harm being done, the best we can make of a bad matter is to confine "natural law" and "law of nature" to the old Stoic compulsory sense, and to say "law of science" whenever we mean any one of the two or three hundred brief summaries of the facts of observation which we see in the scientific reference books.

In other words, this whole problem of miracles and non-miracles is entirely factitious. Events simply are. Nobody knows why.

I sit down to my typewriter and think "A." Forthwith, the proper finger hits the "A" key. But has anybody the remotest idea how a mental state operates to alter the position of bodies in the outer world? A recent discussion proposes to call this performance a miracle. Well, of course it is, in the sense that it is "a material change dictated by mind" and nobody knows how the trick is done. That is a perfectly good definition of "miracle"—only, where shall one look for a non-miracle?

But when I hit the "A" key, the "force"—whatever that may mean—sets in operation sundry springs and levers, until the letter prints. But no mortal knows why one body moves another, any more than he knows how an idea in his thought stream moves a body. The finger goes through the air; and it does not go through the key. The key is a rigid bar that is deformed inappreciably; and the ink ribbon is flexible and buckles under a like stress. These, I understand, are not miracles. But why not? Nobody has any idea whatever, why air and steel and silk do not behave alike.

All events, in short, are alike incomprehensible. Doubtless it is remarkable that the twig of a pear tree grafted on an apple, should still bear pears and not apples. But it is equally remarkable that trees growing out of the ground should bear either apples or pears instead of stones. Doubtless it is amazing that staves, cast from the hands of Pharaoh's magicians should alter instantly into serpents. But it is equally amazing that serpents eggs, let alone, should come slowly to a like end. It is all a question of what one is used to seeing and what one can prove to have happened.

Events, in other words, differ in frequency and in predictability. There is not the least evidence that they differ in their ultimate cause.

But now comes along the theologian and wants to put in a purely artificial division of events into miraculous and non-miraculous. Having done this, quite wantonly, he then finds himself needing deliverance out of six troubles, because he has to define his two categories, discover some difference between them, and explain their relation. If only he had not made the division in the first place, then the resulting difficulties would not be plaguing him now.

Not satisfied with making himself all this quite useless trouble, the theologian persists in adding to it by dragging in "the laws of science," which have nothing whatever to do with the matter. Having by this device manufactured a fresh set of factitious difficulties, he adds these on to—rather he multiplies these by—whatever difficulties arise from his own quite different meaning of the term. But why drag in "the laws of science" at all? If anybody thinks that God, as an all-wise being, will not lay down a "law" in the first place and then alter it, that is a purely theological question, on which natural science has absolutely nothing whatever to say on either side. And if anybody thinks that God, as all-powerful, can always do as he likes with his universe and "is not bound by his own laws," that is also a purely theological question, on which, once more, natural science has absolutely nothing to say on either side.

It is, therefore, most absurd to say, as is so often said in all sorts of forms, by people who ought to know better, that "Science denies the possibility of miracle." What scientific people deny—what scientific people must always deny—is the possibility of non-miracle.

That is to say, if one insists on thinking of a commonplace and presumably non-miraculous event as caused by "the operation of natural law"—or however else one chooses to express this widely prevalent idea—and if, in addition, one attaches to the term "law" the meaning that it has in every scientific textbook, then every scientific person in the world must of necessity make one reply: Any non-miraculous event, as so defined, is not only impossible, but unthinkable.

There are no non-miracles. Whether there are miracles, turns entirely on how one defines the word.