The Arguments for Determinism

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Herman Harrell Horne (1874-1946) taught philosophy and education at a number of prominent American universities, and published numerous books and articles. His best-known work, *The Democratic Philosophy of Education* (1932), was a critical analysis of John Dewey's educational theories.

In presenting these arguments our purpose is to be succinct, systematic, comprehensive, and as convincing as the case allows. To this end the arguments have been grouped under related headings, nine in all, that seemed appropriate. These arguments have not been drawn from specific determinists but represent a general condensation of the main features in the deterministic view of life. As we read, we may feel that we all might be determinists on the basis of these arguments; at least it were well for us so to feel before passing to any criticisms later. The arguments follow:

1. The Argument from Physics

This argument rests on the hypothesis of the conservation of physical energy. According to this hypothesis, the sum total of physical energy in the world is a constant, subject to transformation from one form to another, as from heat to light, but not subject either to increase or diminution. This means that any movement of any body is entirely explicable in terms of antecedent physical conditions. This means that the deeds of the human body are mechanically caused by preceding conditions of body and brain, without any reference whatsoever to the mind of the individual, to his intents and purposes. This means that the will of man is not one of the contributing causes to his action; that his action is physically determined in all respects. If a state of will, which is mental, caused an act of the body, which is physical, by so much would the physical energy of the world be increased, which is contrary to the hypothesis universally adopted by physicists. Hence, to physics, the will of man is not a *vera cama* in explaining physical movement.

2. The Argument from Biology

The discussions of evolution during the latter half of the nineteenth century brought this argument to the front. The argument rests upon the hypothesis of biology that any organism is adequately explained by reference to its heredity and environment. These are the two real forces, the diagonal of whose parallelogram explains fully the movements of the organism. Any creature is a compound of capacities and reactions to stimuli. The capacities it receives from heredity, the stimuli come from the environment. The responses referable to the mentality of the animal are the effects of inherited tendencies on the one hand and of the stimuli of the environment on the other hand. The sources of explanation are deemed adequate for the lower animals; why not also for man, the higher animal?

3. The Argument from Physiology

As we pass from physics, on the one hand, to biology and physiology, on the other, from the physical to the natural sciences, it is to be observed that the natural sciences, dealing with animate matter, have borrowed their methods of explanation from the physical sciences of physics and chemistry, that deal with inanimate matter. Science today tends to reject any form of "vitalism" as a principle of explanation, "vitalism" implying that the living principle is, in some sense, a cause. This will clearly appear in the argument for determinism based on physiology.

This argument rests on the hypothesis made famous by Huxley, that man is a conscious automaton. The existence of consciousness cannot easily be denied by any man. But its efficacy is denied by this physiological theory. All the actions of man conform to the automatic type, despite their complexity, and

these actions are accompanied by consciousness, which, however, is not in the chain of causal phenomena, but stands outside as an "epi-phenomenon," to use Huxley's word. The individual in his deeds is really a vast complex of reflex actions, an aggregate of physical forces balanced against each other. Man is a conscious machine whose acts, however, are in no sense attributable to his conscious purposes.

This theory that men are machines may be repellant to our feelings, but there are many reasons that make it attractive to the scientific intellect. One might object that the deeds of men are too complicated to be those of a machine undirected by consciousness, but, as Spinoza urged, we do not really know the limits of the body's actions, as any somnambulist, unguided by his waking consciousness, would illustrate. The theory, furthermore, is characterized by that simplicity, so dear to the scholastic and the scientist alike, as a sign of truth. The theory gives a continuous principle of explanation of conduct according to the theory of reflex action, without appealing to a non-physical and interrupting cause. Really, too, it is unknown just how consciousness could move a molecule in the brain, though the popular mind is ready to assert that it does. Furthermore, this view is in harmony with the theory, generally accepted by science, of the uniformity of nature, subject to no interruptions from a non-physical source. If man is a conscious automaton, an act of free will, whereby choice determined conduct, would be a miracle. But it is against all the foundations of science to allow a miracle, in the sense of the temporary suspension of the natural order. In physiology, the soul is no cause. It is very natural that the regular practitioners, brought up on strictly scientific physiology, should reject the mental healers of every type, and that on theoretical as well as practical grounds.

4. The Law of Causation

It is evident from the arguments already urged here that they each turn upon a certain use of the law of causation. We must now state the argument based upon this law. The law of causation is one which no man would care to deny; it simply and undeniably asserts that every effect has its cause. No one indeed can think otherwise. Causation, in fact, as Kant showed, is one of the ways in which we must think; it is, as he says, an *a priori* form of thought; we did not learn from experience to think causally, but rather by thinking causally we help to constitute experience. The mind does not so much experience cause as cause experience.

Upon this basis the argument for determinism proceeds as follows: Like effects have like causes, the effect is like the cause, the effect is in fact the cause transformed, as the lightning is the effect of the preceding electrical conditions. Now human action is, of course, a physical effect; hence, we must expect to find only a physical cause; hence, any non-physical, psychical cause is from the nature of the case precluded, hence, of course the human will effects nothing. The actions of a man, a dog, a tree, a stone, all are due alike to antecedent physical conditions, which alone as causes determine the effects. We no longer explain the lightning in psychical terms--as the bolts of Jove; no more should we explain a man's deeds by reference to the intention of his soul.

5. The Argument from Science's Philosophy of Nature

This argument has been somewhat anticipated in the preceding paragraph. It is but a generalization of all the four preceding arguments. A philosophy of nature is a general theory explanatory of all the occurrences of nature. Now the ideal of scientific explanation in physics, chemistry, biology, physiology, and everywhere is mechanical. Events do not happen because anybody or any will wants them to happen; they happen because they have to happen; they happen because they must. And it is the business of science to find this necessary connection between the occurrences of nature. The universe, by this hypothesis, whole and part, is governed by the action of mechanical law. The reign of law is universal. Man is a very small creature upon a small earth, which is itself a comparatively small planet in one of the smaller solar systems of an indefinitely large number of solar systems which partially fill infinite space. The universe is a physical mechanism in which law rules, and man is but a least part of this universal machine. How then can he do otherwise than he does do? A single free-will act would introduce caprice, whim, chance, into a universe whose actions are so mechanically determined that an omniscient observer of the present could predict infallibly all futurity. . . .

Suppose now we pass from the objective sciences of nature to the subjective sciences of man, to the sciences that study mental things, in order to see how determinism defends itself here in the very regions of will.

6. The Argument from Psychology

The typical subjective science is psychology. The last fifty years of the, wonderful nineteenth century saw psychology, hitherto rational and introspective, invaded by the scientific methods of observation, experimentation, and explanation. Since the methods of science exclude freedom of the will, it is natural that most scientific psychologists today are, as psychologists at least, determinists. The lamented Professor James is a noted exception, but his psychology has been most criticized by his fellows just on the ground of his "unscientific" retention of freedom of the will. As illustrating the contemporary attitude toward freedom, the following somewhat contemptuous and evasive reference may be cited: "We may prate as much as we please about the freedom of the will, no one of us is wholly free from the effects of these two great influences [heredity and environment]. Meantime, each of us has all the freedom any brave, moral nature can wish, *i.e.*, the freedom to do the best he can, firm in the belief that however puny his actual accomplishment there is no better than one's best."[1] The question is not whether we are "wholly free" from these influences, but whether we are at all free.

The psychological defenders of determinism refer to "the working hypothesis of psychology," *viz.*, there is no mental state without a corresponding brain-state; that the brain-state is to be regarded as the explanation of the mental state since successive mental states have no quantitative measurable relations; that the brain-state is itself to be explained not by reference in turn to the mental state but by reference to the preceding brain-state. Thus the chain of physical causation is unbroken; it is self-explanatory; it also explains the mental series; but the mental series in turn explains nothing on the physical side. This working hypothesis does effectually exclude the conscious will from all efficaciousness. In favor of this hypothesis as a working basis for psychology, it is to be remarked that our modern knowledge of localization of brain functions, of the aphasias, of the insanities, is largely dependent upon it.

Psychology also emphasizes our ignorance respecting the real relations of mind and brain, and emphasizes our inability to imagine just how attention could change a brain-state, though just such an effect is attributed to attention in some theories of free will.

Psychology as a science of mind also has its presuppositions respecting law. If the mental region is to be understood, it also must have its laws. These laws must be without any exception, such as free will would imply. It is the business of psychology, as a science, to deny exceptions and dis cover laws. . . .

One of these laws affects our present question intimately. It is the law of motive. It asserts there is no action of will without a motive and that the strongest motive determines the will. Action is always in accord with the strongest motive, and the motives are provided by the heredity or the environment, or both. How could one choose to follow the weaker of two motives?

Psychologists are better aware than others of the sense of freedom revealed to introspection. Men often feel they are free to decide in either of two ways. Such a feeling, however, the psychologists do not consider as proof of the fact of freedom. The mind often cherishes false opinions concerning matters of fact; delusions are among the commonest mental phenomena. Schopenhauer, particularly, admitted that men felt at times they were free, while he denied they were really free. A straight staff appears bent, in a clear pool, and cannot be made to appear otherwise, despite the fact of its straightness and despite our knowledge of the fact. If we had never seen it out of the pool we should probably affirm it was crooked. So most people, judging by appearances, believe in freedom because they feel they are free. There is thus a possibility of general deception respecting this belief in freedom. This possibility is appreciated if we recall some hypnotic phenomena. A man may, though awake, under the influence of post-hypnotic suggestion, give away some of his property; he may then sign a statement saying he did it of his own free will and accord; spectators know

otherwise. . . .

7. The Argument from Sociology

The sociologists have rewritten the free-will question in their own way. They have taken it out of the region of the individual and put it in the region of the social. This is a most fruitful thing to do because man really lives and acts in society and not in isolation. Now, in society, the laws that control are those of imitation and suggestion. The members of a crowd are not freely deciding; they are following the leader. The leader himself is not freely deciding; he is fascinated by some idea in his mind, he has put deliberation behind. So a man's deeds are traceable to the deeds of others and to his own dominating ideas. So the science of the action of the action of men in groups becomes possible through asserting social determinism and denying individual freedom.

A peculiarly suggestive illustration of what appears to be freedom turning out to be determinism is afforded by the application of statistical methods of study in sociology. Supposed free-will acts are really capable of prediction in the mass. One decides to get married; he says he does so of his own free will and accord; many others do the same. But the statistician can predict in advance the approximate number of marriages that will take place next year. Was it not predetermined then, in the nature of the social situations, that so many marriages would occur? How otherwise account for the prediction? And if the prediction is possible, how then were the marriages due to free will? Viewed thus in the large, free-will acts appear subject to general laws. Indeed, without such legality, such predictability, how could society make its plans and assume responsibilities? So sociology as a science speaks for determinism.

8. The Argument from Ethics

The interests of ethics, of such matters as duty, obligation, conscience, reward, and blame, are peculiarly bound up with the doctrine of freedom, in the eyes of many. Yet there is also an argument from ethics for determinism. It runs as follows: a man's character determines his acts, he is responsible, for the act is his own; he committed it because, being the man he could not have done otherwise. If his act were an effect of free will, no one could count upon him, he would be an irresponsible agent. Just because he is bound by his character, he is dependable. If his acts are good, he is to be congratulated on his character, not praised overmuch; if his acts are bad, he is to be pitied for his character, not blamed overmuch. He is rewarded, not because he could have done otherwise, but as a tribute to the stability of his character and as a stimulus to continued right action. He is punished, again not because he need not have done wrong, but to help him do right next time. All our instruction, reproof, and correction of others presupposes they may be determined by such influences. Thus, the whole outfit of ethical categories may be read in deterministic terms, and indeed are so read by many ethical thinkers and writers, begining with Socrates, who held that right ideas determine right conduct. Some practical teachers say, though believing in freedom for themselves, they must believe in determinism for their pupils. At any rate the theory of conduct, which ethics attempts, is not necessarily committed to the defense of freedom. . . .

9. The Argument from Theology

...The argument from theology for determinism runs somewhat as follows: God is omniscient, He therefore knows what I am going to do, there is therefore nothing for me to do except what H knows I am going to do, there is consequently but one reality, not two possibilities awaiting me in the future; therefore I am not free to do otherwise than I must do when the time comes. Thus the doctrine of the foreknowledge of God is held to exclude the freedom of man's choice. But to deny that God has foreknowledge would be derogatory to His dignity...

1Angell, "Psychology," 4th Ed., New York, 1908, p. 437.