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DETERMINISM AND FREEDOM

Determinism is the family of theories that takes some class of events to be effects of certain causal sequences or chains, more particularly certain sequences of causal circumstances or causally sufficient conditions. One of these theories, universal determinism, associated with much science and philosophy, concerns the class of all events without exception. Another theory concerns physical events. Determinism in a third and important sense is human determinism. It is the theory that our choices and the many other antecedents of our actions, and the actions themselves, are effects of certain causal sequences. Lesser theories, usually associated with Freud and given no philosophical attention to speak of, concern themselves with particular sorts of conscious or otherwise mental causes of choices and actions, notably early sexual desires.

There are various relations between these four determinisms, depending on how they are additionally characterized. The most important relation, perhaps, is that universal determinism entails human determinism. That is not to say, however, that human determinism cannot be asserted, supported, or proved independently of universal determinism.

It is explicit or implicit in any of the above theories that the events in question are effects as more or less standardly conceived. An effect is an event such that an identical event follows every counterpart of the causal circumstance in question, or an event such that because the circumstance occurred, the event was in a stronger sense necessitated or had to happen (Sosa and Tooley 1993). A theory of our choices and actions, in contrast, that has to do with effects so-called—say, for example, effects conceived as events preceded by merely necessary conditions, or events merely made probable by antecedents—would not ordinarily be taken as a determinism. Indeed, weaker ideas of effects have often enough been introduced by philosophers precisely in order to avoid something else explicit or implicit in determinisms—that they may be inconsistent with or pose a challenge to beliefs in human freedom.

HUMAN DETERMINISM

This entry's concern will be with human determinism. It involves three large problems or enterprises.

The first is the formulation of a conceptually adequate theory. Human determinism has traditionally been thought about without reference to the philosophy of mind. Still, an adequate treatment of it must rest on a theory of the mind that is conceptually adequate: clear, consistent, and something like complete. Also, it must surely be that the theory of the mind, perhaps in what it rejects, say a puzzling power of originating choices, should be consonant with the philosophy of mind generally (Priest 1991, Heil 1998, Lowe 2000, Crane 2001).

The second problem with human determinism is its truth, whether or not this is considered in relation to universal determinism. The third problem is what can be called the human consequences for our existence of a human determinism. Is there in fact the consequence that we are not free? The philosophy of determinism and freedom, except in the philosophy of science and philosophical ruminations by scientists, has mainly concerned itself with this problem of consequences.

If these three problems are not the only ones that have been raised about determinism and freedom (Adler 1958), they have become the main ones (Kane 2002; Campbell, O'Rourke, and Shier 2004; Clarke 1995).

The formulation of a conceptually adequate theory is simple in terms of a truly physicalist or materialist philosophy of mind—one that takes conscious or mental events to have only or nothing but physical properties, however additionally conceived. In this case, human determinism becomes part of physical determinism. However, relatively few philosophies of mind are truly physicalist. Anomalous Monism, to mention one, is fairly typical in denying "nothing-but materialism" (Davidson 1980).

All other determinist theories face considerable problems of formulation. They encounter the problem of actually characterizing their primary subject matter—conscious or mental events. There is also the problem of the psychoneural relation, traditionally called the mind-body problem. If mental events are taken not to be in space, how can they be lawlike correlates or effects or causes? Further difficulties include the avoidance of epiphenomenalism, the nineteenth-century doctrine that actually makes conscious antecedents no part of the causation or explanation of our actions.

It is my view, seemingly now shared with most philosophers of determinism and freedom in the early twenty-first century, that despite these difficulties a conceptually adequate theory of human determinism can be formulated. This used to be doubted (Austin 1961, P. F. Strawson 1968).

Is any theory of human determinism true? A conceptually adequate theory has the support of much ordinary rationality, philosophy, and much science. It is notable that the ordinary philosophy of mind has no indeterminism in it. This most flourishing part of philosophy, much of it concerned with exactly the explanation of behavior, contains nothing at all of origination, an uncaused or uncausing initiation of choices and actions. Contemporary neuroscience, as distinct from philosophizing by retired neuroscientists and the like, plainly proceeds on the assumption of a human determinism. A reading of any of the main textbooks of neuroscience confirms this (Kandel et al. 1991) It is worth remarking, about what was called ordinary rationality, that in the end, which may be a long way down the line, it sits in judgment on science itself. That is to say, first of all, that inconsistency is not an option.

DENIALS OF HUMAN DETERMINISM

Despite these considerations, many or most of us do not take human determinism to be true. We deny or more likely doubt it. There may be an explanation of this, as distinct from a ground or justification, in our culture, at any rate European and North American culture.

One familiar ground used for this denial or doubt has been interpretations of quantum theory—applications to the world of the formalism or mathematics in which this part of physics can be said actually to consist. According to these interpretations, there are things at a microlevel of reality that are not effects. These things, well below the level of neural events in the brain, the events of ordinary neuroscience, are taken as made probable by antecedents but not necessitated by them. They are not chance events in the sense of being events of which it is true in advance that they are as likely not to occur as to occur. However, each one is certainly a chance event in that its actual occurrence or existence, no matter the antecedent probability, is such that there exists no causal explanation to be found for it. This is a matter of what is in the world, not our capabilities of knowing it.

Perhaps there is no strong consensus within science as to the truth of such indeterminist interpretations of quantum theory, despite an inclination in that direction. Something of the same sort may be true within physics itself. It is notable that outstanding treatments of the question in the philosophy of science may be agnostic (Earman 1986, 2004).

Opposition to indeterminism, some of it by philosophers, is strengthened by the fact, too often glossed over, that no satisfactory interpretation of quantum theory's application to reality has ever been achieved, although the theory is now getting on for a century old. It is possible to try to explain an ascendancy of an indeterminist understanding of quantum theory, say among other philosophers who would not tolerate contradiction, obscurity, and mystery elsewhere, by the fact of a cultural and institutional ascendancy of science in general and physics in particular. It is unclear to me why indeterminist interpretations have persisted within physics in the absence of any direct and univocal experimental evidence (Bohm and Hiley 1993, van Frassen 1991, Bub 1997).

One opposition to the idea that indeterminist interpretations of quantum theory prove or indicate the falsehood of determinism has to do with the supposedly undetermined things. Are they in fact events, which is to say things that happen; perhaps understood as ordinary things having properties at or for a time (Kim 1973)? Determinism has no concern with anything other than events. Numbers or propositions or other abstract objects, for example, are not part of its subject matter of effects. It does not say five is an effect. A reading of accounts of quantum theory quickly establishes that it is not clear that the things denied to be effects, about which there is real and wide disagreement, are indeed things asserted to be effects by a determinism. Some of these have been probabilities, features of a calculation, and waves in abstract mathematical space.

There is another uncertainty about any undetermined microevents, assuming such real events to exist. What is their relation to macroevents, and in particular to the neural events ordinarily taken to be in some intimate connection with such conscious or mental events as choices? Does the microdeterminism issue in macrodeterminism? Does it "translate up"? Or does the microdeterminism, instead, "cancel out" (Weatherford 1982)?

It is difficult indeed to resist the proposition that there is no indication at all of macroindeterminism in the physical world. Taken together with the previous uncertainty about amplification, this appears to issue in a kind of dilemma. Either microindeterminism if it exists does not translate up, in which case it does not matter to the problem with which we are concerned—or, because it would translate up if it existed, and there is no macrodeterminism, it follows that microindeterminism does not exist.

Answers or attitudes with respect to the question of the truth of a determinism do indeed affect responses to the third problem, that of the consequences of human determinism. Someone inclined to the truth of determinism may then be inclined, partly as a result of the further inclination that we have some freedom or others, to the response that we must have a freedom that goes with determinism. Still, the problem of the human consequences of determinism can be considered on its own, as usually it has been by philosophers.

Traditionally those consequences have been taken as having to do with freedom or free will, moral responsibility, and the justification of punishment. The central question is whether determinism is compatible or consistent with free choices and actions, with holding people responsible for and crediting them with responsibility for actions, and with imposing justified punishments on people and rewarding them. Compatibilists, who can be traced back at least to the seventeenth century (Hobbes 1839), answer yes. Incompatibilists, with Hobbes's great adversary in their history, answer no (Bramhall 1844).

The stock in trade of compatibilists has been the conception of freedom as voluntariness. That, in a rudimentary account, is the conception of a free and responsible action as in accordance with the desire of the person in question rather than against his or her desire. It is the conception, they say, that issues in the seemingly indubitable judgment that a man chained to the wall is not free, and that a woman whose life is under real and immediate threat by someone with a gun is not free.

The stock in trade of incompatibilists has been the idea of freedom as origination. This, in a rudimentary account, is the conception of a free action as one that the person was not caused to perform, but which was up to the person or in his or her control. This is the conception, incompatibilists say, that is familiar to all of us in that most common thing in our lives: holding people responsible for things. We hold people responsible only, as we say, when they are not literally caused to do what they do, but have a choice. We take a man to have been free exactly when he could have done otherwise than he did.

DEALING WITH OBJECTIONS TO HUMAN DETERMINISM

The rudimentary conception of freedom as voluntariness, as well expressed as the absence of ordinary constraint or compulsion, has been enriched in order to deal with objections. One objection was that people in the grip of an addiction are not acting against their own desire for heroin, but nonetheless are not free. A response in defense of compatibilism has been that voluntariness consists in someone's acting according to a desire that they desire to have. There is the possibility, indeed, of thinking of a hierarchy of desires (Frankfurt 1971).

Other objections, or perhaps the reaction that both the rudimentary and the amended ideas of voluntariness do not do justice to the fullness of our reactions to people in their actions, may call up other developments. A free choice or action, it may be said, is not only in accordance with the desired desire of the agent rather than against it, but grows out of the personality, character, history, and indeed the very being of the person. Who can object, compatibilists ask, to the idea that such a choice or action, so autonomous, is what we take to be a free and responsible one?

The conception of freedom as origination has also been given much attention, again in response to objections, usually about obscurity. It has long been insisted that an originated decision, although not a standard effect, is not merely that. It is not merely a chance or random event. Hobbes's adversary Bramhall in the seventeenth century explained originated choices and actions as owed to the elective power of the rational will. It has become common to try to explain such choices by assigning them to what is called agent causation as against standard causation (Chisholm 1976, O'Connor 1995). Agent causation, whatever else is said of it, does not give rise to effects that had to happen or were necessitated. Other attempts to further clarify origination are in terms of teleology, in particular that the occurrence of choices and actions are somehow explained by their goals (O'Connor 1995), and in terms of a mixture of determined and undetermined events (Kane 1985, 2002), and in terms of reasons rather than causes (Ginet 1990).

It is clear that a determinism can be true and there can still be voluntary choices and actions. There is full compatibility. There is nothing in a theory of determinism that rules out choices and actions being according to someone's desire. Determinism is evidently never the theory that all choices and actions are against the wills of the agents. Compatibilism, indeed, is best seen as based on the proposition that free choices and actions have certain causes, causes somehow internal to rather than external and somehow opposed to the agent.

It is equally clear that if a decent theory of determinism is true, there can be no originated choices and actions. There is clear incompatibility. An originated choice or action, by rudimentary definition, is an event that is in a standard sense uncaused. The question of whether determinism is compatible with freedom has

been the question of whether our freedom consists in voluntariness or origination, not the question of whether determinism is compatible with origination.

HUME, KANT, AND COMPATIBILISM

To come to the principal arguments of the two traditions of philosophers, Hume was typical of compatibilists in maintaining that anyone who actually thinks of what he or she means in speaking of a free and responsible action will immediately see that it is an unconstrained or uncoerced one—a voluntary one. What is needed is no more than some self-reflection, unconfused by religion or the like (Hume 1955).

Kant, although in fact not an incompatibilist, certainly not an ordinary incompatibilist, was as positive in declaring that to think of one's idea of a free and responsible action is not to think merely of one that was necessitated in a certain way. To go along with Hume and suppose otherwise, he said, is to engage in no more than a little quibbling with words (Kant 1949). With these philosophers, there was already a kind of stalemate about determinism and freedom.

Near the beginning of the twentieth century, it was taken as established, by some, that compatibilism was proved by a simple consideration. If a person acted freely on some occasion, it was true that the person could have acted otherwise. But, it was said, the latter means that the person would have acted differently if he or she had chosen differently, which is consistent with determinism (Moore 1912). By the mid-twentieth century, however, it became clear to some that "could have acted otherwise" is inconsistent with determinism (Austin 1961).

Subsequent twentieth- and indeed twenty-first-century compatibilists, undaunted by the failure of their predecessors to prove it, have somehow stuck to the conviction that our common idea of freedom, our common idea of what is necessary for moral responsibility and right punishment, is voluntariness (Ayer 1973, Magill 1997). One further contention is that the idea of origination, despite the seemingly clear rudimentary description of it, is actually incoherent, and so the field is left to the tolerably clear ideal of voluntariness (G. Strawson 1986).

Another compatibilist argument, widely discussed, begins from a thought experiment about moral responsibility (Frankfurt 1969). What it amounts to is the idea of a person subject to the control of a neuroscientist with some apparatus who will secure that the person will act in a certain way if it happens that the person is not on the way to doing so. Those are the causal facts. Suppose, however, that the person actually is on the way to and absolutely committed to doing A—wants it, wants to want it, and so on. It remains true, given the neuroscientist in the background, that he cannot do anything else. But it is clear, surely, that he is morally responsible for A. It follows, we are told, that freedom does not require being able to do otherwise than we do in a strong sense—it does not require origination and is not itself origination. Other recent compatibilist argumentation has been the elaboration of the idea of voluntariness by seeing its growth and extent in terms of evolution (Dennett 2003). Our human freedom is favorably contrasted with the lesser freedom of other animals.

Twentieth-century incompatibilists gave much attention to an argument well-developed from its beginning in Kant's philosophy (van Inwagen 1986). Here we have it that a free action is one that is up to us. Suppose now that an action is subject to determinism—the effect of a causal sequence, a series of lawlike connections leading back to some causal circumstance prior to the birth of the agent. Can such an action be up to us? The answer given is that it can only be up to us if the lawlike connections and the first causal circumstance are within our control—which definitely they are not. Hence free actions cannot be effects of certain causal sequences but must be originated.

Given the unbroken history of the philosophical debate on determinism and freedom until recently, must there be a presumption that either compatibilism or incompatibilism is true? Can that respectful attitude survive certain troublesome questions and alternatives?

If you reflect on the compatibilist case of the desiring and committed agent but with the neuroscientist around the corner, or indeed on any of many cases, say the simple one of the man chained to the wall, one thing you must be persuaded of is that there certainly is *an* idea of freedom—voluntariness. Quite as clearly, if you reflect on the incompatibilist case of the agent about whom it is supposed that a causal circumstance before his birth was not up to him, one thing you must allow is that there is *an* idea of freedom such that he does not have it—origination.

Does it follow from either speculation, however, that each of us has *only* the idea of freedom in question? That we all have and use only that single settled idea? That is exactly what is intended by each speculation, exactly what it is supposed to prove.

To ask the question, perhaps, is to become at least worried. Recall the first agent doing what he wants and

responsible although in the toils of the neuroscientist. Is it just the philosophers who can readily think that there still *is* a sense in which he is not free—he cannot do otherwise in a sense of the words inconsistent with determinism? And is it just the philosophers who can readily think of the second agent, who indeed does not have a causal circumstance in the distant pas in his control, that there still *is* a clear sense in which his action may indeed be in his control? It may be wholly in accord with his desires and character and his whole existence, not pushed on him by anyone else or anything else or any conflict within him. Do we not have and use both conceptions?

What may lead someone to assent to one of the two speculations, and to either compatibilism or incompatibilism, is of course the proposition that freedom either is or is not compatible with determinism. That is a logical or necessary truth, is it not? Well, it is a truth only on a certain ordinary assumption or presupposition. The presupposition of course is that freedom is one thing, that we in general have only one idea of freedom. Evidently this presupposition needs thinking about, and it has been thought about in additional ways.

DEFENSES OF COMPATIBILISM

An original defense of compatibilism prepared the way by making more explicit the fact that determinism is not best seen as raising a question of consistency or inconsistency, but rather as affecting attitudes directed at certain facts or propositions having to do with moral responsibility—and also such personal and nonmoral attitudes as gratitude and resentment (P. F. Strawson 1968). Subsequently it was proposed that determinism affects more attitudes than these, including the important attitude to the future that is hope and the important attitude to inquiry and conclusions that is confidence.

It was argued that it is plain that we are all subject to two kinds of hope, one for an open future where all has not been fixed by the past, one for a future in which we get what we want, maybe a whole kind of life. To this attitudinal argument, a behavioral one was subsequently added. What we secure by enacting and benefiting from bills of rights and political liberty is evidently an absence of compulsion. What we punish for in part is an action of which we take it that it could have been otherwise despite the past, and we have the same thought in various personal relations (Honderich 1988, 1993).

Such considerations also bear nearly as sharply on weaker positions to which compatibilists and incompatibilists may be retreating. These positions are that voluntariness is our more important conception of freedom (Dennett 1984, 2003), the freedom more worth having, or that origination has these recommendations (Kane 1985, 2002).

THE WIDER DEBATE

The ensuing wider debate—wider than compatibilism and incompatibilism—has included the idea that our being free requires origination but our being responsible requires only voluntariness (Fischer 1994). A different inquiry into what is called autonomy also accepts that we do not have to choose between compatibilism and incompatibilism (Mele 1995). It has been argued, against compatibilism's way of saving our responsibility from determinism, that we must give up our real idea of responsibility (Pereboom 2001). There has been the more radical contention that ascribing freedom and responsibility to people is a matter of attitudes that do not depend on objective facts or propositions at all (Double 1991, 1996).

Against another thought, that of giving up the set of attitudes inconsistent with determinism and taking satisfaction in the set of consistent ones, it has been argued that despite the truth of determinism we must maintain the illusion that we have the power of origination (Smilansky 2000). The thought of giving up the inconsistent attitudes and being satisfied by the others has also been followed by another radical idea. It is that roughly our attitudes to ourselves previously associated with origination can survive acceptance of determinism, and so must be owed to something else entirely different. This could be the nature of our consciousness, or the explanatory nature of certain causal lines of events within sequences of causal circumstances (Honderich 2002).

It is too early to say, but it may be that a consensus is emerging that determinism and freedom can no longer be the protracted and tired battle between compatibilism and incompatibilism. It is not possible to conjecture about the outcome of an alternative discussion.

See also Action; Causation: Metaphysical Issues; Determinism, A Historical Survey; Freud, Sigmund; Hobbes, Thomas; Hume, David; Kant, Immanuel; Philosophy of Mind; Quantum Mechanics; Responsibility, Moral and Legal; Strawson, Peter Frederick.

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DETERMINISM AND INDETERMINISM

Determinism is a rich and varied concept. At an abstract level of analysis, Jordan Howard Sobel (1998) identifies at least ninety varieties of what determinism could be like. When it comes to thinking about what deterministic laws and theories in physical sciences might be like, the situation is much clearer. There is a criterion by which to judge whether a law—expressed as some form of equation—is deterministic. A theory would then be deterministic just in case all its laws taken as a whole were deterministic. In contrast, if a law fails this criterion, then it is indeterministic and any theory whose laws taken as a whole fail this criterion must also be indeterministic. Although it is widely believed that classical physics is deterministic and quantum mechanics is indeterministic, application of this criterion yields some surprises for these standard judgments.