overdetermination here is harmless, which raises the possibility that the relation may be appropriated by nonreductive physicalists seeking a way to preserve the causal efficacy of the mental in a physical world; perhaps physical properties are determinates of mental determinables (Yablo 1992).

The fit is not quite right, however. To repeat the point made earlier, the determinate-determinable relation is not the genus-species relation, nor is it merely one of greater and lesser generality. A perfectly determinate shape may be realized in different materials, but the conjunctions of that shape with different types of material do not form further determinates of shape. Likewise, mental properties may still admit multiple physical realizations even if they are perfect determinates of thought (Funkhouser).

See also Armstrong, David M.; Properties; Set Theory; Shoemaker, Sydney.

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DETERMINISM, A HISTORICAL SURVEY

Determinism is the general philosophical thesis that states that for everything that ever happens there are conditions such that, given them, nothing else could happen. The several versions of this thesis rest upon various alleged connections and interdependencies of things and events, asserting that these hold without exception.

There have been many versions of deterministic theories in the history of philosophy, springing from diverse motives and considerations, some of which overlap considerably. We shall consider these in the order in which they have been historically significant, together with certain alternative theories that philosophers have proposed. There are five theories of determinism to be considered, which can for convenience be called ethical determinism, logical determinism, theological determinism, physical determinism, and psychological determinism.

ETHICAL DETERMINISM

ADVOCATES. It seemed to Socrates that every man always chooses what seems to him best, that no man can set as the object of his choice something that seems evil or bad to him. Plato had much the same view, arguing that no man who knows what is good can possibly choose anything else. They drew the obvious corollary that wrongdoing or the pursuit of evil must always be either involuntary or the result of ignorance.

A thirsty man, for example, might choose to drink from a certain cup in ignorance of the fact that it contains poison, or, knowing its contents, he might be forced to drink from it. But he could not, knowing that it contained poison and that this would bring upon him a great evil, voluntarily drink from it. Socrates and Plato thought that similar reasoning applies to any choice whatsoever. Hence, the Socratic doctrine that virtue is knowledge and vice ignorance. If one knows the good, he automatically seeks it; if one seeks something else, it can only be because he is pursuing an apparent, but specious, good—in other words, because he is ignorant of what is in fact good. An obvious corollary to this, and one that was drawn by Plato, is that the best commonwealth would be one governed by philosophers—that is, by men who know the good and can intellectually distinguish it from its counterfeits.

It is evident that in this ethical intellectualism, which is so central to Platonism, there is a theory of determinism. Men's voluntary actions are invariably determined by an apparent good; hence, all their actions are determined by this, if by nothing else. Philosophers who have been convinced by this teaching have nevertheless without exception insisted that it enhances rather than debases man's freedom. Freedom, they have maintained, is precisely the determination of the will by what is good. To have one's will or choice determined by what is bad is to be enslaved; to have it determined by something less than the highest good is, to that extent, to be less than perfectly free. Thus, Plato described the wicked tyrant, who pursues what is evil because he is ignorant of the true good, as enslaved and an object of pity.

René Descartes believed that no man who knew his true "end" or highest good could reject it in favor of something less and maintained that man's freedom consisted precisely in knowing that good and being thereby determined to seek it. St. Thomas Aquinas spoke similarly, with qualifications, concerning man's knowledge of his true "end" or highest good. Gottfried Wilhelm Leibniz similarly took for granted the fact that God could not possibly be guided by anything except the true good, which he must surely know, and that in creating a world, for example, he therefore could not create any but the best possible world. Still, Leibniz maintained, this is no derogation of God's freedom; on the contrary, it is the most perfect freedom to have one's will thus determined.

OPPONENTS. Aristotle rejected this theory of ethical determinism, mostly because it conflicts with what he took to be the evident fact of incontinence. It seemed clear to him that sometimes a man's desires or appetites are in conflict with his reason, precisely in the sense that he desires something bad even while knowing that it is bad, which is the very essence of incontinence. John Locke took the same position. A drunkard, Locke pointed out, well knows that his use of spirits is bad for him, but the mere knowledge of this cannot be depended upon to extinguish his desire for them.

Most contemporary thinkers incline to the same view. The moral and intellectual determination of men's choices and the consequent impossibility of genuine incontinence are no longer considered a plausible view by very many. Nevertheless, it is not easy to see just what is wrong with it. Surely, men do prefer the better to the worse in some sense—not what is absolutely better, perhaps, but what at least seems better; otherwise, why would any man choose it? It is the very nature of things bad to be shunned, and that is precisely why they are called bad.

Perhaps the real issue here is the more general opposition between rationalism and voluntarism. If one assumes the primacy of man's reason and supposes his will, or what the Greeks called his appetite, to be naturally subordinate to it, then the Socratic thesis of the determination of the will by the reason is difficult to refute. If, on the other hand, one presupposes the primacy of man's will or appetite and assumes the intellect to be at least sometimes subordinate to the will, then there is no difficulty in accounting for incontinence. Furthermore, there have been many philosophers—for example, Benedict (Baruch) de Spinoza, Thomas Hobbes, and William James—who have insisted that all it means to describe

something as good is that it is the object of one's will—that is, of his desire or interest. If this is so, then the Socratic thesis becomes utterly trivial. It amounts to saying nothing more than that the object of a man's will is always an apparent good—that is, something that is the object of his will. This is certainly true but not significant.

LOGICAL DETERMINISM

Very early in the development of Western philosophy it occurred to certain thinkers that logic alone suggests that men's wills are fettered, that nothing is really in their power to alter. This thesis was developed by Diodorus Cronus and others of his school, whom Aristotle sometimes referred to as "the Megarians," and more importantly by the highly influential school of the Stoics. Such views were associated by the ancients with the idea of fate, an idea that has, however, the same implications as certain forms of determinism with respect to human freedom. Thus, if no man's destiny is in any degree up to him, if everything that he ever does is something he could never have avoided, then in the clearest sense it is idle to speak of his having a free will. The Stoics thought that the most elementary consideration of logic shows this to be true.

The consideration in question is simply the supposition that every statement whatsoever is true or, if not true, false. This ultimately came to be expressed in the dictum *tertium non datur,* meaning that no third truth-value, besides true and false, can be assigned to any statement. If this is so, then it must hold for statements about the future as well as any others, for statements about individual men's future actions and even for statements or propositions that are never asserted. It must also, of course, apply to statements believed by the gods. The last idea eventually became very important when the belief in an omniscient and infallible god became theological dogma.

What apparently led certain ancients, such as Chrysippus, Posidonius, and the Stoics generally to take the idea of logical determinism seriously was a consideration of signs, omens, and portents, which were then widely believed in. If there are signs from which it can be discovered what is going to happen, especially what a certain man is going to do at a certain time, and if, moreover, such signs are vouchsafed to men by gods, then it seems that such predictions must unavoidably, in the fullness of time, be fulfilled. Any such prediction that was not fulfilled could not have been true when made, contradicting the supposition that it was true. If such a prediction must be fulfilled, then it seems to follow that it is not within

anyone's power to confute it. The extension of this thought to all actions of all men leads quite naturally to the view that no man's actions are ever free or that nothing any man ever does was ever avoidable, it having always been true that he was going to do whatever he eventually did.

ARISTOTLE'S OPINION. A penetrating discussion of this problem is contained in some much disputed passages of Aristotle's *De interpretatione.* Aristotle there considers the question whether every true proposition, asserting that a certain event has occurred at a certain time, was true before the event in question took place and whether every false proposition, asserting that a certain event has occurred at a certain time, was false before the event failed to take place at that time.

Suppose, for example, a naval battle took place yesterday. This would seem to entail that it was already true, prior to yesterday, that it was going to occur. If anyone had said a thousand years earlier that such a battle was going to occur that day, then it would seem that his prediction was true, and if anyone had denied it a thousand years earlier, then the events of that day would have shown him to have been wrong. Aristotle, however, seemed reluctant to make this seemingly obvious inference. He suggested that it is inconsistent with the fact that men sometimes deliberate about whether to make certain things happen and with the belief all men have that it is sometimes up to them whether the events about which they deliberate will occur. If it is true a thousand years before a naval battle occurs that it is going to occur on a certain day, then whether or not anyone actually makes the prediction, it is difficult to see how, when that day arrives, it can still be up to the naval commander whether the battle will occur or what point there could be in anyone's deliberating about whether to precipitate it. The same difficulty arises if one supposes it to have been false a thousand years earlier that a naval battle would later occur. Aristotle therefore seems to suggest that some propositions—namely, those which assert or deny the future occurrence of certain deliberate actions of men or of events which are dependent upon these—are sometimes neither true nor false until the actions have either occurred or failed to occur.

SUBSEQUENT CONTROVERSY. This whole question was highly vexing to the early thinkers who followed Aristotle. It was even more troublesome to the Scholastics, many of whom felt bound to affirm the freedom of the human will but also bound to affirm that God knows from the beginning of time everything that will ever happen in his creation. Most of the Stoics, whose philosophy was highly fatalistic anyway, embraced the view of logical determinism or fatalism, while many of the Epicureans, who from moral considerations had always set themselves against any theories of fatalism, sometimes defended the view that statements about the future need not be either true or false and hence could not be known in advance even by the gods.

Diodorus Cronus was perhaps the most polemical of the early advocates of logical determinism. His fundamental principle, which is obviously a very strong one, was that it always follows from the fact that something *has* happened that it was *going* to happen and, hence, that it was true that it was going to happen before it did happen. Applying this seemingly incontestable dictum, Diodorus concluded that nothing is ever possible except what actually happens, from which it follows that it is never within any man's power to do anything except what he actually does.

Among the problems to which this conclusion gave rise was one called "the idle argument," which states that there is never any point in any man's ever taking any precautions or making any preparations. If, for example, a man is ill, then it follows from Diodorus's principle that he is either going to recover or he is not going to recover. If he is going to recover, then he will recover whether or not he summons a physician; similarly, if he is going to perish, then he will perish whether or not he summons a physician. Hence, there is no point in his summoning a physician in either case because the outcome is already inevitable. The philosopher Chrysippus sought to resolve this evident absurdity by inventing the notion of "condestinate" facts, facts whose truths are dependent upon one another. Thus, it may be true that a man is going to recover from his illness and also true that he is going to recover only if he summons a physician, from which one cannot conclude that he will recover whether or not he summons a physician. The two facts are, in this case, "condestinate."

CONTEMPORARY ANALYTICAL DISTINCTIONS. Contemporary philosophers have for the most part tried to resolve the problems of logical determinism by distinguishing between modal concepts, such as necessary, impossible, and so on, and the nonmodal concepts of true and false and by refusing to make certain inferences from one kind of concept to the other. Thus, from the fact that something happens of necessity, it follows that it happens, and from the fact that it is impossible for something to happen, it follows that it does not happen. The

reverse of these inferences cannot be made, however; something might happen without being necessary, and something might fail to happen without being impossible. This permits one to say without contradiction that it is true, without being necessary, or false, without being impossible, that a certain man is going to perform a certain action.

The difficulty that some writers have found in this seemingly obvious solution is that "necessary" and "impossible," as applied to human actions, do not mean logically necessary and impossible. (As Gilbert Ryle and others have noted, the only things that can be logically necessary or impossible are propositions, not events or actions.) When the ancients described an event or action as necessary, they simply meant that it was unavoidable, and when they described it as impossible, they meant that it was not within the power of an agent to bring it about. This is still what men mean by such locutions. It is surely not obvious how an action can be avoidable on the supposition that it has been true from the beginning of the world that it would be performed by a certain man at a certain time and place, and it is not obvious how it can be within the power of an agent to perform a given action on the supposition that it is eternally false that he will. Still, as critics of this line of thought have forever pointed out, we must take for granted that men are often able to do many things which they never do and to forgo many things which they do all the time. It is perhaps just this that has always been at issue.

Following the suggestions of Aristotle, some contemporary philosophers, such as Charles Hartshorne, have maintained that predictions concerning a man's future voluntary actions are always false, the truth being expressed only by a statement to the effect that he might and might not perform them. Others have argued that such predictions are neither true nor false when made, though they eventually become either true or false. In this connection Ryle has suggested that "correct" and "incorrect," as applied to predictions of this sort, are more like verdicts than descriptions and thus convey more the idea of "fulfilled" and "unfulfilled" than of "true" and "false." It would be always wrong to call a prediction fulfilled as long as it is a prediction, and similarly, Ryle suggests, it is misleading to speak of predictions as having been true. Ryle and others have also noted the error of thinking of predictions as the causes of the events they predict, though essentially the same error was pointed out by St. Augustine and many of the Scholastics, who noted that God's prescience is never by itself the cause of anything.

Perhaps the most significant upshot of this whole problem, however, has been the considerable contemporary philosophical discussion concerning the status of future things, particularly future contingent or undetermined things. Do they exist "in the future," awaiting only the lapse of time in order to become present, or do they have the more nebulous status sometimes referred to as possible existence? Ryle has suggested that predictive statements are not true or false in the same way that statements about past things are, precisely because the things to which they ostensibly refer do not have the same determinate existence, and that some descriptive statements therefore cannot make sense until the things ostensibly described really do exist. He thus compares certain predictive statements, such as the statement that a given man is going to cough at a certain future time, with statements about "past" things which might have been but never were—for example, certain automobile accidents that were prevented. All these suggestions have raised some of the most vexatious questions in contemporary metaphysics, and they are very far from being resolved.

THEOLOGICAL DETERMINISM

With the development of Christian theology there arose the concept of a God who is, among other things, perfectly good, omniscient, and omnipotent and upon whom, moreover, the entire world and everything in it, down to the minutest detail, are absolutely dependent for existence and character. This idea is obviously loaded with possibilities for deterministic theories, and there have been many philosophers and theologians who have developed them into extensive systems, some of which have formed the basis for theological doctrines having an extremely wide and abiding influence.

MORAL DETERMINATION OF GOD'S WILL. If, for example, we consider first the absolute goodness of God, it seems incongruous not only to think of him as choosing or by his action inflicting evil, but equally of his being able to choose, inflict, or even permit evil. Since, moreover, the world is the result of his act of creation, it seems to follow that it is the only world that was ever possible, being of necessity the best that was possible. Many of the Stoics affirmed this conception, identifying the world or "nature" with God or Zeus and also with fate. The world, they thought, is the only possible world, and nothing in it could be different from what it is. It is nevertheless good, and so the aim of a wise man should simply be to find and accept his place in it. Spinoza's philosophy contains essentially the same idea. In the first book of his *Ethics* he affirms that nothing in nature is contingent, that there is

no free will in God, and, hence, that things could not have been produced by God in any other manner, though Spinoza was led to these conclusions by considerations other than the mere goodness of God.

Perhaps it was Leibniz who tried hardest to reconcile the moral determinism implied by God's absolute goodness with the existence of alternative possibilities. Leibniz distinguished two senses of necessity, which he called absolute and hypothetical. Given the absolute goodness of God, he said, then the world that exists must be the only possible world, because it is of necessity the best possible one. But this is only on the hypothesis that God is good; hence, the exclusive necessity of this world is only hypothetical. In the absolute sense, not taking into account God's goodness, this world is only one of many possible worlds, contrary to what Spinoza maintained. Something is necessary in an absolute sense only if its negation involves a contradiction, and in this sense neither God's acts nor men's are necessary. The actions of men are necessary only in the sense that there is a sufficient reason for them, as for everything else. This is consistent with their being free, considered in themselves, Leibniz thought, since in no absolute sense are they necessary.

It is doubtful, however, whether Leibniz's distinctions supply more than a verbal solution to the problem of theological determinism. One can grant that this must be the only possible world given the hypothesis that it is the creation of an absolutely good creator and thus agree that apart from that hypothesis it is not the only possible world. But as soon as one affirms God's goodness, which traditional theology considered beyond doubt, then it is difficult to see in what sense alternative worlds are still "possible." Leibniz's concept of hypothetical necessity has nevertheless had the most far-reaching significance in the subsequent development of the ideas of determinism and free will, for it became a cornerstone for generations of later philosophers, like David Hume, in their attempted reconciliations of physical and psychological determinism with free will.

DIVINE OMNISCIENCE AND DETERMINISM. The omniscience of God has likewise seemed to many thinkers to imply the inevitability of everything that happens. The philosophical arguments involved in this kind of determinism, resting on the idea that all truths are eternal, are essentially the same as those which led Diodorus and others to assert fatalism, but the addition of the premise that there is a being who knows all truths

from the beginning of time gives these arguments an especially powerful appeal to the imagination.

St. Augustine. An omniscient being knows everything. St. Augustine and virtually every other theologian who contributed greatly to the development of Christian thought assumed without question that God, as thus conceived, must know in advance every action that every man is ever going to perform, including, of course, every sin he will ever commit. If this is so, then the question arises of how men can behave otherwise than God knows they will—how, for example, a man can forgo those sins that God, when he created the man, knew he would commit. The strongest concise way of expressing this point is to say that (1) if God knows that I shall perform a certain act at a certain time and (2) if I am nevertheless able to forgo that act when the time for performing it arrives, then (3) it follows that I am at least able to confute an item of divine knowledge, whether or not I actually do so. That conclusion, of course, is absurd. The second premise, accordingly, must be false if the first is true.

Carneades, a pre-Christian defender of human self-determination and freedom, maintained that even Apollo could not know in advance what men were going to do. Such a view, however, seemed so inconsistent with the notion of omniscience that hardly any Christian thinker entertained it. St. Augustine, in considering this question independently of the idea of God's power, maintained that God's foreknowledge constitutes no threat whatsoever to man's free will. God, according to St. Augustine, foresees all events because they are going to occur; they do not occur just because he has foreseen them. Thus, he compared God's prescience to a man's memory. The fact that someone remembers an event does not render that event necessary or involuntary, and the same is true with respect to God's foreknowing an event. Again, St. Augustine pointed out, there is no difficulty in the notion of God's foreknowing that someone will be happy, from which one can hardly conclude that such a man must therefore be happy against his will. And whether or not we do anything else voluntarily, it can hardly be denied that we *will* things voluntarily, and this constitutes no reason why God should not know what we are going to will. Many of the other events God foreknows are things that, as God knows, depend upon our wills for their happening, from which it follows that they are both foreknown and willed—that is, voluntary. Most of the apparent difficulties in reconciling divine prescience with human freedom seemed to St. Augustine to evaporate in any case as soon as one comprehends the nature of God's eternity. The distinctions of "before" and "after," which

are essential to the formulation of this kind of theological determinism, have no application to God, according to St. Augustine. His eternity is not an everlastingness but, rather, an existence that is altogether independent of time. God therefore sees the whole of history in a manner similar to that in which we view the present, and from this point of view one is not easily tempted to suppose that God's knowledge imposes any determination on things to come.

SUBSEQUENT VIEWS. St. Augustine's reflections on this problem have for the most part been followed by subsequent thinkers. St. Thomas Aquinas, for example, similarly emphasized the eternity of God's vision and argued that God's knowledge is not by itself the cause of anything. Boethius, in *The Consolation of Philosophy,* defended the same view, adding numerous analogies to increase the plausibility of his arguments. Thus, he noted, a sign shows that to which it points without thereby producing it. In the same way God knows what will come to pass, but his knowing does not cause anything to happen. Again, a man might at one and the same time see another man walking and the sun rising; yet the man's walking can be voluntary, whereas the sun's rising is not. This, Boethius maintained, is the manner in which God views all things from the perspective of eternity. Boethius was thus led to his famous definition of eternity as "the simultaneous and complete possession of infinite life." In such a conception there is no suggestion of succession in time, and God must thus see all things in a manner similar to that in which we view things spread out in a given moment.

This Augustinian solution to the problem, echoed so often in the subsequent history of thought, has not been without dissenters, however. In the fourteenth century Peter Aureol reaffirmed what he took to be the arguments of Aristotle, maintaining that propositions concerning particular future contingent events, such as men's acts of free will, cannot be either true or false. This would seem to imply, of course, that God cannot foreknow them, but Peter Aureol seemed reluctant to draw that heterodox conclusion. He observed that God's foreknowledge does not make anything true or false and is to that extent consistent with the lack of either truth or falsity in some such propositions. He apparently did not observe that in order to be known by God, a proposition must nevertheless be true when foreknown, since God obviously cannot know something to be true that is in fact neither true nor false. William of Ockham expressed similar doubts but, unlike Peter Aureol, was unwilling to reject either the law of excluded middle or the doctrine of divine omniscience. God, according to William of Ockham, is omniscient and

hence knows all future contingent events. In the case of any disjunction to the effect that a given contingent event either is going to occur at a given time or is not going to occur at that time, God knows which of the mutually inconsistent propositions is true since he is omniscient. It follows that one of them is true and the other one false. But, according to this thinker, no one knows how this is possible, and no philosophical arguments, such as St. Augustine's, can render it really intelligible. Ockham's position thus consisted essentially of simply affirming what he thought was required by both logic and faith and refusing to render either intelligible in terms of the other.

The attempts of St. Augustine and many others to reconcile God's omniscience with the indetermination of men's actions were entirely rejected by the eighteenth-century American theologian Jonathan Edwards, who maintained that divine prescience imposes the same necessity upon things as does predestination, a doctrine that had been taught by St. Augustine. Foreknowledge, Edwards agreed, does not cause those things that are foreknown, but it nonetheless renders them certain and therefore inevitable. Indeed, such foreknowledge could not exist if determinism were not true, for there can be no certainty with respect to any contingent things. To say that things are foreknown with certainty by God and are nevertheless contingent and thus uncertain struck Edwards as an evident absurdity.

Similar doubts are expressed, among contemporary philosophers, by Charles Hartshorne. Hartshorne has defended indeterminism and free will, and defending also the belief in God, he has proposed an exceedingly interesting revision of the idea of omniscience. An omniscient being, according to him, is one who knows everything that it is possible to know. There can, however, be no antecedent truth with respect to particular future free actions of men other than that they might and might not occur. God, accordingly, cannot know whether they will be performed until the time for the performance arrives. He is nevertheless omniscient, since only those things that are inherently unknowable are unknown to him. It is significant and rarely noted that this is precisely the position taken by St. Thomas Aquinas with respect to God's omnipotence. God, according to St. Thomas, is omnipotent not in the sense that he can do anything whatsoever but, rather, that he can do anything that it is possible to do.

DIVINE POWER AND PREDESTINATION. It was earlier noted that the three chief sources of theological determinism are God's presumably unlimited goodness, knowledge, and power. It is undoubtedly the third of

these alleged attributes that has been the richest source of such theories. Even St. Augustine, although he defended human freedom on other grounds, felt obliged to relinquish it in the light of his conception of God's power. Thus arose the doctrine of predestination and all the baneful consequences it has wrought in the history of Christendom.

A man's power, St. Augustine thought, is nothing in comparison to that of his maker. Indeed, a man is helpless to do anything except sin unless he is assisted by the power and grace of God—"God worketh in us both to will and to do." Adam, our first ancestor, was, to be sure, free and, hence, free not to sin, but he sinned anyway and thereby cast the entire race of men into a morass of sin from which it is unable to lift itself by its own power. God as well as the blessed are unable to sin, but men are unable to avoid it. Accordingly, no man can be saved by the exercise of his own will, which can lead him only to damnation. He can be saved only by being chosen by God.

The same opinions were promulgated by Martin Luther and John Calvin, particularly in Luther's dispute with Desiderius Erasmus and Calvin's dispute with the Arminians on the issue of man's free will; they formed a considerable part of the theological basis of the Protestant Reformation. Both Luther and Calvin stressed the power, sovereignty, and righteousness of God, subordinating to these the belief in his love and mercy. God, according to Luther, does not merely foreknow what will happen. He foreknows, purposes, and does everything according to his eternal, changeless, and infallible will. To affirm any power or freedom on man's part, particularly any freedom to perform meritorious actions, seemed to both Luther and Calvin to compromise the power of God and even to set men in competition with him. Without God's grace everything we do is evil and therefore determined. It is not within any man's power to do any good thing. Even actions which would otherwise be right and proper, such as acts of charity, are, according to Luther, without merit if not accompanied by faith and prompted by grace. Luther thus compared the human will with the will of a beast of burden, which is ridden by either God or Satan. If ridden by God, it goes where God wills, and if by Satan, where Satan wills; in neither case, however, does it choose the rider. The riders, God and Satan, vie over who shall control it. Such views as these were once, of course, the source of persecutions and upheavals, but they are rarely enunciated with seriousness now, even by theologians, for the idea of divine power no longer has the reality in men's minds that it once had.

PHYSICAL DETERMINISM

Modern theories of determinism were inspired mainly by the development of physical science, particularly in the seventeenth and eighteenth centuries. Scientists then discovered that the motions of the heavenly bodies were not only regular but also "obeyed" certain laws that could be expressed with mathematical exactness. Gradually, the whole approach to the study of nature, which had been philosophical, speculative, and heavily influenced by Aristotle, gave way to observation, experiment, and the search for laws. The idea slowly took hold that all things in nature, men included, behave according to inviolable and unchanging laws of nature. In the philosophical tradition there was a great deal that made this idea plausible, reasonable, and almost inevitable. Theories of determinism were about as old as philosophy. The rise of physical science only prompted philosophers to revise somewhat the content of deterministic theories to which they were already thoroughly accustomed. They more or less ceased thinking of human actions and other events as determined by moral considerations or by an eternal and immutable God and began thinking of them as determined by eternal and immutable laws of nature.

THE EPICUREANS. Of course, this idea was by no means new. The view that everything is composed of matter or, more precisely, of minute and impenetrable atoms or invisible material particles had been elaborated by Leucippus and Democritus before the Christian era and had been perpetuated in the teachings of the Epicureans for centuries. Such a conception of nature gave rise to the idea that if everything that happens is resolvable into the motions and combinations of atoms, then men's behavior, too, must be reducible to and understandable in terms of the motions of atoms. The early atomists assumed that this must be true even of men's thoughts and desires, since, according to them, even the "soul" is composed of atoms. The behavior of atoms, in turn, was thought to be a function of their speed, direction of motion, and sometimes their shapes. Atoms changed the direction of their motion simply by being struck by other atoms. Material bodies arose from the combination of atoms into groups or clusters and perished as a result of their dispersion. The atoms themselves, however, were individually indestructible and indivisible.

The Epicureans who took over this theory of nature were not long in discovering its implications with respect to human freedom. These philosophers were concerned mostly with discovering the means to the attainment of the highest good for man, which they took to be happi-

ness and freedom from pain. It would be idle, however, to work out the means for the attainment of this if men had no freedom to choose those means. If the theory of atomism were true, then it would seem that what became of a man and whether he attained a good life were simply matters of how physical bodies and, ultimately, the atoms of which all bodies are composed behaved, and no man would have any hand in what became of him. The Epicureans accordingly modified the theory by claiming the atoms to have the power of occasional spontaneous motion, which they referred to as the capacity to swerve. Ordinarily, an atom would change its direction only by being driven from its path by impact with another atom, but occasionally, they maintained, an atom alters its path spontaneously, without any cause for this change at all. This enabled the Epicureans to maintain that there is an element of contingency and uncertainty in nature, that not everything is determined by physical laws, and that men can therefore intelligibly be thought of as free to some extent or, in modern terms, as having free will. The Epicureans' opponents never tired of waxing merry with the doctrine of the swerve, however. Indeed, that doctrine did enable the Epicureans to avoid determinism, but there appeared to be nothing else in its favor, and it seemed, moreover, to be plainly irrational.

HOBBES'S MATERIALISM. Perhaps the best example of physical determinism in modern philosophy is the system of Thomas Hobbes. His philosophy represents a thoroughgoing attempt to interpret human nature according to the basic presuppositions of the science of bodies—that is, physics—and although it is no longer novel, it is probably fair to say that the generations of thinkers since Hobbes who have shared his aim and purpose have not significantly modified or improved upon his fundamental ideas. Modern materialistic theories differ from Hobbes's basic system only in details and mode of expression and share equally with it such purely philosophical merits and defects as it may possess.

Hobbes denied the existence of any immaterial soul or spirit in men, maintaining, as do some contemporary materialists, such as J. J. C. Smart, that ideas, sensations, and all psychological processes are motions or modifications of matter in the brain. From this it at once follows that human behavior is the behavior of matter and is to be understood according to the same general principles that we apply to matter. The idea that men might be the original sources of their own voluntary motions or that acts of will might arise without causes was rejected as unintelligible; nothing, Hobbes said, "taketh a beginning from itself." Whatever happens, whether in the realm of

human behavior, human thought, or elsewhere is caused and hence causally determined by changes of material particles. Voluntary actions are therefore no less necessitated than anything else.

Hobbes nevertheless insisted that such complete physical determinism is consistent with human liberty, for he defined liberty as simply the absence of external restraint or impediment and, hence, as something that even inanimate things can possess. He said that, properly understood, liberty is simply the "absence of all the impediments to action that are not contained in the nature and intrinsical quality of the agent." Hobbes concluded that any unobstructed moving body can be considered free. The unobstructed water of a flowing stream, for example, descends freely, though it is not at liberty to ascend or to flow across the riverbed. It is part of the "nature and intrinsical quality" of water to flow downward, and it flows freely.

Hobbes interpreted human nature according to such analogies. All voluntary human action, he thought, is caused by the alternate operation of the general motives of desire and aversion, which he took to be similar to, and, indeed, varieties of, physical forces. The proximate or immediate cause of a voluntary motion is an act of the will, but an act of the will is never free in the sense of being uncaused. It is caused by some kind of desire or aversion. Deliberation was described by Hobbes as an alternate succession of contrary appetites, a kind of vacillation between competing impulses, in which the appetites are of such approximately equal force that neither immediately overcomes the other. Deliberation ceases when one of them comes to outweigh and thus to prevail over the other. An "act of will," accordingly, is simply the "last appetite"—that is, the desire or aversion upon which one finally acts. To speak of an agent's act of will as "free" would be equivalent to saying that the agent is able to perform it if he wills to perform it, and this Hobbes dismissed as an "absurd speech." To say a man is free to do a given action means only that he can do it if he wills—that is, that his will or "last appetite" is sufficient to produce that action—but it is obviously nonsense to speak of an act of will itself being free in any such sense. Any other sense of freedom, however, seemed to Hobbes inherently incoherent. It is, for example, a fairly common conception of liberty among the advocates of free will that a free agent is one who, when all things necessary to produce a given action are present, can nevertheless refrain from that action. This, according to Hobbes, is equivalent to saying that conditions might be sufficient to

produce a given effect without that effect's occurring, which is a contradiction.

It is noteworthy that Hobbes, though he claimed all human behavior to be physically determined and necessitated, did not conclude that men are not responsible for their actions. In this his theory represents an important departure from some of his predecessors. The Epicureans took for granted that behavior that is physically determined is unfree, and they therefore denied, in the face of their own presuppositions, that all human behavior is physically determined. But Hobbes maintained that a voluntary act is simply one that is caused by an act of will. It is rendered no less voluntary by the fact that acts of will are caused. Generations of philosophers, while for the most part rejecting Hobbes's materialism, have nevertheless followed him in this and in his conception of liberty. Arthur Schopenhauer, for example, declared it nonsense to ask whether acts of will are free, giving the same reason that Hobbes had given; defined freedom as the absence of impediments and constraints; and, like Hobbes, found no incongruity in speaking of inanimate bodies, such as a flowing stream, as acting freely. In the twentieth century Moritz Schlick, A. J. Ayer, and many others made the point that freedom is not opposed to causation but to constraint. The significance of these ideas is enormous, for they appear to offer the means of once and for all reconciling the apparent opposition between determinism and freedom, thus dissolving the whole problem of free will. Many philosophers are still convinced that this insight is entirely correct and that there really is therefore no problem of free will.

PSYCHOLOGICAL DETERMINISM

Most philosophers since Socrates, and even those before him, have, unlike Hobbes, distinguished between men's minds and their bodies, taking for granted that men are not just collections of material particles. Descartes distinguished minds and bodies as two entirely distinct substances whose essential properties are utterly different. Most philosophers since have rejected much of Descartes's philosophy but have nevertheless preserved the distinction between minds and bodies. In contemporary philosophy minds and bodies are not often described as distinct substances, but an absolute distinction is nevertheless often drawn between "psychological" predicates and verbs, on the one hand, and "physical" ones, on the other, and this amounts to much the same thing. Because of this, most modern theories of determinism, as applied to human behavior, can suitably be called theories of psychological determinism. Most of these theories are in

complete agreement with Hobbes's concept of free and voluntary behavior as the unconstrained and unimpeded behavior that is caused by an act of will, a motive, or some other inner event. The only significant difference is that acts of will and other inner causes are conceived of as psychological or mental events within the mind of the agent rather than as modifications of matter in his brain.

CARTESIAN INDETERMINISM. Descartes stands out in modern philosophy as a defender of free will, which is conceived of as indeterminism with respect to the voluntary operations of the mind. In his *Meditations* he described such freedom as infinite, meaning that no limitation whatsoever is put upon the mind's power of choice. His theory was essentially that willing consists of assenting or dissenting to some conceived object of choice or to some proposition. By the understanding one is enabled to entertain certain propositions, but understanding by itself neither affirms nor denies, neither chooses nor rejects. This role is reserved for the will. Accordingly, human understanding can be of limited scope, as it is, without in any way limiting the freedom of the will. The understanding sometimes represents things in an obscure and confused manner, sometimes even falsely, as in the case of various illusions and deceptions, but it sometimes represents them clearly and distinctly. Intellectual error results from the precipitous use of the will—that is, from assenting to things that are not clearly and distinctly perceived by the understanding. Moral error results from a similar unrestrained use of free will—that is, from men's assenting to or choosing objects that are only speciously good, without a clear and distinct apprehension of their true worth. Thus, error is always avoidable. To know what is true, attain genuine knowledge, and choose rightly, one needs only to confine the assent of the will to what is clearly and distinctly perceived by the understanding as true or good. God cannot therefore be blamed for men's errors. He endowed men with understanding adequate for the perception of truth and with a will that is absolutely unlimited in its freedom to accept what is true and reject what is doubtful or false.

This way of conceiving of the human will has provided what is virtually a standard solution to the problem of moral evil—that is, to the problem of reconciling the occasional turpitude of men with the presumed goodness of their creator—but beyond that hardly any philosophers have agreed with it. Probably no other indeterminist, for example, has described the freedom of the human will as unlimited. The theory was also quickly subjected to criticism on epistemological grounds. With great perception Spinoza, for example, challenged the basic dis-

tinction between the understanding and the will. It is quite impossible, Spinoza said, to have a clear and distinct understanding of some truth without at the same time assenting to it. The perception of truth is one and the same thing with the knowledge of it, and one cannot therefore have a true idea without at the same time knowing that he has a true idea.

Much more important, however, were the implications of Descartes's idea of a "free" will, conceived of as a will that is not determined by anything else. It appeared to imply that men's choices are completely random and capricious, utterly mysterious and inexplicable. In fact, this has always been the overwhelming stumbling block for all theories of indeterminism, whether in the Epicurean notion of spontaneous swerves of atoms or Descartes's notion of uncaused assents, dissents, and choices. If such things are really free in the sense of being causally undetermined and if human behavior is to be explained in terms of such things, then human behavior itself would have to be random, capricious, and utterly inexplicable. Since, however, human behavior does not appear to be exactly what these theories suggest, there has always been a powerful incentive to reject indeterminism in favor of some conception of determinism that does not do violence to men's conceptions of liberty.

Innumerable philosophers have thought that this is accomplished in the manner suggested by Hobbes—that is, by conceiving of a voluntary action as one that is caused by such an inner event as volition, motive, desire, choice, or the like; conceiving of an involuntary action as one that is caused by some state or event external to the agent; and then defining a free action not as a causally undetermined one but as one that is not involuntary or constrained. This kind of determinism has been advocated by so many philosophers, including many contemporary writers, that it would be tedious to list them. The basic idea was suggested by Aristotle, although Aristotle did not discuss the problem of free will as such. It was lengthily defended by John Locke, who was, however, aware of some of the difficulties in it, which he never entirely resolved except by enormous equivocations. Probably the most famous classical defense of it was presented by David Hume, who is still thought by many to have solved the problem of free will.

LOCKE'S THEORY OF LIBERTY. Locke, like Descartes, distinguished between a man's mind and his body and described both as substances. Changes in a man's body, including voluntary motions, are, he thought, all caused, but the causes are within the mind in the case of volun-

tary motions. Unlike Descartes, however, Locke did not suppose that anything within the mind is causally undetermined, nor did he think it necessary to suppose this in order to preserve the belief in human freedom, which he thought misleading to label "freedom of the will."

Locke defined liberty or freedom as "a power in any agent to do or forbear any particular action, according to this determination or that of the mind, whereby either of them is preferred to the other." One acts freely, then, provided he is acting according to the preference of his own mind, and this is perfectly consistent with his action's being causally determined. It might, for instance, be determined by that very preference. Locke also defined freedom as "being able to act or not to act, according as we shall choose or will," and this again, far from implying that free actions are uncaused, implies that they are caused by the agent's choice or will. In the light of this, Locke, like Hobbes, dismissed the question whether men's wills are free as "improper" or meaningless, like asking whether a man's sleep is swift or whether virtue is square. Liberty, he said, is something that can be possessed only by agents, not by their wills.

That an action can be perfectly voluntary and nevertheless unavoidable was, Locke thought, borne out by clear examples. Suppose, for instance, that a man went to a certain room because there was someone he had a strong desire to see and suppose that while he was there conversing with him, someone secretly bolted the door behind him so that he could not leave. Now, Locke pointed out, his action of remaining in the room, entirely in accordance with his own preference and desire, would not cease to be voluntary just because he could not, unbeknown to him, leave if he wanted to.

One acts voluntarily and freely, then, in doing what one wills, prefers, or chooses. Locke distinguished, however, between desires or preferences and volitions, noting that men can prefer certain things they can by no means will. Thus, a man might prefer to fly than to walk, but he cannot will it. Locke defined a volition as "an act of the mind knowingly exerting that dominion it takes itself to have over any part of the man, by employing it in, or withholding it from, any particular action." Elsewhere he defined a volition as "an act of the mind directing its thought to the production of any action, and thereby exerting its power to produce it." A volition, then, is a psychological act that sometimes figures causally in the production of voluntary motion. It is itself causally determined by the mind, and the mind, in the determination of its volitions, is, Locke thought, causally deter-

mined by the satisfaction of doing or continuing a given action or by feeling uneasy in doing or continuing it.

There is, then, throughout Locke's involved, tortuous, and sometimes equivocating discussion the general presupposition that determinism is true and that indeterminism is irrational and unintelligible. The philosophical problem, as he understood it, is simply that of showing that determinism is compatible with what all men believe concerning human liberty. He seemed to believe that once certain crucial concepts, such as "voluntary," "free," and the like, are rightly defined and understood, the problem of free will would evaporate.

HUME ON FREEDOM AND NECESSITY. The defining of the concepts was, in any case, precisely what David Hume set out to do in his celebrated discussion of liberty. According to Hume, all men have always been of the same opinion on this subject, believing both that men are free and that all their actions are causally determined. There is therefore no philosophical problem of free will, and the whole dispute, he thought, has heretofore been purely verbal in character, involving only confusions in the meanings of words.

It was a fundamental point of Hume's philosophy that causation is essentially constant succession, that there is no necessary connection between causes and their effects. Causes, therefore, do not compel the occurrence of their effects; they only precede them. The question of whether human actions are caused, then, is simply the question of whether there is anything with which they are constantly joined. Hume claimed that no one has ever been in any doubt about this. Throughout history certain actions have always been associated with certain motives with the same constancy and regularity that one finds between any causes and their effects. Human actions are caused, then, in the same way that everything else is caused.

Far from concluding from this, however, that no human actions are free, Hume concluded the opposite, for he considered it the very nature of a free action that it springs from the motive of the agent. He therefore defined freedom as being able to act according to the determinations of one's own will—that is, of one's motives—a definition that presupposes that one's free actions are caused. One's actions are not unfree if they are caused but if they are caused by something other than the determinations of one's own will.

Nor does this conception of liberty, according to Hume, vitiate a man's responsibility for what he does. On the contrary, responsibility depends upon the causation

of actions by motives. All laws are based on rewards and punishments and thus rest on the assumption that men's motives can be relied upon to have a regular influence on their behavior. There would be no point in appealing to such motives as fear and hope if nothing could be predicted from their operation. Justice, moreover, requires such an operation of motives, for no man can be a fit object of punishment if his actions are in no way traceable to his motives. Indeed, if one could not rely upon the constant and predictable operation of motives, all intercourse with one's fellows would be hazardous or impossible. One could not even invite a guest to his table with any confidence of not being robbed by him, for the knowledge of his honesty and friendliness would in that case provide no assurance. Sometimes, to be sure, men are robbed or murdered when they had every reason to expect otherwise; however, men are also sometimes destroyed by earthquakes and the like when they had no reason to expect it. No one concludes from this that earthquakes are without any causes. Determinism, then, does not imply that all human behavior is predictable in the most straightforward sense of the term, for many unpredictable things are nevertheless causally determined. A man might not know why his watch has stopped and might not have been able to predict that it was going to stop, but this is only because the cause is hidden from him. He does not suppose that there was no cause at all. Similarly, a normally genial man might on occasion be peevish, but this is only due to some cause—some intestinal disorder, for instance—that is hidden from others and perhaps even from himself.

The important question for Hume, then, was not whether all human actions are causally determined, since all men have always been convinced that they are, or whether any human actions are free, since all men have always been of the same opinion on this, too. It is simply the question of how these two beliefs, so universally shared, can both be true, and Hume found the answer to this in analyzing what is meant by saying that one's action may be caused and also free.

DETERMINISM AND RESPONSIBILITY. What is essentially Hume's argument has been repeated by other philosophers and is still vigorously pressed by many of them. There have nevertheless always been doubters who have contended that this is a superficial conception of liberty, that the actions of a causally determined agent can be "free" only in a technical sense that does not at all correspond with the notion of freedom that men in fact have and that moral responsibility requires. A genuinely free action, according to this point of view, is not merely one

that is in keeping with one's preferences, desires, and volitions, but one that is avoidable or, in C. D. Broad's terminology, "substitutable." To say that a given action was free means at least, according to these writers, that the agent could have done otherwise given the very conditions that obtained, not just that he could have done otherwise if something within him had been different. This thought was expressed by Immanuel Kant, who rendered it in the formula "ought implies can." What Kant had in mind was that whenever one rightly judges that a given agent is morally obligated to perform a certain action, he must logically presuppose that the agent can perform it—not just that he can if he wants, prefers, or wills to, but that he can in some absolute sense. This kind of freedom has been aptly called "categorical," as opposed to the "hypothetical" freedom defended by Hume and others, for it is a freedom both to do and to forbear doing a certain action under the same set of conditions.

The difficulty in deterministic theories that all these critics have felt can perhaps be illustrated with an example. Suppose that a given man is often motivated to steal and that in accordance with determinism he always does steal when, prompted by that motive, his efforts to do so meet with no impediment. According to the determinist theory, these actions are then free and voluntary, and he is responsible for them. Suppose further, however, still in keeping with determinism, that he has no control over the occurrence of this motive, that it arises, let us suppose, as a result of an abominable background and deprivation in his youth, that, in short, he is the product of precisely those influences that nourish and perpetuate that motivation. One's inclination may be to say that even given such a background, he did not have to become a thief, but that would not be in keeping with the thesis of determinism. According to that thesis, it was causally determined and, hence, inevitable and unavoidable that he should become whatever he is. It follows from these suppositions, then, that he cannot help being whatever he is and performing just the actions he does perform. We can indeed still say that if he were not the kind of man he is or if he were motivated otherwise than he is or if something had been different, he could then act otherwise than he does; however, any point to ascribing this merely hypothetical kind of freedom to him seems to vanish when we add, as the determinist must, that nothing could have been different, that he could not have been any other kind of man, that he could not have been motivated differently, and that, hence, he could not have acted otherwise than he did.

It was with this sort of thing in mind that Kant, contrary to what he acknowledged to be the requirements of reason, postulated what he called a "causality of freedom" and insisted that the theory of determinism cannot be applied to men. Their freedom, he thought, must be categorical or such that their actions are not entirely determined by factors over which they have no control. The same point was pressed by G. W. Fichte, Thomas Reid, Samuel Clarke, and William James, and among contemporary writers it has been eloquently urged by C. A. Campbell and many others. It was essentially the point that was skillfully made by Henry Mansel in his criticisms of J. S. Mill's determinist theories. Mill defended a theory that was in all basic respects identical with Hume's—that causation is constant conjunction; that men, when acting voluntarily, always act in accordance with their strongest desires or aversions; that justice, morality, and the administration of laws all require such causal determination of behavior, and so on. Mansel argued that when pressed to its ultimate conclusions, this theory did not differ in its consequences from what he called "Asiatic fatalism," or the view that all men are helpless to do anything except what they actually do. Mill denied this by arguing that although one's actions are determined by his will, his will by his desires, his desires by his motives, and his motives by his character, his character is itself amenable to his will. Mill did not, however, succeed in explaining how, according to his theory of determinism, a man's character, which he evidently thought of as the ultimate determinant of his conduct, could be "amenable" to or within the control of his "will," which is merely the expression of his character.

"HARD" AND "SOFT" DETERMINISM. William James is among the relatively few philosophers who, impressed by the kind of argument Mansel directed against determinism, have defended a theory of outright indeterminism or chance. He was, like the Epicureans, led to do so by what he thought were the requirements of morals. Determinism, he said, implies that the world we have is the only possible world and that nothing could have been other than it was; he declared this to be incompatible with the reasonableness of regret and other basic moral sentiments. In the course of his argument he drew a very useful distinction between what he called "hard" and "soft" determinism. By soft determinism he meant all those theories, like those of Hobbes, Hume, and Mill, which affirm that determinism is true and then, by means of what he considered sophistical and contorted definitions, somehow manage to preserve a semblance of certain moral notions like liberty, responsibility, and so on that, accord-

ing to James, are plainly obliterated by any theory of determinism. Hard determinists, on the other hand, are those who affirm what their theory entails—namely, that no man can help being what he is and doing what he does and that moral distinctions are therefore irrational and ought never to be applied to men or anything else.

There have been relatively few defenders of hard determinism, most philosophers preferring instead to try reconciling determinism with morals. Certain materialist philosophers of the French Enlightenment, such as Baron d'Holbach, are exceptions, for they did maintain that men are only helpless products of an impersonal nature who govern neither themselves nor anything else but are simply carried along to whatever destinies the circumstances of their lives inflict upon them. Arthur Schopenhauer sometimes defended the same thought, emphasizing the irrational forces that govern human behavior. The American lawyer Clarence Darrow applied this hard determinism in courts of law with the most devastating effect, saving many men from the gallows not by pretending they were legally innocent but by the simple and eloquent plea that they could not help being what they were and doing what they had done. Among contemporary philosophers the claim that men are not morally responsible, as an implication of determinism, has been vigorously defended by John Hospers, and many others have pointed out the dubious character of soft determinism. The standard "solution" to the problem of free will, embodied in the writings of Hume, Mill, and many others, is as a result no longer considered to be as obvious as it once was, and a decreasing number of philosophers are now willing to speak blithely of free and voluntary behavior's being caused by motives, desires, volitions, and the like.

DETERMINISM AND MODERN PSYCHIATRY. Contemporary psychiatrists are for the most part highly impatient with theories of human freedom, particularly the theories with which philosophers are familiar. Whether all or most human behavior is causally determined is, after all, an empirical question of fact, and psychiatrists profess to know with considerable assurance not only that it is but to some extent what the causal factors are, particularly in cases of deviant behavior. Philosophers have largely been content to speak in general terms of motives, volitions, desires, and the like as the springs of action, but psychiatrists speak of specific unconscious fears, defenses, and hostilities. One finds in their writings, in fact, an extensive and elaborate terminology for the identification and description of hitherto undreamed of forces that are supposed to be the real determinants of

behavior, including certain typical human behavior that both the learned and unlearned have long been accustomed to thinking of as rational, deliberate, and free. Philosophical speculations on the problem of free will have, as a result, come to appear rather superficial to many of those who are familiar with psychiatry.

Hospers's opinion. Perhaps no contemporary philosopher has done more toward viewing these problems in the light of modern psychiatry than John Hospers. One can, according to this writer, agree with the philosophers who maintain that freedom is opposed not to causality but to restraint and compulsion and also think of human behavior as being typically caused by human desires and even volitions. He nevertheless advances impressive empirical evidence, drawn from typical cases of the kind long familiar to psychiatry, to show that our very desires, volitions, and even deliberations are the product of unconscious forces, compromises, and defenses that are not only not within our control but whose very existence is usually unsuspected by those—all of us—who are their victims; that they were for the most part implanted in us in our earliest years, to which our memory does not even extend; and that our after-the-fact explanations or reasons for our behavior are mostly illusions and wishful thinking. "It is not," Hospers claims, "as if man's will were standing high and serene above the flux of events that have moulded him; it is itself caught up in this flux, itself carried along on the current." Spinoza compared a man with a conscious stone which thinks it moves freely through the air only because it does not know the cause of its motion, and Baron d'Holbach compared him with a fly riding on a heavy wagon and applauding itself as the driver. Hospers similarly says that a man is "like the hands on the clock, thinking they move freely over the face of the clock," a comparison that is particularly apt in the light of the psychiatrists' claim that the forces that move us lie within us and are normally deeply hidden.

Philosophers almost entirely agree that if a man's behavior is the effect of a neurosis or inner compulsion over which he has no control and of which he usually has no knowledge, then in a significant sense he is not morally responsible, and in any case he certainly is not free. The most common illustration of this is kleptomania. What is philosophically significant about kleptomania is that its victim does act according to his own volition and desire but that the volition and desire are themselves the product of a neurosis. The profound significance of Hospers's view lies in his claim, which with considerable justification he believes is empirically sup-

ported by psychiatry, that virtually all significant behavior is of the same order as kleptomania and other familiar compulsions, having its sources in the unconscious. The issue is accordingly not a philosophical one but an empirical one. It is simply whether, in fact, as Hospers graphically expresses it, "the unconscious is the master of every fate and the captain of every soul." His defense of this claim is an array of fairly typical cases that are quite well understood by psychiatrists—the compulsive gambler who always plays until he loses, the man who inwardly loves filth and so washes his hands constantly, the mother who lets her child perish of illness on the train because she "must get to her destination," and so on. In case histories like these, Hospers believes, we can, if we are honest and sophisticated, see our own lives and conduct partially mirrored and perhaps begin to have some inkling of the unconscious, deeply hidden but powerful forces that almost entirely determine what we are and what we do. If Hospers is right and if psychiatrists do actually know what they confidently claim to know—and it would be very rash to suggest that they really do not—then the problem of determinism versus free will is not, as Hume thought, resolved in a way that accommodates both views. It is, rather, solved, and it is solved on the side of hard determinism with all the enormous and, to some minds, shocking implications that theory has for morals and law.

THE THEORY OF SELF-DETERMINATION. The great difficulty of indeterminism, as previously noted, is that it seems to imply that a "free" or causally undetermined action is capricious or random. If one's action is strictly uncaused, then it is difficult to see in what sense it can be within the control of an agent or in any way ascribable to him. The difficulty with determinism, on the other hand, is that it seems to render every action ultimately unavoidable. The implications of determinism do not therefore significantly differ from those of pure fatalism.

It is partly in order to meet both of these difficulties that some philosophers have defended a theory of self-determination or agency. The essential elements of all such theories are that men are the sources or causes of their own actions; that their being the source or cause distinguishes those bodily motions that are actions from those that are not, the latter being caused by something other than themselves; and that free actions are those that an agent performs or produces but that he is not caused by anything else to perform or produce. This theory thus distinguishes "action," or "agency," as a basic philosophical category, treating actions as different in kind from

other events and as not in any way describable in terms of the latter.

The theory of self-determination is most fully and clearly set forth by Thomas Reid in his *Essays on the Active Powers of Man,* though he does not call his theory by that name. The basic idea, however, was, according to Cicero's essay *On Fate,* advocated by Carneades. It has also been defended by G. W. Fichte and Samuel Clarke. Aristotle seems to have had some such conception in mind when he spoke of men and other animals as self-moved, and Kant also seemed to when he ascribed to men a special causality of freedom and distinguished this sharply from ordinary causality. Perhaps its best-known advocate among contemporary philosophers is C. A. Campbell, who ascribes a "creative activity" to "selves"—that is, to minds or persons—and argues that men are capable of originating their own actions in opposition to the inclinations of their characters.

Carneades on causality and freedom. Carneades, in trying to resolve the problems begotten by the Epicurean theory of uncaused swerves of atoms, on the one hand, and the fatalism of their opponents, on the other, suggested that the idea of being uncaused is ambiguous, like the idea of something's being empty. When one describes a vessel as empty, one does not ordinarily mean that it is absolutely empty—that it does not contain even air, for example. One means only that it does not contain oil or wine or whatever one might expect. Similarly, when one says that a man's action was uncaused, one does not mean that it was without any cause at all but only that it had no antecedent cause. This is compatible with its having been caused by the agent himself. Carneades noted, moreover, that the Epicureans themselves ascribe the power of motion to atoms, giving no account or cause of why they should be in motion other than that it is their nature to move. Why, then, may not men be thought of as having a similar original power of motion without supposing that some antecedent force must set them going? When men act freely, he thought, they are simply the sources of their own behavior, which is therefore caused, though not caused by anything external to themselves. One acts unfreely when one is caused to act as one does by some antecedent and external force. This way of viewing the matter, Carneades suggested, does not imply any fatalism, nor does it imply that a man's actions are random, like the swerves of the atoms. To say that a man is the cause of his own action does not imply that he was unable to cause any other action, nor does it imply that his action was uncaused.

Reid's theory. Reid developed many arguments against determinism, which he sarcastically called "the glorious system of necessity," but his own positive theory is remarkably similar to that of Carneades. Reid argued that determinism is inconsistent with a whole range of beliefs that are shared by all mankind and maintained that we have far more reason for adhering to these than for affirming any philosophical theory with which they are inconsistent. In particular, he maintained that determinism is incompatible with deliberation, with morality, and with the pursuit of ends. When, for example, a man deliberates about some possible course of action, he assumes that the proposed end, as well as the means to its attainment, is within his power to accept or reject—that is, that it is up to him whether the end shall be sought and if so, how. Without this belief he could not deliberate. The belief itself, however, is incompatible with determinism, for determinism entails that no act that is performed was avoidable and that in this sense it is never up to any man what he does. Again, all men believe that a basic distinction can be made between acts that are blameworthy, praiseworthy, and neither. Determinism, however, implies that every act that is performed is ultimately unavoidable and, hence, that no such basic distinction can be made. Finally, all men believe they can pursue, sometimes over a long period of time, certain ends that they have previously conceived. This implies, however, that their actions in pursuit of such ends are within their own power and control, which is inconsistent with determinism.

Reid therefore defined the liberty or freedom of a moral agent as "a power over the determinations of his own will," a definition that contrasts interestingly with Hume's definition of freedom as "a power of acting or not acting according to the determinations of the will." In rejecting determinism, Reid did not, however, affirm that human actions are uncaused. On the contrary, he maintained that nothing happens without a cause, that everything that changes is changed either by some other thing or by itself. Not all causes, then, are antecedent and external causes. Some things, such as men, are sometimes the causes of their own behavior. Indeed, Reid took this to be the very reason for calling a man an agent—namely, that he is a being who acts, not merely one that is acted upon. To speak of an agent being caused to act by something other than himself was for Reid a contradiction, so that acting and acting freely amount to the same thing, whereas the idea of a necessary agent amounts to a contradiction.

It is evident that Reid employed the concept of causation differently from Hume. A cause, he said, is not merely some change that always accompanies another. It is always something that has the power to produce a change, whether in itself or in something else, and no man can define it beyond this. In fact, he maintained that no man would even understand any philosophical definition of a cause if he did not first have the idea of causation from the awareness of himself as an agent. There is, then, no reason why men may not be the original causes of their own voluntary actions, which is precisely what all men believe themselves to be. This way of viewing the matter permits us to say that determinism, defined as the thesis that everything that happens is the result of some antecedent cause or causes, is false and, further, that nothing occurs without any cause whatsoever. Reid's philosophy thus overcomes the chief difficulties of both determinism and simple indeterminism. It accomplishes this, however, only by introducing what many philosophers have thought to be an enormous difficulty of its own—namely, understanding how anything can be the cause of its own changes. One is reminded of Hobbes's dictum, "Nothing taketh a beginning from itself." Alexander Bain pressed this difficulty in both Reid's and Samuel Clarke's philosophies, maintaining that it rendered their claims quite unintelligible, and Patrick Nowell-Smith has made the same point against C. A. Campbell's similar views. The idea of something's being self-moved in the sense understood by Carneades, Reid, Clarke, and Campbell is obviously entirely unlike any concept of physics. Accordingly, Nowell-Smith has suggested that it should be understood in the way such physical concepts as self-regulating, self-propelled, self-starting, and the like are understood, thus rendering it less esoteric. It was Reid's view, however, that this seeming difficulty is only a fact, that all men really do consider themselves to be the causes of their own voluntary actions in a sense in which no inanimate things are ever causes, and that we should be guided in our opinions not by what this or that system of philosophy requires but by what the common sense of mankind universally affirms.

THE "STRONGEST MOTIVE." It is fairly common to suppose that a man invariably acts—in fact, must act—in response to his "strongest motive" and that voluntary behavior is therefore always causally determined by such motives. Philosophical determinists frequently fall into this line of thought, sometimes substituting "strongest desire" for "strongest motive," though it is now less common than it once was. It is well illustrated in one of Alexander Bain's discussions of the free will controversy,

in which he writes that "in the absence of prohibition, [an agent's] decision follows the strongest motive; being in fact the only test of strength, of motive on the whole." Again, Bain notes that "any supposition of our acting without adequate motive leads at once to a self-contradiction; for we always judge of strength of motive by the action that prevails" and, further, that the action that follows upon deliberation "testifies which motive has in the end proved the strongest."

It is to the credit of Thomas Reid, with whose writings Bain was familiar, that he exhibited both the source of the considerable persuasiveness of such reflections as these and at the same time their fallaciousness. The reason this kind of claim has seemed so compelling to so many philosophers is that it has functioned as an analytic statement or one that is rendered true by definition of the concept of a "strongest motive." As such, it sheds no light whatsoever on any fact of human nature and leaves entirely unanswered the question of whether voluntary actions are really caused.

What, Reid asked, is the test of whether the motive that is strongest is the one acted upon? It is simply the motive that prevails. The claim that a man acts upon his strongest motive therefore means, Reid noted, only that he acts upon that motive upon which he acts, which is hardly a significant philosophical claim. If, however, we apply any other criterion for distinguishing which motive is strongest, then there is nothing at all to suggest that we always act on our strongest motives. On the contrary, it is a fairly common experience to feel strongly motivated to do something from which we nevertheless refrain from purely rational considerations, for example, or perhaps from moral ones. The temptation here, of course, is to say that the fact that one refrains from a given action only shows that some contrary motive is "stronger," but this indicates that we are again using as our concept of the strongest motive the motive that prevails and saying nothing more than that a man acts upon the motive upon which he acts.

Reid, however, went further than this by denying that motives can be likened to forces and that varying "strengths" can be ascribed to them in the first place. A motive, he said, is not a cause but a rational consideration of a reason. As such, it is something purely abstract, which has "strength" or "weakness" only in the sense of expressing wisdom, prudence, or the opposites. A "conflict of motives" is nothing at all like the conflict of opposing forces, one of which overcomes the other by superior force. It is more to be likened to the conflicting pleas of contending attorneys. One of these can be

"stronger" or have more "force" or "weight" than the other only in the sense that it is more reasonable and persuasive. When, accordingly, we speak of rational or intelligible considerations as having "force," "weight," or "strength," we are not using these notions in the sense they have for physics but as metaphors borrowed from physical nature. It is, Reid thought, largely from mixing these literal and metaphorical meanings that some persons are led into theories of determinism and into supposing that human nature bears a greater resemblance to inanimate bodies than it actually does.

CONTEMPORARY PROBLEMS

The problems of determinism are still very lively in philosophy and have recently gained powerful momentum from detailed philosophical analyses of peripheral questions. Most current philosophical discussion bearing on the problem of free will is not aimed directly at whether men have free will, but at a whole host of questions that have been begotten by this long controversy. Ludwig Wittgenstein's reflections have made it evident, for example, that philosophers do not even know what it means to call something an action in the first place or just how some of men's bodily motions qualify as actions while others do not. It is an elementary distinction that is constantly made by common sense, but philosophers have thus far been unable to analyze it. Obviously, as long as this ignorance prevails, there is little point in discussing whether men's actions are ever free. Certain recent writers, such as Arthur Danto, have suggested that the concept of an action is basic and unanalyzable and that it corresponds to nothing that is found in physical science. Previous generations of philosophers often took for granted that an action is a bodily motion caused by some such inner episode as a volition, motive, desire, or choice, but these terms are now used with much greater care.

Gilbert Ryle, in his *The Concept of Mind,* declared volitions to be a fabrication of philosophy, corresponding to nothing that has ever existed, and since his devastating critique of this whole notion there has been great reluctance among scholars even to employ the word. The concepts of desire, motive, choice, and kindred notions have been similarly subjected to criticism, so that fewer philosophers are still willing to speak blithely of them as causes. A. I. Melden, for example, maintained that no particular motive can be described at all independently of the action of which it is allegedly the cause and that its connection with an action is therefore a logical one, not, as Hume and so many others supposed, a causal one. Moreover, Melden pointed out that if an action is con-

ceived of as a bodily motion together with its motive in order to distinguish actions from bodily motions that are not actions, then it is plainly impossible to explain any action in terms of its motive, as philosophers were once so ready to do.

The interpretation of statements expressive of human ability as either disguised or incomplete conditional statements has likewise been considerably unsettled by the precise and detailed analyses of J. L. Austin. In his celebrated essay "Ifs and Cans" this writer maintained that statements involving the locution "I can" cannot possibly require, for their complete sense, the addition of some such hypothetical as "if I choose" but are, instead, to be understood in some absolute sense. Accordingly, they do not, as so many philosophers since Hume have supposed, express the idea of a causal condition at all. "I could have if I had chosen," is similarly claimed by Austin to express a past indicative rather than a conditional despite its grammatical form, for it normally expresses the idea of having had an opportunity or ability rather than the idea of a causal connection between one's choice and one's action. In statements involving the locution "I shall if I choose," the word *shall,* according to Austin, is normally expressive of an intention rather than a simple future tense and thus also differs essentially from other conditionals in the future tense. Such painstaking analyses as Austin's, although not pursued with the explicit aim of supporting or disconfirming any theories of determinism or free will, have nevertheless considerably weakened some of the strongest defenses of determinism since so many of them have more or less presupposed that statements expressive of human ability, which are so central to any discussion of free will, are simply disguised statements of causal conditions and thus are not only consistent with, but actually imply, a theory of determinism for the very understanding of them.

The highly refined and critical inquiries of contemporary philosophy have brought into further question the whole concept of the will. Is willing to do something an act, for instance, or not? If it is, then how does it shed any light on the concept of acting? If it is not, then how does an action differ from any other bodily change having an inner psychological cause? Clearly, no difference is marked merely by applying different names to such things. Furthermore, if there are such things as acts of will, do they or do they not require antecedent causes? If not, then why should any action require an antecedent cause? If so, then how are deliberate or willed actions to be distinguished from simple compulsions?

Closely associated with the notion of the will is that of intending. Doing something intentionally is now seldom thought of as merely undergoing some change as the result of an inner intention, intentions currently being thought of more in the manner in which Reid described motives—namely, as reasons and purposes having a rational content. Again, it is fairly common practice among contemporary philosophers to distinguish sharply, as Reid did, between the causes of an action and the reasons for it. If this is a real distinction, then it follows that whether some human acts are reasonable and intelligible is quite independent of whether they are caused, and there is no absurdity in describing an action as both free, in the sense of being avoidable and not the effect of antecedent conditions, and rational. This line of thought has raised anew the whole problem of understanding purposeful behavior. Men often do certain things in order to achieve certain results, and this appears to distinguish human behavior from the behavior of inanimate things in a fundamental way. When philosophers were more eager than they are now to interpret human behavior within the framework of determinism, many of them assumed that purposeful behavior was simply behavior that is caused by purposes, desires, or intentions, but this conception harbors the same difficulties as the volitional conception of action that Ryle, Melden, and others have so severely criticized. If one is acting in acting purposefully and if action can be distinguished from such other bodily behavior as digestion, perspiration, and the like only in terms of concepts like purpose, desire, or intention, then one can hardly explain purposeful activity as action that is caused by one's purpose, desire, or intention. The connection is conceptual rather than causal. Desires, purposes, and intentions are, moreover, desires for this or that, purposes or intentions to do this or that, and their objects or aims may never be realized. Thus, they are what we sometimes call "intentional" concepts, and there seems to be nothing that completely corresponds to them in the realm of physical science. No inanimate thing, for example, can without metaphor be spoken of as behaving as it does in response to its desire for something which perhaps never has and never will exist, and no engineer who spoke in that manner of even the most sophisticated machine would ever suppose that he had thus given a causal explanation of anything.

More and more philosophers are inviting attention to certain fundamental differences between the way men view the past and the future. The future, some have wanted to suggest, is a realm of possibilities in a sense in which the past is not. This idea is at least as old as Aristo-

tle's philosophy, but the renewed interest in whether men's actions might be free in some sense not countenanced by determinism has quickened interest in it. It is, for example, sometimes contended that there is a fundamental difference between finding that something is true and making something become true, a contention that renders the concept of action more fundamental than it was once supposed to be and raises anew the question of what is meant by acting freely.

The question, then, of whether determinism is true or of whether men have free will is no longer regarded as a simple or even a philosophically sophisticated question by many writers. Concealed in it is a vast array of more fundamental questions, the answers to which are largely unknown.

See also Aristotle; Arminius and Arminianism; Augustine, St.; Austin, John Langshaw; Ayer, Alfred Jules; Bain, Alexander; Boethius, Anicius Manlius Severinus; Broad, Charlie Dunbar; Calvin, John; Carneades; Causation; Chance; Chrysippus; Clarke, Samuel; Descartes, René; Determinism and Freedom; Determinism and Indeterminism; Determinism in History; Determinism, Theological; Diodorus Cronus; Edwards, Jonathan; Epicureanism and the Epicurean School; Erasmus, Desiderius; Fichte, Johann Gottlieb; Hobbes, Thomas; Holbach, Paul-Henri Thiry, Baron d'; Hume, David; James, William; Kant, Immanuel; Laws of Thought; Leibniz, Gottfried Wilhelm; Locke, John; Luther, Martin; Mansel, Henry Longueville; Mill, John Stuart; Peter Aureol; Plato; Platonism and the Platonic Tradition; Posidonius; Rationalism; Reid, Thomas; Responsibility, Moral and Legal; Ryle, Gilbert; Schlick, Moritz; Schopenhauer, Arthur; Smart, John Jamieson Carswell; Socrates; Spinoza, Benedict (Baruch) de; Thomas Aquinas, St.; Time; Voluntarism; William of Ockham.

Bibliography
The literature on determinism and free will is so vast that only a sampling can be given here.

A good though not recent critical history of the controversy is outlined in Alexander Bain's *Mental and Moral Science* (London, 1872), Book IV, Ch. 11. More recent general studies include Sidney Hook, ed., *Determinism and Freedom in the Age of Modern Science* (New York: New York University Press, 1958), which is a collection of papers by contemporary philosophers, and Sidney Morgenbesser and James Walsh, eds., *Free Will* (Englewood Cliffs, NJ: Prentice-Hall, 1962), which brings together carefully selected discussions from classical and modern writers and is intended mainly for students. A widely read but superficial discussion of the problem is contained in D. F. Pears, ed.,

Freedom and the Will (New York: St. Martin's Press, 1963), which is in part the transcription of a series of discussions by contemporary philosophers most of whom are connected with Oxford University.

ETHICAL DETERMINISM

The ethical determinism associated with Plato and Socrates is a theme of Plato's *Protagoras* and *Gorgias,* and certain elements of this theory are treated rather unsatisfactorily in his *Hippias Minor.* Aristotle discusses the theory and related problems in the *Nichomachean Ethics,* Book VII, Ch. 2.

LOGICAL DETERMINISM

The most frequently cited reference in discussions of logical determinism is the ninth chapter of Aristotle's *De Interpretatione.* Among the many more recent discussions of the problems arising from those passages are A. N. Prior's "Three-Valued Logic and Future Contingents," in *Philosophical Quarterly* 3 (1953): 317–326; R. J. Butler's "Aristotle's Sea Fight and Three-Valued Logic," in *Philosophical Review* 64 (1955): 264–274; G. E. M. Anscombe's "Aristotle and the Sea Battle," in *Mind* 65 (1956): 1–15; Richard Taylor's "The Problem of Future Contingencies," in *Philosophical Review* 66 (1957): 1–28; R. Albritton's "Present Truth and Future Contingency," ibid.: 29–46; and C. Strang's "Aristotle and the Sea Battle," in *Mind* 69 (1960): 447–465.

One of the best sources for the ancients' views on both determinism and fatalism and the only source for some of them is Cicero's *De Fato,* translated by H. Rackham for the Loeb Classical Library (London, 1942). The problem of fatalism, conceived of essentially as it was by ancient philosophers, has been extensively discussed in recent literature—for example, in Gilbert Ryle's provocative essay "It Was to Be," which is Ch. 2 of his *Dilemmas* (Cambridge, U.K.: Cambridge University Press, 1954), and by A. J. Ayer, "Fatalism," the concluding chapter of his *The Concept of a Person* (New York: St. Martin's, 1963). Richard Taylor's "Fatalism," in *Philosophical Review* 71 (1962): 56–66, was followed by many critical discussions by various British and American authors in subsequent issues of the same journal and in *Analysis* 23 (1962) and 24 (1963), and in the *Journal of Philosophy* 61 (1964) and 62 (1965).

THEOLOGICAL DETERMINISM

Leibniz's claim that God could create no world except the best one possible and the implications he drew from this are found in his *Discourse on Metaphysics* and his *Theodicy.* St. Thomas Aquinas's opinions on the moral determination of God's will are set forth in the *Summa Theologiae,* Part I, Q. 19, especially Articles 9 and 10.

The question whether determinism and fatalism follow from the conception of God as an omniscient being has been discussed by countless authors. St. Augustine's views, for example, are reproduced in a selection titled "On Free Will," in Morgenbesser and Walsh, op. cit., and also in *The City of God,* Book XI, Ch. 21. Boethius's famous treatment of the problem is given in *The Consolation of Philosophy,* Book V. St. Thomas Aquinas discusses it in the *Summa Theologiae,* Part I, Q. 14, Article 13. His views and the views of various other Scholastics are given in Frederick Copleston's excellent *History of Philosophy,* Vols. II–III (London, 1950–1953). An extensive defense of theological determinism and

predestination on various grounds is given by Jonathan Edwards in his famous *Freedom of the Will,* edited by P. Ramsey (New Haven, CT: Yale University Press, 1957). Charles Hartshorne's rather novel and perceptive reconciliation of free will with certain theological presuppositions is found in Ch. 3 of his *Man's Vision of God* (Chicago: Willett Clark, 1941). Although some of the foregoing sources raise the question of predestination, this doctrine, developed specifically as an implication of God's power, is more fully developed in St. Augustine's *Treatise on the Predestination of the Saints,* in the Nicene and Post-Nicene Fathers, first series, Vol. V, edited by Philip Schaff (New York, 1902); see also Augustine's *Enchiridion on Faith, Hope and Love,* edited by Henry Paolucci (South Bend, IN: Regnery/Gateway, 1961). Martin Luther's uncompromising denial of human free will is set forth in his polemic with Erasmus, under the title *Discourse on Free Will,* translated by Ernst F. Winter (New York: Ungar, 1961). John Calvin's defense of the same doctrine can be found at the close of the third book of his *Institutes of the Christian Religion.*

PHYSICAL DETERMINISM

The materialism of the Epicureans and the manner in which they tried to reconcile this with free will are beautifully exhibited in Lucretius's *On the Nature of Things*; an excellent source for earlier Epicurean arguments is Cicero's *De Fato.* Thomas Hobbes's materialism and arguments in favor of determinism are most fully expressed in *On Human Nature.* A more readily available source of Hobbes's important writings on this question is a paperback book of selections edited by Richard S. Peters, *Body, Man and Citizen* (New York: Collier, 1962). Arthur Schopenhauer, though he was not a materialist, defended a theory very similar to that of Hobbes in his *Essay on the Freedom of the Will,* translated by K. Kolenda (New York: Liberal Arts Press, 1960).

PSYCHOLOGICAL DETERMINISM

Most discussions of determinism and free will in modern philosophy have been within the framework of psychological determinism, which assumes that human behavior has its origins in psychological causes of various kinds. Descartes's defense of free will within this context is expressed in the fourth of his *Meditations* and also in *The Principles of Philosophy,* Part I, Sections 32–39. John Locke's extremely vacillating but influential discussion is found in *Essay concerning Human Understanding,* Book II, Ch. 21, where he discussed at length the idea of power. The classic attempt to reconcile determinism and liberty was achieved by David Hume in Section 8 of his *Enquiry concerning Human Understanding.* A defense along similar lines has been given, among numberless others, by C. J. Ducasse, in Ch. 11 of *Nature, Mind and Death* (La Salle, IL: Open Court, 1951). A now famous essay expressing essentially the same view was written by Dickinson Miller under the name R. E. Hobart and titled "Free Will as Involving Determinism and Inconceivable without It," in *Mind* 43 (1934): 1–27. J. S. Mill defended Hume's theory in his *Examination of Sir William Hamilton's Philosophy,* the relevant excerpts from which are reprinted in Morgenbesser and Walsh, op. cit.

Problems of moral responsibility are involved in almost every discussion of determinism and are central to most of them. Immanuel Kant's treatment of the problem and his defense of the idea of a causality of freedom are given in his *Critique of Pure Reason,* under the section "Transcendental Dialectic," particularly in his discussion of the third "antinomy," and, more fully, in his *Critique of Practical Reason.* C. D. Broad's influential and highly elaborate analysis, "Determinism, Indeterminism and Libertarianism," appears in his *Ethics and the History of Philosophy* (London: Routledge, 1952) and has been reprinted in Morgenbesser and Walsh, op. cit. Problems of determinism and responsibility are discussed by several authors in Hook, op. cit., particularly in the essays by Paul Edwards, "Hard and Soft Determinism," and John Hospers, "What Means This Freedom?" Both authors vigorously defend determinism and the claim that determinism and moral responsibility cannot be reconciled with each other.

William James's essay "The Dilemma of Determinism," in which the distinction between hard and soft determinism was first made, is included in almost all of the many collections of his popular essays. Most modern and contemporary writers who have defended deterministic theories have also defended some version of soft determinism, though they have seldom used the term itself. Examples, in addition to most of those already mentioned, are Patrick Nowell-Smith, in the last two chapters of his *Ethics* (Baltimore: Penguin, 1954), and A. J. Ayer, in Ch. 12 of his *Philosophical Essays* (London: Macmillan, 1954).

The most thoroughgoing defense of the theory of self-determinism was given by Thomas Reid, in his *Essays on the Active Powers of Man,* of which there have been many editions. A contemporary defense of what is essentially the same theory is given by C. A. Campbell, in Ch. 9 of *Selfhood and Godhood* (London, 1957). The same book contains an appendix in which the opinions of Patrick Nowell-Smith are subjected to a most thoroughgoing criticism. A similar concept is defended by Richard Taylor in "Determinism and the Theory of Agency," in Hook, op. cit. The same theory underlies Taylor's "I Can," in *Philosophical Review* 69 (1960): 78–89, reprinted in Morgenbesser and Walsh, op. cit. Another article that indirectly suggests such a view is Arthur Danto's "What We Can Do," in *Journal of Philosophy* 60 (1963): 435–445. Determinism is also attacked at great length in Konstantin Gutberlet, *Die Willensfreiheit und ihre Gegner* (Fulda, Germany, 1893), and in Ch. 9 of M. Maher, *Psychology* (London, 1940). These two works are written from a Catholic point of view.

A. I. Melden's *Free Action* (London, 1961) offers fairly elaborate and penetrating analyses of a wide range of concepts that have always been central to the free will controversy, such as those of wants, motives, actions, and so on; although the author does not try to prove directly that men have free will, he attacks the bases of certain widely held determinist theories. Gilbert Ryle's *The Concept of Mind* (London: Hutchinson, 1949) contains a chapter, "The Will," which amounts to a devastating critique of the idea that voluntary actions are caused by volitions. J. L. Austin's "Ifs and Cans," which is included among his *Philosophical Papers,* edited by J. O. Urmson and G. J. Warnock (London: Oxford University Press, 1962), is a painstaking inquiry into what is meant by saying of an agent that he could have done otherwise; although it is directed at claims made specifically by G. E. Moore and Patrick Nowell-Smith, it actually attacks the foundations of theories that have been widely held for over a century.

A detailed and annotated bibliography of works on determinism and free will can be found in Paul Edwards and Arthur Pap, eds., *A Modern Introduction to Philosophy,* 2nd ed. (New York: Free Press, 1965).

Richard Taylor (1967)

DETERMINISM, THEOLOGICAL

Theological determinism or predestination is the belief that events are determined or necessitated by God. One form of the traditional belief insists that owing to his omnipotence, God controls the occurrence of things. Another form asserts that his omniscience, making possible his foreknowledge of future events, affects the occurrence of such events. There are also nontraditional forms. Throughout the history of Islamic and Jewish philosophy, the debate over predestination was central.

When Islamic philosophy emerged in Baghdad in the ninth century CE, the religious and intellectual circles in the city had been witnessing a heated debate over the issue of predestination (*al-qadar*). There were three main Islamic views at the time: events in the universe, including human actions, are not predested (Muʿtazila); all such events are predested (Jabriyya); some aspects of such events are predested, whereas others are humanly "acquired" (Ashʿariyya). In treating this issue, Muslim philosophers tried to reconcile Greek rationalism with Islam.

Abū Yūsuf al-Kindī (c. 801–873) and Abū'l-Walīd Ibn Rushd (Averroes, 1126–1198) denied predestination. They interpreted the Islamic revelations to assert that God does not, for example, control human actions. They both believed that at the moment God desires or wills something to happen, it happens. However, neither God's power nor his knowledge necessitates that he desire or will everything that happens to happen. If one reads Ibn Rushd carefully, though, one discovers that for him, God determines all events, because his omnipotence means that he fulfills all possibilities. Such fulfillment includes that of the natures of things and the laws that govern them. The conduct of any being is consequent upon its nature and its laws. In some of his writings, Ibn Rushd also stresses that God's knowledge of things is the cause of those things.

Abū al-Naṣr al-Fārābī (870–950) and AbūʿAlī al-Husayn ibn Sīnā (Avicenna, 980–1037) adhered to neoplatonic tendencies, according to which everything necessarily follows from God's nature. Even God's nature itself is necessitated to act in certain ways. There is no room for God's will or choice, let alone the will or choice of any other being. This is despite the fact that al-Fārābī and Ibn Sīnā speak of God's omnipotence and omniscience, and even of human free will. However, they do not use these terms in the traditional sense. "Omnipotence," for example, is the ability to fulfill all possibilities, and omniscience is knowledge of universals.

Abū Ḥāmid al-Ghazālī (1058–1111) attacked such philosophical views in his famous work *The Incoherence of Philosophers* (1184). He considered such ideas non-Islamic and classified some of them, for example, God's inability to know particular events, as heretical. In the absence of such knowledge, reward and punishment, which are essential to Islam, become meaningless, especially in light of the Islamic concept of God's absolute justice.

Reward and punishment did not pose a problem for al-Kindī, because he believed that human beings have free will and that God knows particular events. Therefore, reward and punishment are not in conflict with his justice. The other three philosophers mentioned were not concerned about the issue either. For them, God does not reward and punish people. According to al-Fārābī and Ibn Sīnā, following death, bodies eventually disintegrate and souls become close to or distant from God, based on their degree of knowledge. Their closeness is their reward; their distance is their punishment. Reward and punishment are necessary consequences of the souls' conduct in life. To Ibn Rushd, there is no reward and punishment after death. The bodies disintegrate and the individual souls merge with the universal soul.

Moses Maimonides (1135–1204) asserts the Judaic belief that the human soul is intrinsically free, and agrees with the Greek and Muslim philosophers that matter is the source of natural evil. Thus, he absolves God from moral and natural evil, and justifies reward and punishment for the former, because God does not predetermine human action. However, God can intervene under certain circumstances. Maimonides was criticized by many Jewish thinkers for his rational approach to Judaism, which they feared denies some of its basic ideas, for example, that God wills whatever happens according to his knowledge of the natures of things.

See also al-Fārābī; al-Ghazālī, Muhammad; al-Kindī Abū-Yūsuf Yaʾqūb ibn Isḥāq; Averroes; Avicenna; Determinism, A Historical Survey; Islamic Philosophy; Jewish Philosophy; Maimonides; Universals, A Historical Survey.