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REALITY

See *Appearance and Reality; Being*

REASON

In English the word *reason* has long had, and still has, a large number and a wide variety of senses and uses, related to one another in ways that are often complicated and often not clear. However, there is one particular sense of the word in which it, with its synonyms or analogues in other languages, has figured prominently in philosophical controversy. This is the sense, sometimes distinguished typographically by an initial capital, in which the term is taken to designate a mental faculty or capacity—in which reason might, for example, be regarded as coordinate with, but distinguishable from, sensation, emotion, or will.

QUESTIONS TO BE EXAMINED

The question that has been chiefly debated by philosophers might be expressed succinctly, but far from clearly, as "What can reason do?" However, there has also been discussion of the question whether the faculty of reason is peculiar to humanity (and presumably to "higher" beings, if there are any), or whether its possession and exercise in some degree can also be ascribed to "lower" animals. It should perhaps be added that in recent years there has been much debate as to whether machines can, or in principle ever could, properly be said to think; for if an affirmative answer were to be given to this question, then there is a quite common sense of *reason* in which it would follow that that faculty could be exercised by a machine. Only the first of these questions is dealt with here.

The short but unclear question "What can reason do?" is peculiarly liable to give rise to theoretical dissension. The question may, however, be transformed with advantage into a question not directly about the "faculty" of reason itself but about those beings to whom this faculty is attributed. What, we may ask, are human beings in a position to do, in virtue of their possession of the faculty of reason? What, by means of reasoning, are we in a position to achieve? In this form it becomes very clear that the question raises at least two highly disputable issues. First, it is far from immediately clear what reasoning is—on what occasions, in what activities or processes, reason is exercised. And second, if we determine—probably with some degree of arbitrariness—what reasoning is, it may very well remain highly disputable whether this or that can or cannot be achieved by reasoning. One should, indeed, distinguish further at this point between two radically different kinds of dispute that may arise; if it were held that, for instance, knowledge of God cannot be

attained by reasoning, there would plainly be an important further distinction between holding this to be true in fact and true in principle. It might be maintained that the reasoning necessary for knowledge of God is, as a matter of fact, too difficult for frail and mortal human beings to manage; or it might be maintained, quite differently, that the kind of conclusion capable of being established by reasoning excludes in principle that kind, if there is any such, to which knowledge of God must belong. This sort of distinction can be seen as differentiating the positivism preached by Comte in the nineteenth century from the logical positivism of recent philosophy.

MANY SENSES OF *REASON*

What, then, is reason? Alternatively, what is reasoning? It seems scarcely possible to maintain that these questions can be given definite answers. The definitions, implicit or explicit, of the relevant terms that have been employed by philosophers and other writers vary widely and significantly; and while some may be judged preferable to others, or may adhere more closely than others to senses which the terms may bear in ordinary discourse, there seems to be no basis secure enough to support a pronouncement that a particular meaning, and hence a particular answer to the question, is exclusively correct. In any case, what is important to the understanding of philosophical writing on this topic is not that one should know what *reason* means but, rather, that one should discern, so far as possible, what meaning is attached to *reason* by an author.

CONTRASTS WITH OTHER TERMS

Here it seems particularly important and helpful to consider with what reason is contrasted, or from what it is distinguished. There is, for example, a large body of literature in which reason stands essentially in contrast with faith. In this context, what we can achieve by reason is taken to embrace the entire field of knowledge and inquiry in which, with varying degrees of skill and success, we produce or seek reasons for our views, proofs of or evidence for our conclusions, and grounds for our opinions. This whole field is set in contrast with another, in which supposedly we may—or should or must—accept certain propositions or doctrines without any grounds but rather on authority or perhaps on unreasoned conviction.

There is another large body of literature in which reason stands in contrast with experience. In this context, what we can achieve by reason is much more narrowly circumscribed; here a distinction is being made between, roughly, what we can discover or establish by merely sitting and thinking, and what we can discover or establish only by the use of our senses, by observation or by experiment. It will be observed that there are, corresponding to these wider and narrower senses of *reason*, also wider and narrower senses of the term *rationalist*; a rationalist in the one sense is concerned with denying or belittling the claims or the role of faith, and in the other with denying or belittling the role, in the acquisition of knowledge, of experience. There is no particular reason why one who is a rationalist in either one of these senses should be expected to be a rationalist in the other sense also; the two positions are quite independent of one another.

THE OBJECTS OF REASON

There is, then, no universally agreed or uniquely correct sense of *reason*. This is obvious enough, perhaps; but it is not unimportant. Clearly, even though philosophers may use this term in diverse senses without being wrong, the fact that they do so must, if unobserved by them or their readers, generate confusion and argument at cross purposes. Further, as was noted above, even if we avoid confusion at this point, many problems as to the "scope" or the "powers" of reason remain. They are, in fact, some of the major and central problems of philosophy.

Suppose that, following Brand Blanshard in his *Reason and Analysis*, we define *reason* as "the faculty and function of grasping necessary connections." We may feel that this is not a very good definition, since it seems excessively restrictive. For example, a judge arguing his way to a decision, or a meteorologist setting forth his grounds for a weather forecast, would in this sense not be exercising the faculty of reason; the argument in each case is nondemonstrative—that is, it does not set out or rely on strictly necessary connections. However, waiving that point, the definition is at least a clear one. But notwithstanding its possession of the important virtue of clarity, the question of what reason can do is not thereby settled.

In order to settle this question, we must decide what necessary connections there are and in what cases or what fields there are necessary connections to be grasped; and the determination of this question raises, or might very well raise, almost every problem of philosophy. Are we to hold, with Plato, that no necessary connections are to be discerned in the everyday world, but only in an intelligible world of Forms? Or are we to hold, with David Hume and many others, that strictly necessary connections are to be found only in the formal, abstract relations between our concepts or ideas? Was Immanuel Kant right in supposing that the moral law can be demonstrated a priori,

and is therefore necessary? Or, on the contrary, was Hume correct in holding that in the field of moral judgment "reason is the slave of the passions"? Are causal relationships cases of necessary connection? Are they perhaps, as John Locke seems to have held, really cases of necessary connection that in practice, however, we are inveterately unable to grasp as such? And so on.

BASIC QUESTIONS

The point that emerges here is simply this: Whatever particular definition of the faculty of reason we may, implicitly or explicitly, adopt, it seems unavoidable that it will be attempted thereby to distinguish this faculty from others as being that by the exercise of which we can perceive, or arrive at, truths of some particular kind or kinds; and this kind of truth, or these kinds of truths, will in turn be distinguished from other kinds on logical or epistemological grounds. If so, then the question of what we can actually achieve or come to know by reason unavoidably becomes the question of what propositions are of that kind or those kinds; and this is precisely the question about which, in any field, philosophical controversy may, and characteristically does, arise. Thus the apparently simple question "What can reason do?" is not a neutral question on which otherwise dissentient philosophers may expect to be in agreement. On the contrary, it is very likely that their disagreement consists precisely in their diverse answers to this question. It may further be felt, with justice, that if this innocent-looking question unavoidably raises major philosophical issues concerning the logical and epistemological analysis and classification of propositions, it would probably be advantageous to raise those questions directly and overtly rather than as an only half-acknowledged corollary of a discussion that is ostensibly concerned with a faculty of the mind. There are few modern philosophers who would naturally cast their discussions in this latter idiom.

One final risk of confusion is worth pointing out. It is probably true that in recent philosophy there has been a persistent tendency to narrow the field in which necessities, strictly speaking, are admitted to be found; and also, perhaps more significantly, a persistent tendency to take the awesomeness out of necessity by attempts, more or less successful in various fields, to exhibit necessity as fundamentally derived from the unpuzzling, and perhaps unimposing, phenomenon of tautology. In this sense, then, it can be said that there has been some tendency both to narrow the scope conceded to reason and perhaps also to make reason itself seem less mysterious and grand. In some, this tendency has occasioned considerable distress: As Bertrand Russell has expressed it, "My intellectual journeys have been, in some respects, disappointing.… I thought of mathematics with reverence, and suffered when [Ludwig] Wittgenstein led me to regard it as nothing but tautologies" (*The Philosophy of Bertrand Russell*, edited by P. A. Schilpp, Evanston, IL, 1946, p. 19).

EXAMINATION OF REASON'S POWERS

There are several instances in which Russell's sense of distress has been expressed in curiously bellicose terms. Books have been written in defense of reason, and exponents of the contemporary trend have been castigated as reason's enemies. But this latter charge, even if there is some sense in which it might be well founded, is peculiarly liable to mislead, and very commonly has misled, those who urge it. One thinks, naturally and rightly, of an enemy of reason as one who is opposed or hostile to the exercise of reason. Such a person might be, for instance, a religious bigot, fearful that reason might shake the obscure foundations of his bigotry; he might be a political or racial fanatic, hostile to the careful weighing of arguments and evidence because he is half conscious that his program or doctrine lacks reasonable grounds; or he might, less malignantly, hold some doctrine about the merits of unreflecting spontaneity, disliking the slow pace, the qualifications and hedging, of rational thought. It is obvious, however, that scarcely any philosopher is, or ever has been, an enemy of reason in this sense.

Nor, to mention a group not uncommonly arraigned on the same charge, is the psychoanalyst. It is a tenet of psychoanalytic theory that reason, the dispassionate consideration of arguments and evidence, is a less conspicuous and influential determinant of the beliefs and the conduct of men than has often been supposed, or than most people might like to admit; but the psychoanalyst does not, as would an enemy of reason, rejoice in this circumstance or seek to aggravate it. Quite the contrary: Recognizing the state of the case as being what, in the light of his evidence, he takes it to be, he deploys his art in the attempt to enable people to become more rational than they would otherwise be. He may be mistaken in his theory and unsuccessful in his practice, but in any case neither in theory nor in practice does he display the least enmity toward reason.

Somewhat similarly, the philosopher who produces an argument against high traditional claims for, or traditional characterizations of, reason is, in so doing, exercising reason to the best of his ability; nor does it occur to him to question the desirability of doing so. Thus, to dissent from rationalism as a philosophical doctrine is cer-

tainly not to disparage reason; the man who values, and shows that he values, reason is not he who merely pitches reason's claims exceptionally high but, rather, he who attempts, by painstaking reasoning, to determine how high those claims may justifiably be pitched. Philosophers, whose work consists mostly in sitting and thinking, have often enough and naturally enough been prone to estimate very highly the range and significance of the results that can thereby be achieved. However, this propensity is scarcely an indication of devotion to reason; rather, it is an indication, if of anything, of pardonable self-importance.

See also Blanshard, Brand; Comte, Auguste; Faith; Hume, David; Locke, John; Logical Positivism; Plato; Positivism; Practical Reason; Rationalism; Russell, Bertrand Arthur William; Thinking; Wittgenstein, Ludwig Josef Johann.

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REASONING

See *Thinking*

REBIRTH

See *Reincarnation*

RECURSION THEORY

See *Computability Theory*

REDUCIBILITY, AXIOM OF

See *Russell, Bertrand (section on logic and mathematics)*

REDUCTION

A cursory glance at the history of science reveals a continuous succession of scientific theories of various areas or domains. For example, since ancient times theories of the cosmos have been proposed to account for the observed behavior of the heavenly bodies. The geocentric Ptolemaic theory was, for instance, succeeded by the heliocentric theory of Copernicus. Another example concerns the nature of light. Corpuscular theories were succeeded by wave theories of light. Wave theories, in turn, have been followed by the quantum theories of electromagnetic radiation.

This entry concerns the nature of certain relations that may obtain between different pairs of theories in such sequences. A radical or extreme view of those relations is that of Thomas Kuhn. Kuhn (1970) famously argues that across scientific revolutions there is a radical disconnect between theories. One can find a similar argument in Paul K. Feyerabend (1962). On such a view, no