Empiricism, History of

There are almost as many empiricisms as there are empiricists, but what these views or approaches have in common is an emphasis on the importance of experience to the formation of concepts and to the acquisition of knowledge. The foil to empiricism is rationalism, which emphasizes instead the importance to thought and knowledge of material that is in some sense independent of experience. The range of empiricist positions is vast, from the shocking view that all we can think or know about are our sensations to the mundane claims that experience plays some role in the formation of some of our concepts and in the justification of some of our beliefs. Empiricism of some form may seem both obviously correct and obviously the correct philosophy for science on the grounds that it is clear that one can only find out about the world by observing it; but this innocuous looking thought has been disputed, and in any case many forms of empiricism go far beyond it in their claims. It is also unclear whether empiricism ultimately supports or undermines claims to scientific knowledge.

1. History

Empiricism is a hardy perennial in the history of philosophy. It was extensively discussed in antiquity, often with considerable hostility. Plato disdained it, partly on the grounds that observation can only provide information about a realm of appearances less important and indeed less real than a more abstract realm that we may be able to grasp through a form of thinking that does not depend on experience. Mathematics was a model of knowledge for many ancient thinkers, and this is perhaps the area where empiricism is least plausible, since mathematical proofs do not seem to depend on observation. Nevertheless, empiricism did have defenders in the ancient world, with Epicurus often cited as its first clear exponent. He held not only that observation is the only source of knowledge about the world but that, insofar as they are taken as sources of information about the appearances of things, the senses never lie.

Empiricism also had its advocates in the medieval period. St. Thomas Aquinas wrote that there is nothing in the intellect which was not previously in the senses, though by this he meant to endorse only the mundane claims that experience plays some role in the formation of some of our concepts and in the justification of some of our beliefs. Empiricism of some form may seem both obviously correct and obviously the correct philosophy for science on the grounds that it is clear that one can only find out about the world by observing it; but this innocuous looking thought has been disputed, and in any case many forms of empiricism go far beyond it in their claims. It is also unclear whether empiricism ultimately supports or undermines claims to scientific knowledge.

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Newton’s underlaborer, ‘clearing ground a little, and removing some of the rubbish, that lies in the way to knowledge.’ Part of that ground-clearing operation consisted of a vigorous rejection of the claim that we are born with innate knowledge, a characteristic point of dispute between empiricists and rationalists (cf. Mackie 1976). Hume characterized his own project more ambitiously, as an attempt to do for the human sciences (‘moral philosophy’) what Newton had done for the physical sciences (‘natural philosophy’), by providing a theory that explained the creation and behavior of ideas. Berkeley was less influenced by the model of natural philosophy, aiming instead to combat skepticism and to support theism. The result was an exceptionally lucid statement and defense of idealism, the view that the only things that exist are minds and their contents. Locke had not taken this step, hoping to hold on to a material world even if our knowledge of its nature must be severely limited, but Berkeley argued that only idealism was compatible with the principles of empiricism. Hume was an idealist too, but made less of a fuss than Berkeley about this aspect of their philosophies, in part because Hume wished to avoid metaphysics, even of a negative sort.

In the nineteenth century, John Stuart Mill carried forward the tradition of British Empiricism from Hume, including his idealism, though in Mill’s (1872) hands the position is normally referred to as ‘phenomenalism.’ Mill held that physical objects are ‘permanent possibilities of sensation’: to say that there is a tree in the quad at a certain time is to say either that someone is having an appropriate arboreal experience at that time or that they would have had one if they had been in the quad. Berkeley famously preferred to account for the existence of the tree when no human is observing it by appealing to God’s constant observation, but in one or two passages he clearly presages Mill’s counterfactual alternative, which appeals to possible human observations rather than to actual divine observations.

Mill went beyond his British precursors, however, in his treatment of mathematics, the most obvious candidate for nonempirical knowledge. Most empiricists have adopted the strategy of admitting that pure mathematics is nonempirical but denying that it provides worldly knowledge, claiming instead that it tells us only about the logical consequences of our definitions. Mill, however, maintained that mathematics, however pure, is empirically based, an inductive inference from pervasive regularities in our experience, such as those involving the manipulation of objects.

Twentieth-century empiricism continued to be inspired by science. Logical positivists and logical empiricists saw empiricism both as a way to understand scientific claims and as a way to make philosophy itself more scientific and less metaphysical (cf. Ayer 1936). They especially pushed the conceptual side of empiricism, for example, in the verifiability theory of meaning, whose motto was that ‘the meaning of an expression is its method of verification.’ On this view, the experiences that would confirm a claim also tell us what it means, and a claim which no course of observation could either confirm or refute is either a mere definition or metaphysical nonsense. Empiricism in this century has also been promoted by scientists themselves, in movements such as operationalism in the physical sciences and behaviorism in psychology. Another influential empiricist strain in this period has been Pragmatism, especially as developed by the American triumvirate of William James, Charles Saunders Pierce, and John Dewey, and more recently in a radical form that rejects definitions and meanings by Willard Van Orman Quine (1951).

2. Concept Empiricism

Empiricism about concepts is the view that our concepts derive in some sense from our experiences. Hume offered what has come to be a canonical version of this position, arguing that all our ideas are copies of preceding impressions, meaning roughly that every concept is a faint image of the experiences that cause it. Thus, to take a favorable example, our idea of the color blue is supposed to be a faint image of the particular blue experiences we have enjoyed. For Hume, the copy principle was not just a fundamental fact about our cognitive economy but also a powerful philosophical tool. Constructively, the copy principle is supposed to allow us to analyze the content of an idea or concept, since by tracing ideas back to their source impressions we determine what that content really is. Destructively, the copy principle is supposed to expose empty talk or thought, since if a putative idea has no possible source impression, it must be devoid of content. The copy principle obviously requires some general demarcation between impressions and ideas. Hume draws it subjectively, in terms of the relative ‘force and vividacy’ of perceptions, recognizing the vagueness of this distinction, but trusting that we will all understand the difference between the vividness of what one sees as compared with faintness of memory and imagination.

Hume’s most famous applications of his copy principle were destructive, part of his program to expose the emptiness of metaphysics. Thus, although he allowed that we do have an idea of the ‘necessary connection’ that is supposed to glue causes to their effects, the source impression reveals this idea to be purely subjective. For that impression is merely the feeling of expectation of a familiar effect when we see a familiar cause, something that is obviously only in our minds. We cannot conceive one thing making another thing happen: all we can conceive is a pattern of objects. Indeed although Hume often did write as if we could conceive of external objects, he seems to have held that the copy principle rules out conception of these too.
Hume's antimetaphysical fervor was taken up by the logical positivists of the first half of the twentieth century. They took statements rather than ideas as the unit of analysis, and held that a statement is meaningful only if there is some specifiable experience that would verify it. They made an exception of mathematics and logic, which were allowed to count as meaningful even though not empirical, but only because they consisted of definitions and their consequences rather than substantive claims. Since philosophical truths have often been supposed to consist precisely of nonempirical truths about the world, it is not surprising that the verification principle was supposed to sweep away great swaths of traditional philosophical doctrine, not on the grounds that such claims are false, but that they are literally meaningless, just noise.

As with Hume, the logical positivist program also had a positive side: for those statements that did manage to be meaningful, their meaning comprised the experiences that would confirm them. From this it follows that all claims are claims about experiences. Some tempered this extreme view by speaking of observable states of affairs rather than experiences, thus making the data public. In the hands of some behaviorists in the philosophy of psychology, this brought about a kind of reversal of the positivists' original, experiential doctrine, since now rather than analyzing all claims as claims about experiences, experiences and other mental states are analyzed in physical terms. On this view, the real meaning of the claim that someone is happy is not that the person is enjoying a certain kind of inner life, but that they are disposed to behave in characteristically happy ways. Hostility to this position is the source of the story of the behaviorist who, upon meeting another behaviorist in the street, proclaims 'You're fine, how am I?'

Concept empiricism has been extensively criticized in both its negative and positive aspects. The demarcation that concept empiricism attempts to draw between genuine concept or meaningful statement on the one hand and nonsense on the other depends on making reasonably precise the notion of a copy of an impression or the conditions under which evidence confirms a hypothesis. This has proven remarkably difficult so that, for example, familiar accounts of confirmation have been shown to have the consequence that everything is evidence for anything else, a result that would make all statements meaningful and is anyway obviously false. The other conspicuous weakness of concept empiricism concerns the specific meanings it attributes to statements that it rightly classes as meaningful. The attempt to reduce the meaning of a statement to the evidence that would support it typically both attributes meaning the statement does not have and leaves out meaning it does have. This comes out clearly in the case of scientific hypotheses that traffic in unobservable entities and processes. A hypothesis about the behavior of subatomic particles does not include as part of its meaning the diverse and indirect kinds of empirical evidence in its favor, while that meaning does include claims about unobservable particles.

3. Knowledge Empiricism

Knowledge empiricism is the view that all knowledge of the world is based on experience. Put negatively, this is the denial of a priori knowledge of the world. Empiricism here opposes rationalism, according to which the fundamental source of knowledge of the world is reason, not experience.

Critics of knowledge empiricism generate putative examples of a priori knowledge. Empiricists deal with these cases in several ways, claiming either that the statement in question cannot be known a priori, because it is unknowable altogether or knowable but only through experience, or that that the statement does not really provide knowledge of the world. Thus, when René Descartes, the great seventeenth century rationalist, claimed to know a priori of his own existence, Hume could respond that the only knowledge one has of oneself is of one's experiences, which are known through themselves. Mathematical knowledge is another popular area for rationalists' examples of the a priori although, as we have seen, Mill claimed that even this knowledge is ultimately empirical, resting on observations of the result of adding together and dividing apart physical objects. The more common empiricist treatment of mathematical knowledge, however, is to admit it does not depend on specific experiences but to deny that it is about the world. Both Hume and the logical empiricists admit that definitions or analytic truths—such as that a bachelor is an unmarried man—can be known to be true without experience, but maintain that these statements have no factual content. They then analyze mathematical axioms as definitions and treat everything that is derived from them as analytic truths which can be known without experience but tell us nothing about the world.

4. Empiricism and Scientific Knowledge

Alongside the question of whether there can be any knowledge independent of experience is the question of how far empirical knowledge may extend beyond the experience upon which it is based. Since Hume's seminal discussion of the problem of induction, it has become difficult to see how knowledge can extend beyond actual experience at all. It is neither surprising nor worrying that any non-demonstrative inference from experience might in principle go wrong; but Hume gave a remarkably resilient argument that we can have no reason whatever for extrapolating in one direction rather than in another, even when dealing
Empiricism continues to play an important role in the study of knowledge within science studies. One example is the ‘strong program’ in the sociology of knowledge, which rests on a kind of psychological empiricism. As David Bloor (1991) puts the matter, the strong program assumes that perception and thought are distinct but asymmetrically related: perception influences thought more than thought influences perception. Within the philosophy of science, a recent empiricist approach to scientific knowledge and the underdetermination problem is Bas van Fraassen’s constructive empiricism. Van Fraassen (1980) introduces a technical sense of ‘acceptance,’ where to accept a scientific theory is not to believe that it is true, but only that it is empirically adequate, where a theory is empirically adequate just in case everything it says about what is observable is true.

Constructive empiricism is the view that the aim of science is to discover theories that are empirically adequate, not theories that are true. The content of the theory that goes beyond its empirical claims is to be regarded as a model which may serve its function of generating true predictions without itself being a true representation of an invisible realm. Constructive empiricism thus appears to solve the underdetermination problem, since although the theories underdetermined by the data will be incompatible with each other, their empirical consequences, which is all the constructive empiricist would have us believe, may be compatible.

Constructive empiricism can thus be seen as a form of moderate skepticism, but it is still too skeptical for those who think that knowledge or at least reasonable belief about unobservable entities and processes is possible. Constructive empiricism also faces the difficulty of providing a nonarbitrary distinction between what is observable and what is not, a tricky problem faced in one form or other by almost all forms of empiricism.

See also: Darwin, Charles Robert (1809–82); Experimentation in Psychology, History of; Galton, Sir Francis (1822–1911); Helmholtz, Hermann Ludwig Ferdinand von (1821–94); Hume, David (1711–76); Locke, John (1632–1704); Logical Positivism and Logical Empiricism; Mill, John Stuart (1806–73); Pavlov, Ivan Petrovich (1849–1936); Positivism, History of; Positivism: Sociological; Wundt, Wilhelm Maximilian (1832–1920)

Bibliography


Employers’ Associations

Employers’ associations are formal organizations which specialize in the aggregation, definition, processing, and promotion in the political arena of the collective interests and goals of a distinct social class defined by its dominant position in the division of labor and its power to invest in market economies. Although the term ‘employers’ associations’ applies specifically to the role played in labor relations, while the term ‘trade associations’ refers to the role played in industrial policy, the former is often used more generally to identify any kind of business interest associations. It is in this broader sense that it is used here.

Employers’ associations are representative voluntary organizations—i.e., they are led by elected leaders and managed by professional managers—with a permanent staff for the administration of associational activities and the delivery of associational services, a budgetary process for the acquisition of funds and the accountability of their use, and a set of specific criteria defining the rights and duties of members. They can be analyzed in terms of their organizational properties, i.e., the domain of representation, the internal structure, the resources, and the tasks performed, and in terms of their degree of organizational complexity and relative autonomy. As formal representative organizations, they differ from other forms of organizations working for business, like clubs, law firms, and public relations agencies, as well as from more informal types of business association.

Business is a powerful pressure group in contemporary society, and employers’ associations are just one of the four major ways by which businessmen can exert power and influence, both individually and collectively, and both in the market and in the political arena. At the level of the individual firm, entrepreneurs and managers play a crucial role through investment, production, and employment decisions in the market—which shape the economic and political environment of government policies—and through lobbying and other forms of pressure politics. Collectively, businessmen can exert power in the market through agreements for controlling prices, market sharing, the allocation of raw materials, and in the political arena through collective political action by its own specific representative organizations. In fact, in spite of social cleavages and cultural differences among entrepreneurs, and in spite of the different roles they play in diverse organizational settings (large and small businesses, private and public firms, local firms, and multinational corporations), the business class often acts today as an organized collective actor through its own specialized representative organizations. Why does this happen? Or, in other words, why should capital owners and top executives, who possess the discretionary power to invest, develop a need for collective interest representation?

Historically, there have been three main reasons by which employers may be brought to politicize their interests and to form organizations. The first is that their power to invest can be challenged by workers’ unions. In most historical instances, business efforts to organize and coordinate actions came as a response to prior attempts by workers to pursue their interests by collective mobilization. Employers’ associations have concerned themselves with assuring a stable and reliable labor force, and with the setting of shared rules of the game in labor disputes in order to institutionalize class conflict. Trade unions have become their most important institutional partners.

A second reason for entrepreneurs to organize have been the attempts to avoid cut-throat competition on the market, to prevent—or at least limit—the access of foreign competitors to the domestic market, to form a common front vis-à-vis the suppliers of basic resources. In fact, while free competition is a basic feature of capitalist market economy, competition, when pushed too far, can generate crises and contradictions which threaten the viability of the system as a whole. Formal coordination rather than that spontaneously created by the market may be necessary through associational activity and through government action.

The last remark leads to the third main reason for employers to organize, i.e., the systematic effort to influence government economic policies: resistance to decisions which either limit the freedom to invest, or