

Empiricism

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Philosophical Concept

In all its forms, empiricism stresses the fundamental role of experience. As a doctrine in epistemology it holds that all knowledge is ultimately based on experience. Likewise an empirical theory of meaning or of thought holds that the meaning of words or our concepts are derivative from experience. This entry is restricted to epistemological empiricism. It is difficult to give an illuminating analysis of 'experience'. Let us say that it includes any mode of consciousness in which something seems to be presented to the subject, as contrasted with the mental activity of thinking about things. Experience, so understood, has a variety of modes – sensory, aesthetic, moral, religious and so on – but empiricists usually concentrate on sense experience, the modes of consciousness that result from the stimulation of the five senses. It is obvious that not all knowledge stems directly from experience. Hence empiricism always assumes a stratified form, in which the lowest level issues directly from experience, and higher levels are based on lower levels. It has most commonly been thought by empiricists that beliefs at the lowest level simply 'read off' what is presented in experience. If a tree is visually presented to me as green I simply 'register' this appearance in forming the belief that the tree is green. Most of our beliefs – general beliefs for example – do not have this status but, according to empiricism, are supported by other beliefs in ways that eventually trace back to experience. Thus the belief that maple trees are bare in winter is supported by particular perceptual beliefs to the effect that this maple tree is bare and it is winter.

Empiricism comes in many versions. A major difference concerns the base on which each rests. A public version takes beliefs about what we perceive in the physical environment to be directly supported by experience. A phenomenalist version supposes that only beliefs about one's own sensory experience are directly supported, taking perceptual beliefs about the environment to get their support from the former sort of beliefs. The main difficulties for a global empiricism (all knowledge is based on experience) come from types of knowledge it is difficult to construe in this way, such as mathematical knowledge.

1. Versions of epistemic empiricism

There are broad distinctions within epistemology that affect empiricism as well as other positions. One can think of *knowledge* or of *justified belief* as based on experience. To simplify the discussion we concentrate on the latter whenever we get into the details, though it is sometimes convenient to speak in terms of knowledge. If, as is often supposed, knowledge is

justified belief that meets further conditions, then the necessity of an empirical basis for justified belief will extend to knowledge as well. There is also the question of whether the justification of belief depends on what the belief is *based on* (what gives rise to it), or whether it simply depends on what the believer *has* in the way of possible grounds, reasons or evidence, whether made use of or not. We take the former as a basis for discussion. Thus the empiricism under consideration here holds that all justified beliefs acquire their justification from being based, directly or indirectly, on experience.

Although empiricism typically concentrates on sense experience, this is not the only possibility. It is plausible to suppose that one's introspective knowledge of one's feelings, desires and other mental states derives from one's experience of those states (see Introspection, epistemology of). There is also a religious empiricism that takes certain beliefs about God to be justified by being based on a (frequently non-sensory) experiential presentation of God (see James, W. §4; Religious experience). This entry is restricted to sensory empiricism.

Empiricism comes in stronger and weaker forms. One such distinction has to do with scope – whether the view takes all knowledge to be based on experience, or restricts this claim to knowledge of the physical universe, excluding, for example, mathematical and/or religious knowledge. There are also differences regarding the strength of support lower levels must give higher levels in order that the beliefs at the higher levels be justified.

2. A phenomenalist empirical base

A common-sense form of empiricism takes perceptual beliefs about the physical environment (external beliefs) to be directly supported by experience – such beliefs as ‘that house is on fire’, ‘a rabbit just ran across the yard’ or ‘a car is parked in front of the house’. But there are considerations that have driven philosophers to retreat to phenomenal beliefs about one's own sensory experience as constituting the base. For one thing, external beliefs are often not solely based on experience, but rest, at least in part, on other beliefs. Thus I typically recognize a book as my copy of *Principia Ethica* not just by the way it looks (many other copies look just like that), but also by the fact that it is on a shelf in a study that belongs to me. For another thing, external beliefs can be mistaken even if confidently based on sense experience. I may unhesitatingly form the perceptual belief that the car in front of the house is a Pontiac when it is a Buick. Many philosophers have felt that if empirical knowledge is to be worthy of the name, at least the foundations on which it rests must consist of absolutely certain knowledge that cannot possibly be mistaken (Lewis 1946). Finally, it has been held that since, when I form an external perceptual belief, I would, if I reflected on the matter, take the justification of that belief to be the sensory experience on which it is based, that shows that beliefs about sensory experience are more basic in our empirical knowledge. All this can drive one to take phenomenal beliefs as the only ones that are directly supported by experience, with external beliefs supported by the phenomenal beliefs.

And yet these considerations do not require that conclusion. It remains to be shown that beliefs must be mistake-proof to constitute an empirical base. And the fact that external perceptual beliefs are based on sense experience should not be confused with the claim that they are based on beliefs about sense experience. Finally, even if my belief that this is my copy of *Principia Ethica* is partly based on other beliefs, that would prevent it from figuring in the empirical base only on an extreme form of empiricism, one that requires knowledge to be based on beliefs that are justified solely by experience. There are also more moderate forms that take the empirical base to include beliefs that are partly based on experience. An alternative way of handling this point would be to restrict the empirical base to those external beliefs that are justified solely by experience, leaving others for the superstructure.

It is just as well that those considerations are not conclusive, for there are serious difficulties in resting empirical knowledge of the world on a purely phenomenal base. Despite centuries of strenuous effort, no one has succeeded in showing how knowledge of the public physical world can be derived from knowledge of one's own experience, at least if we confine ourselves to generally recognized modes of inference. It has been widely recognized at least since the time of Hume that if we try to base an inference from sensory appearances to external objects on an empirically established correlation between them, we cannot establish that the correlation holds unless we already have knowledge of each side of it (see Hume, D. §2). And how can we get knowledge of the external side without already having established some such correlations to go on? Some have tried to side-step this difficulty by arguing that our experience is best explained by supposing that it is due to public physical objects in the ways we usually suppose (BonJour1985). But that argument has never been developed in a thoroughly convincing way. Finally, some have turned in desperation to phenomenalism, the view that physical object statements are to be analysed in terms of what experiences one would have under certain circumstances. To say that there is a car parked in front of my house is to say something about what sensory experiences a sentient subject would have under certain conditions (Lewis1946). The hope of the phenomenalist is that if the physical world is not radically different in nature from sense experience, it will not be impossible to infer the former from the latter. But apart from problems that attach to even these inferences, the programme runs afoul of the fact, classically pointed out by Chisholm (1948), that when we try to give a phenomenalist interpretation of, for example, 'There is a car parked in front of my house', we cannot specify the conditions in which a subject would have the relevant experiences without using physical-object language to do so. For example, we must include in those conditions the physical orientation and physical condition of the subject. We have to presuppose what we are trying to analyse in order to give the analysis (see Phenomenalism).

3. A public empirical base

These considerations drive us back to taking external perceptual beliefs to be, at least in part, directly justified by sense experience. There are many ways of spelling this out. The major differences come from differences in the analysis of sensory experience. We can distinguish three traditional views on this:

1. Sense-datum theory. It consists of immediate awareness of non-physical entities that are, so to speak, reifications of the ways external objects appear to our experience. Thus, on this view, a typical visual experience of a round, red ball would involve being directly aware of a round, red sense-datum, which is distinct from the ball itself in being non-physical and existing only as an object for sensory awareness (Price 1932).
2. Theory of appearing. A sense experience is an awareness of an object (in veridical perception an external object) appearing to one in a certain way (looking, sounding, tasting... a certain way).
3. Adverbial theory. Sense experience should not be construed as the direct awareness of any object – internal or external. It is rather a way or mode of awareness, a way of being conscious. When I see a red round ball, my consciousness is a matter of sensing redly, roundly, and, perhaps, ‘ball-ly’ (Chisholm [1966] 1977).

It has been held that sense experience is to be understood as a process of acquiring perceptual beliefs or inclinations to such beliefs (Armstrong 1961). Others have advocated physicalist construals in terms of the stimulation of sense organs. But these innovations have not had much effect on empiricist epistemology.

One might think that on the sense-datum theory one could not suppose external perceptual beliefs to be directly justified by sense experience. For this theory postulates the awareness of an internal object that, so to speak, stands between the subject and the external object. Does that not imply that any beliefs about the external object would have to be based on beliefs about the sense datum? Not necessarily. Several of the most prominent sense-datum theorists in the first part of this century – G.E. Moore, C.D. Broad and H.H. Price – emphatically denied that any inference from sense-data to external objects is involved. Instead they maintained that when one forms the usual external belief upon becoming aware of a certain sense-datum, that belief is justified just by virtue of being so formed. This is, in effect, to take the belief to be justified by the sense experience in question.

In considering the accounts of direct empirical justification one gets on these different construals of sense experience it will be helpful to recognize that in every case we need to draw a connection between features of the sense experience and the content of the belief. A belief will be justified by an experience only if there is the right kind of ‘match’ between the two. The details of the match will vary, depending on the account of sense experience. The sense-datum theory will have to work out some way of ‘projecting’ characteristics of external objects from

features of sense-data. No one has ever done this in a convincing way for a realist (non-phenomenalist) account of physical objects. With phenomenalism it is a different ball game, for there the only entities referred to even in external beliefs are sense-data. The other views of sense experience have an easier time of it here. Since the theory of appearing construes sense experience as a matter of the way objects (usually external objects) appear, there can be a direct match between what an object appears to be and what it is. If an object looks like a two-storey wooden house, one is justified in believing it to be a two-storey wooden house. The only complexity here comes from complete hallucinations – Macbeth supposing himself to see a dagger in front of him when there is no dagger there. The theory can deal with such cases by saying that one is justified in the perceptual belief that *X* is *P* if and only if it is just as if *X* appears to one as *P*. (To Macbeth it was just as if a dagger appeared before him, the handle towards his hand.) The adverbial theory does not have this problem, since it does not construe sense experience as consisting in some *object* appearing in a certain way. It can read the content of the belief directly off the way of sensing, assuming, as may not be the case, that it is intelligible to convert all perceivable features of external objects into *ways* of sensing.

The complexity involved in formulating principles of justification that relate belief content to experiential content is so staggering that more than one philosopher has sought to cut the Gordian knot by simply granting *carte blanche* to all perceptual beliefs (Chisholm [1966] 1977). To be sure, one cannot deny that some perceptual beliefs are ill formed, and even among those that are not some can be shown to be false. We must not forget the many contradictions between witnesses to automobile accidents, as well as the proverbial drunkard who ‘sees snakes’. A great help at this point is the distinction between *prima facie* and unqualified justification. To say that a subject is *prima facie* justified in believing that *p* is to say that this belief will be justified provided there is nothing to invalidate that status – either sufficient reasons for regarding the belief as false or sufficient reasons for supposing that the justifying grounds do not do the job in this instance (see Knowledge, defeasibility theory of). If I have a visual presentation of an elephant sitting on my lawn, I am justified in supposing that there is an elephant on my lawn, unless I have sufficient reasons for supposing that there are no elephants in the vicinity, or sufficient reasons for supposing that my visual experience was produced in such a way as to make it an unreliable indication of what is before me. Thus we can reasonably hold that all perceptual beliefs are *ipso facto prima facie* justified, even though this status may be overridden in some cases (see Perception, epistemic issues in).

4. Problems about the superstructure

As we have been characterizing empiricism, it would seem to be committed to foundationalism, the doctrine that all knowledge (justified belief) rests on a foundation of beliefs that are justified otherwise than by other beliefs, for example, by experience (see Foundationalism). The ‘empirical base’ of which we have been speaking is simply a special case of the ‘foundations’ of foundationalism. It is only a special case because there are other possibilities for foundations, for

example, rationally self-evident truths. But remember that we have acknowledged forms of empiricism that do not restrict the empirical base to beliefs justified solely by experience. Do these forms count as foundationalism? Well, we can also recognize stronger and weaker forms of foundationalism along the same lines (BonJour1985). Strong foundationalism holds that all knowledge rests on beliefs that are wholly justified by something other than beliefs. Weaker forms require of foundational beliefs only that they are at least partially justified by something other than beliefs. Thus a weaker empiricism will also be a weaker foundationalism.

Continuing in the foundationalist vein, an empiricist epistemology will include not only a doctrine of the empirical base, but also a doctrine of the ways in which other beliefs are justified by their relations to that base. Traditional accounts have concentrated on deductive and inductive inference. Any beliefs that can be deductively or inductively inferred from that base are, or can be, justified. How this works out depends on the scope of inductive inference. If it is restricted to simple enumeration (inferring a generalization from instances), much of what we ordinarily consider to be empirical knowledge will fail to pass the test. Consider testimony: much of what we think we know has been acquired by taking someone's word for it. Are we always or usually in possession of inductive evidence that the testifier is reliable? That is, have we checked out the person's testimony in a sufficient number of cases and found it to be usually accurate? Obviously not. With most of the information we glean from books we have no evidence worthy of the name for the reliability of the author. We simply take it that the author is to be trusted unless we have reason to the contrary (see Testimony). Here too we give *prima facie* credence to certain beliefs, supposing them to be justified in the absence of sufficient reasons to think otherwise. Something similar can be said of the arguments to the best explanation that we constantly employ in a variety of contexts, for example, in arriving at an explanation of Jim's recent unfriendliness towards me. Once again we take the fact that this seems to us the best explanation of the empirical facts in question to justify us in accepting it, even though, in most cases, we lack any significant deductive or inductive reasons for that acceptance (see Inference to the best explanation). Thus, if empiricism is to be at all plausible, it will have to recognize modes of building up the superstructure other than the traditional deductive and enumeratively inductive modes (Chisholm[1966] 1977).

5. Criticisms of empiricism

Criticisms of empiricist epistemology have mostly been of two types. First, there are areas of generally accepted knowledge that seem not to be accounted for by empiricism. Most prominently and most obviously, there is a priori knowledge, knowledge based on something other than experience (see A priori). The least controversial examples of this are logic and mathematics. To take a simple example, it seems for all the world as if our knowledge that ' $2 + 2 = 4$ ' does not rest at all on sense experience. It seems that we can know this to be true just by considering the proposition. The proposition is *self-evident*. There is no need to support it by empirical evidence, nor could it be overthrown by empirical evidence. If we seem to perceive

two apples and two more apples making a sum of five apples rather than four, we would reject the supposed perception rather than the arithmetical truth. Other empirically recalcitrant areas include high-level theory in science, aesthetic knowledge and religious knowledge. But perhaps these latter cases can be handled by sufficiently extended ways of getting the superstructure from the base (high-level theoretical science) or by recognizing modes of justifying experience other than sense experience (aesthetic and religious experience). Still, logic and mathematics remain a stumbling block.

Some empiricists, like John Stuart Mill, have sought to show that mathematical knowledge, contrary to first impressions, rests on empirical evidence after all (see Mill, J.S. §§2–4). But a more common empiricist tack in the twentieth century has been that such knowledge is a matter of tracing out the logical implications of the meanings of the constituent terms. We know that ' $2 + 2 = 4$ ' just by virtue of realizing that its truth follows from what is meant by ' 2 ', ' $+$ ', ' $=$ ' and so on. We know that ' p ' logically follows from ' p and q ' just because of what is meant by ' and ' (Ayer 1936). But how does this show it to be *empirical* knowledge? It would seem that knowledge that owes its status to our grasp of the meanings of words is as far from being supported by *experience* as knowledge of self-evident propositions. The answer is that those who take this line do not suppose themselves to have shown that the knowledge in question is empirical, but rather that it is not knowledge 'of the world', not knowledge of what things are like independent of our conceptual arrangements. They take this line to imply that so-called logical and mathematical knowledge is restricted to the consequences of the way we conceptualize the world, and hence not the sort of thing we should expect to be based on experience. In the most radical version of this position, the claim is that this (so-called) knowledge falls outside the empiricist net because it is not really knowledge at all.

The second criticism is of an internal kind. Whereas the first objection was that there are areas of knowledge that empiricism cannot accommodate, the second objection is that even on the empiricist's home field knowledge claims rest, in part, on non-empirically based principles. The most widely advertised example concerns induction. Many philosophers have concluded that we cannot rationally infer generalizations from instances without assuming some principle of regularity. Suppose we have examined 5,000 samples of copper all of which are ductile. How does that warrant us in inferring that copper is always (or even almost always) ductile? How do we know that the next 5,000 samples will not fail to exhibit ductility? When we make inferences like this, are we not assuming some such general principle as that 'Regularities that hold in a large and varied sample will hold universally', or 'The future will resemble the past', or 'Properly chosen samples are representative of the whole class of which they are samples'? And are such principles themselves justified by experience? If we were to suppose they are, would that not require us to assume such principles in order to validate the inference? And that would make the empirical justification circular. Hence it seems that empirical induction depends for its validity on principles that cannot be empirically justified. And that would seem to be an absolute

limit on the extent to which we can take knowledge, even in the 'empirical' sphere, to be wholly justified by experience (Russell 1948) (see Induction, epistemic issues in).

References and further reading

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