

And in a word, such a person, without more experience, could never employ his conjecture or reasoning concerning any matter of fact, or be assured of anything beyond what was immediately present to his memory and senses.

Suppose, again, that he has acquired more experience, and has lived so long in the world as to have observed familiar objects or events to be constantly conjoined together; what is the consequence of this experience? He immediately infers the existence of one object from the appearance of the other. Yet he has not, by all his experience, acquired any idea or knowledge of the secret power by which the one object produces the other; nor is it, by any process of reasoning, he is engaged to draw this inference. But still he finds himself determined to draw it: And though he should be convinced that his understanding has no part in the operation, he would nevertheless continue in the same course of thinking. There is some other principle which determines him to form such a conclusion.

This principle is *custom* or *habit*. For wherever the repetition of any particular act or operation produces a propensity to renew the same act or operation, without being impelled by any reasoning or process of the understanding, we always say, that this propensity is the effect of *custom*. By employing that word, we pretend not to have given the ultimate reason of such a propensity. We only point out a principle of human nature, which is universally acknowledged, and which is well known by its effects. Perhaps we can push our inquiries no farther, or pretend to give the cause of this cause; but must rest contented with it as the ultimate principle, which we can assign, of all our conclusions from experience. . . .

Study Questions

1. Explain Hume's distinction between "relations of ideas" and "matters of fact."
2. According to Hume, what is the foundation for all reasonings concerning matters of fact?
3. What does Hume mean by "custom"?
4. According to Hume, why is custom "the great guide of human life"?

Custom, then, is the great guide of human life. It is that principle alone which renders our experience useful to us, and makes us expect, for the future, a similar train of events with those which have appeared in the past. Without the influence of custom, we should be entirely ignorant of every matter of fact beyond what is immediately present to the memory and senses. We should never know how to adjust means to ends, or to employ our natural powers in the production of any effect. There would be an end at once of all action, as well as of the chief part of speculation. . . .

What, then, is the conclusion of the whole matter? A simple one; though, it must be confessed, pretty remote from the common theories of philosophy. All belief of matter of fact or real existence is derived merely from some object, present to the memory or senses, and a customary conjunction between that and some other object. Or in other words; having found, in many instances, that any two kinds of objects—flame and heat, snow and cold—have always been conjoined together; if flame or snow be presented anew to the senses, the mind is carried by custom to expect heat or cold, and to *believe* that such a quality does exist, and will discover itself upon a nearer approach. This belief is the necessary result of placing the mind in such circumstances. It is an operation of the soul, when we are so situated, as unavoidable as to feel the passion of love, when we receive benefits; or hatred, when we meet with injuries. All these operations are a species of natural instincts, which no reasoning or process of the thought and understanding is able either to produce or to prevent.

Critique of Pure Reason

IMMANUEL KANT

Immanuel Kant (1724–1804), who lived his entire life in the Prussian town of Königsberg, is a preeminent figure in the history of philosophy, having made groundbreaking contributions in virtually every area of the subject. Kant seeks to show that the laws of nature are based in human reason. First, he distinguishes between analytic and synthetic propositions. An analytic proposition, such as "all bachelors are unmarried," is true because its subject, "bachelor," contains its predicate, "unmarried"; in a synthetic proposition, such as "all bachelors are happy," the subject does not contain the predicate. Kant also distinguishes between *a posteriori* propositions, the truth of which can be determined only by the evidence of experience, and *a priori* propositions, the truth of which can be determined without such evidence.

Are any synthetic propositions true *a priori*? Kant thought so and maintained that, for example, "every event has a cause" is such a synthetic *a priori* proposition, an informative statement known to be true without appeal to the evidence of experience. Thus does Kant develop a strategy for responding to Hume's skepticism about human knowledge.

I. THE DISTINCTION BETWEEN PURE AND EMPIRICAL KNOWLEDGE

There can be no doubt that all our knowledge begins with experience. For how should our faculty of knowledge be awakened into action did not objects affecting our senses partly of themselves produce representations, partly arouse the activity of our understanding to compare these representations, and, by combining or separating them, work up the raw material of the sensible impressions into that knowledge of objects which is entitled experience? In the order of time, therefore, we have no knowledge antecedent to experience, and with experience all our knowledge begins.

But though all our knowledge begins with experience, it does not follow that it all arises out of experience. For it may well be that even our empirical knowledge is made up of what we

receive through impressions and of what our own faculty of knowledge (sensible impressions serving merely as the occasion) supplies from itself. If our faculty of knowledge makes any such addition, it may be that we are not in a position to distinguish it from the raw material, until with long practice of attention we have become skilled in separating it.

This, then, is a question which at least calls for closer examination, and does not allow of any off-hand answer:—whether there is any knowledge that is thus independent of experience and even of all impressions of the senses. Such knowledge is entitled *a priori*, and distinguished from the *empirical*, which has its sources *a posteriori*, that is, in experience.

The expression "*a priori*" does not, however, indicate with sufficient precision the full meaning of our question. For it has been customary to

say, even of much knowledge that is derived from empirical sources, that we have it or are capable of having it *a priori*, meaning thereby that we do not derive it immediately from experience, but from a universal rule—a rule which is itself, however, borrowed by us from experience. Thus we would say of a man who undermined the foundations of his house, that he might have known *a priori* that it would fall, that is, that he need not have waited for the experience of its actual falling. But still he could not know this completely *a priori*. For he had first to learn through experience that bodies are heavy, and therefore fall when their supports are withdrawn.

In what follows, therefore, we shall understand by *a priori* knowledge, not knowledge independent of this or that experience, but knowledge absolutely independent of all experience. Opposed to it is empirical knowledge, which is knowledge possible only *a posteriori*, that is, through experience. *A priori* modes of knowledge are entitled pure when there is no admixture of anything empirical. Thus, for instance, the proposition, "every alteration has its cause," while an *a priori* proposition, is not a pure proposition, because alteration is a concept which can be derived only from experience.

II. WE ARE IN POSSESSION OF CERTAIN MODES OF A PRIORI KNOWLEDGE, AND EVEN THE COMMON UNDERSTANDING IS NEVER WITHOUT THEM

What we here require is a criterion by which to distinguish with certainty between pure and empirical knowledge. Experience teaches us that a thing is so and so, but not that it cannot be otherwise. First, then, if we have a proposition which in being thought is thought as *necessary*, it is an *a priori* judgement; and if, besides, it is not derived from any proposition except one which also has the validity of a necessary judgement, it is an absolutely *a priori* judgement. Secondly, experience never confers on its judgements true or

strict, but only assumed and comparative *universality*, through induction. We can properly only say, therefore, that, so far as we have hitherto observed, there is no exception to this or that rule. If, then, a judgement is thought with strict universality, that is, in such manner that no exception is allowed as possible, it is not derived from experience, but is valid absolutely *a priori*. Empirical universality is only an arbitrary extension of a validity holding in most cases to one which holds in all, for instance, in the proposition, "all bodies are heavy." When, on the other hand, strict universality is essential to a judgement, this indicates a special source of knowledge, namely, a faculty of *a priori* knowledge. Necessity and strict universality are thus sure criteria of *a priori* knowledge, and are inseparable from one another. But since in the employment of these criteria the contingency of judgements is sometimes more easily shown than their empirical limitation, or, as sometimes also happens, their unlimited universality can be more convincingly proved than their necessity, it is advisable to use the two criteria separately, each by itself being infallible.

Now it is easy to show that there actually are in human knowledge judgements which are necessary and in the strictest sense universal, and which are therefore pure *a priori* judgements. If an example from the sciences be desired, we have only to look to any of the propositions of mathematics; if we seek an example from the understanding in its quite ordinary employment, the proposition, "every alteration must have a cause," will serve our purpose. In the latter case, indeed, the very concept of a cause so manifestly contains the concept of a necessity of connection with an effect and of the strict universality of the rule, that the concept would be altogether lost if we attempted to derive it, as Hume has done, from a repeated association of that which happens with that which precedes, and from a custom of connecting representations, a custom originating in this repeated association, and constituting therefore a merely subjective necessity. Even without appealing to such examples, it

is possible to show that pure *a priori* principles are indispensable for the possibility of experience, and so to prove their existence *a priori*. For whence could experience derive its certainty, if all the rules, according to which it proceeds, were always themselves empirical, and therefore contingent? Such rules could hardly be regarded as first principles. At present, however, we may be content to have established the fact that our faculty of knowledge does have a pure employment, and to have shown what are the criteria of such an employment.

Such *a priori* origin is manifest in certain concepts, no less than in judgements. If we remove from our empirical concept of a body, one by one, every feature in it which is [merely] empirical, the colour, the hardness or softness, the weight, even the impenetrability, there still remains the space which the body (now entirely vanished) occupied, and this cannot be removed. Again, if we remove from our empirical concept of any object, corporeal or incorporeal, all properties which experience has taught us, we yet cannot take away that property through which the object is thought as substance or as inhering in a substance (although this concept of substance is more determinate than that of an object in general). Owing, therefore, to the necessity with which this concept of substance forces itself upon us, we have no option save to admit that it has its seat in our faculty of *a priori* knowledge.

III. PHILOSOPHY STANDS IN NEED OF A SCIENCE WHICH SHALL DETERMINE THE POSSIBILITY, THE PRINCIPLES, AND THE EXTENT OF ALL A PRIORI KNOWLEDGE

But what is still more extraordinary than all the preceding is this, that certain modes of knowledge leave the field of all possible experiences and have the appearance of extending the scope of our judgements beyond all limits of experience, and this by means of concepts to which no corresponding object can ever be given in experience.

It is precisely by means of the latter modes of knowledge, in a realm beyond the world of the senses, where experience can yield neither guidance nor correction, that our reason carries on those enquiries which owing to their importance we consider to be far more excellent, and in their purpose far more lofty, than all that the understanding can learn in the field of appearances. Indeed we prefer to run every risk of error rather than desist from such urgent enquiries, on the ground of their dubious character, or from disdain and indifference. These unavoidable problems set by pure reason itself are *God*, *freedom*, and *immortality*. The science which, with all its preparations, is in its final intention directed solely to their solution is metaphysics; and its procedure is at first dogmatic, that is, it confidently sets itself to this task without any previous examination of the capacity or incapacity of reason for so great an undertaking.

Now it does indeed seem natural that, as soon as we have left the ground of experience, we should, through careful enquiries, assure ourselves as to the foundations of any building that we propose to erect, not making use of any knowledge that we possess without first determining whence it has come, and not trusting to principles without knowing their origin. It is natural, that is to say, that the question should first be considered, how the understanding can arrive at all this knowledge *a priori*, and what extent, validity, and worth it may have. Nothing, indeed, could be more natural, if by the term "natural" we signify what fittingly and reasonably ought to happen. But if we mean by "natural" what ordinarily happens, then on the contrary nothing is more natural and more intelligible than the fact that this enquiry has been so long neglected. For one part of this knowledge, the mathematical, has long been of established reliability, and so gives rise to a favourable presumption as regards the other part, which may yet be of quite different nature. Besides, once we are outside the circle of experience, we can be sure of not being *contradicted* by experience. The charm of extending our knowledge is

so great that nothing short of encountering a direct contradiction can suffice to arrest us in our course; and this can be avoided, if we are careful in our fabrications—which none the less will still remain fabrications. Mathematics gives us a shining example of how far, independently of experience, we can progress in *a priori* knowledge. It does, indeed, occupy itself with objects and with knowledge solely in so far as they allow of being exhibited in intuition. But this circumstance is easily overlooked, since this intuition can itself be given *a priori*, and is therefore hardly to be distinguished from a bare and pure concept. Misled by such a proof of the power of reason, the demand for the extension of knowledge recognises no limits. The light dove, cleaving the air in her free flight, and feeling its resistance, might imagine that its flight would be still easier in empty space. It was thus that Plato left the world of the senses, as setting too narrow limits to the understanding, and ventured out beyond it on the wings of the ideas, in the empty space of the pure understanding. He did not observe that with all his efforts he made no advance—meeting no resistance that might, as it were, serve as a support upon which he could take a stand, to which he could apply his powers, and so set his understanding in motion. It is, indeed, the common fate of human reason to complete its speculative structures as speedily as may be, and only afterwards to enquire whether the foundations are reliable. All sorts of excuses will then be appealed to, in order to reassure us of their solidity, or rather indeed to enable us to dispense altogether with so late and so dangerous an enquiry. But what keeps us, during the actual building, free from all apprehension and suspicion, and flatters us with a seeming thoroughness, is this other circumstance, namely, that a great, perhaps the greatest, part of the business of our reason consists in analysis of the concepts which we already have of objects. This analysis supplies us with a considerable body of knowledge, which, while nothing but explanation or elucidation of what has already been thought in our concepts, though in a

confused manner, is yet prized as being, at least as regards its form, new insight. But so far as the matter or content is concerned, there has been no extension of our previously possessed concepts, but only an analysis of them. Since this procedure yields real knowledge *a priori*. Which progresses in an assured and useful fashion, reason is so far misled as surreptitiously to introduce, without itself being aware of so doing, assertions of an entirely different order, in which it attaches to given concepts others completely foreign to them, and moreover attaches them *a priori*. And yet it is not known how reason can be in position to do this. Such a question is never so much as thought of. I shall therefore at once proceed to deal with the difference between these two kinds of knowledge.

IV. THE DISTINCTION BETWEEN ANALYTIC AND SYNTHETIC JUDGEMENTS

In all judgements in which the relation of a subject to the predicate is thought (I take into consideration affirmative judgements only, the subsequent application to negative judgements being easily made), this relation is possible in two different ways. Either the predicate B belongs to the subject A, as something which is (covertly) contained in this concept A; or B lies outside the concept A, although it does indeed stand in connection with it. In the one case I entitle the judgement analytic, in the other synthetic. Analytic judgements (affirmative) are therefore those in which the connection of the predicate with the subject is thought through identity; those in which this connection is thought without identity should be entitled synthetic. The former, as adding nothing through the predicate to the concept of the subject, but merely breaking it up into those constituent concepts that have all along been thought in it, although confusedly, can also be entitled explicative. The latter, on the other hand, add to the concept of the subject a predicate which has not been in any wise thought in it,

and which no analysis could possibly extract from it; and they may therefore be entitled ampliative. If I say, for instance, "All bodies are extended," this is an analytic judgement. For I do not require to go beyond the concept which I connect with "body" in order to find extension as bound up with it. To meet with this predicate, I have merely to analyse the concept, that is, to become conscious to myself of the manifold which I always think in that concept: The judgement is therefore analytic. But when I say, "All bodies are heavy," the predicate is something quite different from anything that I think in the mere concept of body in general; and the addition of such a predicate therefore yields a synthetic judgement.

Judgements of experience, as such, are one and all synthetic. For it would be absurd to found an analytic judgement on experience. Since, in framing the judgement, I must not go outside my concept, there is no need to appeal to the testimony of experience in its support. That a body is extended is a proposition that holds *a priori* and is not empirical. For, before appealing to experience, I have already in the concept of body all the conditions required for my judgement. I have only to extract from it, in accordance with the principle of contradiction, the required predicate, and in so doing can at the same time become conscious of the necessity of the judgement—and that is what experience could never have taught me. On the other hand, though I do not include in the concept of a body in general the predicate "weight," none the less this concept indicates an object of experience through one of its parts, and I can add to that part other parts of this same experience, as in this way belonging together with the concept. From the start I can apprehend the concept of body analytically through the characters of extension, impenetrability, figure, etc., all of which are thought in the concept. Now, however, looking back on the experience from which I have derived this concept of body, and finding weight to be invariably connected with the above characters, I attach it as a predicate to the concept; and in doing so I attach it synthetically,

and am therefore extending my knowledge. The possibility of the synthesis of the predicate "weight" with the concept of "body" thus rests upon experience. While the one concept is not contained in the other, they yet belong to one another, though only contingently, as parts of a whole, namely, of an experience which is itself a synthetic combination of intuitions.

But in *a priori* synthetic judgements this help is entirely lacking: [I do not here have the advantage of looking around in the field of experience.] Upon what, then, am I to rely, when I seek to go beyond the concept A, and to know that another concept B is connected with it? Through what is the synthesis made possible? Let us take the proposition, "Everything which happens has its cause." In the concept of "something which happens," I do indeed think an existence which is preceded by a time, etc., and from this concept analytic judgements may be obtained. But the concept of a "cause" lies entirely outside the other concept, and signifies something different from "that which happens," and is not therefore in any way contained in this latter representation. How come I then to predicate of that which happens something quite different, and to apprehend that the concept of cause, though not contained in it, yet belongs, and indeed necessarily belongs, to it? What is here the unknown = X which gives support to the understanding when it believes that it can discover outside the concept A a predicate B foreign to this concept, which it yet at the same time considers to be connected with it? It cannot be experience, because the suggested principle has connected the second representation with the first, not only with greater universality, but also with the character of necessity, and therefore completely *a priori* and on the basis of mere concepts. Upon such synthetic, that is, ampliative principles, all our *a priori* speculative knowledge must ultimately rest; analytic judgements are very important, and indeed necessary, but only for obtaining that clearness in the concepts which is requisite for such a sure and wide synthesis as will lead to a genuinely new addition to all previous knowledge.

Study Questions

1. Explain Kant's distinction between knowledge *a priori* and knowledge *a posteriori*.
2. Explain Kant's distinction between analytic and synthetic judgments.
3. According to Kant, why are analytic propositions important?
4. Do you agree with Kant that some propositions might be synthetic but known *a priori*?

What Is Knowledge?

A. J. AYER

A traditional definition of knowledge is that you know that something is the case if (1) you are sure of it, (2) what you are sure of is true, and (3) you have a right to be sure. In our next selection A. J. Ayer (1910–1989), who was Professor of Philosophy at the University of Oxford, explains the reasoning behind these three conditions.

The first requirement [of knowing that something is the case] is that what is known should be true, but this is not sufficient; not even if we add to it the further condition that one must be completely sure of what one knows. For it is possible to be completely sure of something which is in fact true, but yet not to know it. The circumstances may be such that one is not entitled to be sure. For instance, a superstitious person who had inadvertently walked under a ladder might be convinced as a result that he was about to suffer some misfortune; and he might in fact be right. But it would not be correct to say that he knew that this was going to be so. He arrived at his belief by a process of reasoning which would not be generally reliable; so, although his prediction came true, it was not a case of knowledge. Again, if someone were fully persuaded of a mathematical proposition by a proof which could be shown to be invalid, he would not, without further evidence, be said to know the proposition, even though it was true. But while it is not hard to

find examples of true and fully confident beliefs which in some ways fail to meet the standards required for knowledge, it is not at all easy to determine exactly what these standards are.

One way of trying to discover them would be to consider what would count as satisfactory answers to the question How do you know? Thus people may be credited with knowing truths of mathematics or logic if they are able to give a valid proof of them, or even if, without themselves being able to set out such a proof, they have obtained this information from someone who can. Claims to know empirical statements may be upheld by a reference to perception, or to memory, or to testimony, or to historical records, or to scientific laws. But such backing is not always strong enough for knowledge. Whether it is so or not depends upon the circumstances of the particular case. If I were asked how I knew that a physical object of a certain sort was in such and such a place, it would, in general, be a sufficient answer for me to say that I could see it; but if my eyesight

were bad and the light were dim, this answer might not be sufficient. Even though I was right, it might still be said that I did not really know that the object was there. If I have a poor memory and the event which I claim to remember is remote, my memory of it may still not amount to knowledge, even though in this instance it does not fail me. If a witness is unreliable, his unsupported evidence may not enable us to know that what he says is true, even in a case where we completely trust him and he is not in fact deceiving us. In a given instance it is possible to decide whether the backing is strong enough to justify a claim to knowledge. But to say in general how strong it has to be would require our drawing up a list of the conditions under which perception, or memory, or testimony, or other forms of evidence are reliable. And this would be a very complicated matter, if indeed it could be done at all.

Moreover, we cannot assume that, even in particular instances, an answer to the question How do you know? will always be forthcoming. There may very well be cases in which one knows that something is so without its being possible to say how one knows it. . . . Suppose that someone were consistently successful in predicting events of a certain kind, events, let us say, which are not ordinarily thought to be predictable, like the results of a lottery. If his run of successes were sufficiently impressive, we might very well come to say that he knew which number would win, even though he did not reach this conclusion by any rational method, or indeed by any method at all. We might say that he knew it by intuition, but this would be to assert no more than that he did know it but that we could not say how. In the same way, if someone were consistently successful in reading the minds of others without having any of the

usual sort of evidence, we might say that he knew these things telepathically. But in default of any further explanation this would come down to saying merely that he did know them, but not by any ordinary means. Words like "intuition" and "telepathy" are brought in just to disguise the fact that no explanation has been found.

But if we allow this sort of knowledge to be even theoretically possible, what becomes of the distinction between knowledge and true belief? How does our man who knows what the results of the lottery will be differ from one who only makes a series of lucky guesses? The answer is that, so far as the man himself is concerned, there need not be any difference. His procedure and his state of mind, when he is said to know what will happen, may be exactly the same as when it is said that he is only guessing. The difference is that to say that he knows is to concede to him the right to be sure, while to say that he is only guessing is to withhold it. Whether we make this concession will depend upon the view which we take of his performance. Normally we do not say that people know things unless they have followed one of the accredited routes to knowledge. If someone reaches a true conclusion without appearing to have any adequate basis for it, we are likely to say that he does not really know it. But if he were repeatedly successful in a given domain, we might very well come to say that he knew the facts in question, even though we could not explain how he knew them. We should grant him the right to be sure, simply on the basis of his success. . . .

I conclude then that the necessary and sufficient conditions for knowing that something is the case are first that what one is said to know be true, secondly that one be sure of it, and thirdly that one should have the right to be sure.

Study Questions

1. Can you be sure of something, yet not know it?
2. Can you know something without being able to say how you know it?
3. How does knowledge differ from true belief?
4. Give an example of a situation in which you believe a claim to be true, it is true, and you have the right to be sure it is true.