
Chapter 2 The Basis of Knowledge

IT IS CONVENIENT to pin the "problem of knowledge" on Plato, for he regarded knowledge as a mysterious kind of union between a knower and the known. Contemplation for Plato was a kind of love; and, just as the lover physically grasps his beloved, so does the knower spiritually apprehend the eternal Forms. The metaphor, of course, is older than Plato, for it was Adam who "knew Eve his wife," and the suggestive phrase "carnal knowledge" still recalls that ancient tradition. But if we take the metaphor too literally-if we ask how knowing involves grasping the immaterial-if we assume that Plato's Forms are quietly waiting out there to be seized-then we have allowed a poetic usage to create a philosophic problem. When a man gets to know something (as John Dewey remarks), the process is no more mysterious than when he gets to eat something. Man's curiosity is as natural to him as his hunger. But philosophers have usually been more puzzled by epistemology than by digestion.

Knowledge by Acquaintance and Knowledge by Description

Of course "knowledge" is not all that simple. We may begin here with Bertrand Russell's distinction between "knowledge by acquaintance" and "knowledge by description." Acquaintance is direct and immediate; it consists of "raw feels." We are acquainted with a person, or with a place, or with a food. Russell calls it "the kind of knowledge a dog-lover has of his dog." We may have degrees of acquaintance, but acquaintance as such is neither true nor false; that is, although I may be wrong in saying that that man across the street is my friend Bert, it is my inference that is erroneous, and not the acquaintance. Acquaintance is indeed the sort of knowledge a lover often has, or a teacher, or a physician, or an animal trainer. Martin Buber claims he knows God by direct acquaintance. But acquaintance is knowledge only in a preliminary or inarticulate sense. Organized scientific and philosophic knowledge, by contrast, is knowing that such and such is
the case: it is descriptive of fact; it is couched in propositions.'

**Knowing That and Knowing How**

Second, *knowing that*, which is propositional, must also be distinguished from *knowing how*. One may know how to swim, for example, or how to tie a bowtie, without being able to describe exactly how one does these things. This is often true of skills and crafts, of wine tasting and puzzle solving, of being able to identify a literary style and to compose a melody. Most of us know how to recognize a face, for example, or an accent, without being fully able to state that knowledge in propositions. Michael Polanyi points out that to know how to balance on a bicycle does not entail knowing that "for a given angle of unbalance, the curvature of each winding is inversely proportional to the square of the speed."

Can knowing how theoretically always be reduced to knowing that? Knowing how to play tic-tac-toe can be articulated precisely in propositions, and formulated as a computer program. It remains a serious open question, however, whether or not, for example, the diagnosis of disease by a physician, or the translation of natural languages, or the taxonomy of animal and plant species, or the recognition of patterns, can be computerized. Knowing how to do these things perhaps cannot be fully specified in propositional knowing that.

We see in Chapter 19 how *this distinction bears on some problems of language*. It is apparently not possible to state fully the rules for some ordinary English usages which we all know how to employ, such as the order of adjectives. We say "it is a long metal rod," not "a metal long rod." The substitutability of very for highly is similarly complex. Something may be "very difficult" or "highly difficult"; but not "very hard" or "highly hard."

**Knowledge and Experience**

Some philosophers (Henri Bergson, for example) belittle science because science cannot capture the peculiarly ineffable quality of so many of our experiences. *William James* makes this point well
in *The Varieties of Religious Experience*:

Something forever exceeds, escapes from statement, withdraws from definition, must be glimpsed and felt, not told. No one knows this like your genuine professor of philosophy. For what glimmers and twinkles like a bird's wing in the sunshine it is his business to snatch and fix. . . .

Life defies our phrases ... it is .infinitely continuous and subtle and shaded, whilst our verbal terms are discrete, rude, and few ... there is something in life ... entirely unparalleled by anything in verbal thought ....

Can you describe the aroma of coffee? or the taste of cold water? No one can quarrel with Louis Armstrong's reply upon being asked what jazz is: "Man, if you gotta ask what it is, you ain't never gonna get to know." Nor with the Zen Buddhist nun **Ryo-Nen**, who thus describes the experience of silence:

> Sixty-six times have these eyes beheld the changing scenes of Autumn.
> I have said enough about moonlight,
> Ask me no more.
> Only listen to the voices of pines and cedars, when no wind stirs.

But there is no problem here unless one confuses two very different concepts: experience and propositional knowledge. Experience is a very wide philosophical term: it includes everything we do and everything that happens to us; it encompasses sensations and emotions and pains and aesthetic experiences and mystical transports. None of these should be confounded with propositional knowledge. *It is not the function of knowledge to duplicate experience, but to describe it; not to reproduce what occurs, but to explain it.* Knowing what anger is, for example, is not the same as being angry. To have tasted wine is not to know its chemical composition. In its specificity and concreteness, life often has qualitative aspects that defy representation in general descriptive terms. Not every encounter with the world results in knowledge. "Fact is richer than diction," said J. L Austin; but they are not competitors. Experience may be an incentive to acquiring knowledge, or it may be evidence for some kinds of knowledge, or it may become the object of knowledge; but experience is not itself knowledge. **We should never confuse the description with what is being described, nor the explanation with what is being explained, nor the knowledge with the experience.** The physician who has himself had an operation is
likely to be more sympathetic to the patient with a ruptured appendix, but the physician does not thereby know any more about appendicitis. The male obstetrician does not ipso facto know less about menstruation and childbirth than the female doctor does. Experience and knowledge by acquaintance are of enormous intrinsic significance, but they are never a substitute for, nor a rival to, descriptive knowledge.

A conversation with Albert Einstein, reported by Rudolf Carnap, is revealing:

Once Einstein said that the problem of the Now worried him. He explained that the experience of the Now means something special for man, something essentially different from past and future, but that this important difference does not and cannot occur within physics.... I remarked that all that occurs objectively can be described in science... the temporal sequence of events in physics; and... the peculiarities of man's experience with respect to time, including his different attitudes toward past, present, and future can be in principle explained in psychology. But Einstein thought there is something essential about the Now which is just outside the realm of science. We agreed that this was not a defect for which science could be blamed, as Bergson thought.

The experiences of now and here ("indexical particulars") are known to us by acquaintance; they are what our propositional knowledge describes.

(We examine in Chapter 21 the claim of poetry and art to communicate knowledge. It is often the hallmark of the great literary artist that he finds the words to describe what the rest of us have inarticulately experienced or felt.)

**Propositional Knowledge**

Disputes about the nature of knowledge have frequently turned on whether "knowledge" must be propositional. On one side of the debate are Carnap ("Science in principle can say all that can be said"); Hans Reichenbach ("What we know can be said, and what cannot be said cannot be known"); and the early Wittgenstein ("Whatever can be said at all can be said clearly... Whereof one cannot speak, thereof must one be silent"). On the other side are Polanyi ("We know more than we can tell"); and those who assert that a baby knows that fire is hot; or that "a dog knows the difference between being stumbled over and being
kicked" (0. W. Holmes) or that a plant knows down from up. The first group of philosophers has been accused of legislating conformity to their rigorous standard (in the manner of Benjamin Jowett, the master of Balliol, who allegedly proclaimed, "I am master of this college/What I don't know isn't knowledge"). The second group has been charged with excessively diluting the term "knowledge."

The solution seems to me to make it clear that propositional knowledge is different from (but neither better than, nor worse than) knowledge by acquaintance; and likewise different from knowing how, and from feeling, and from sensing, and from other sorts of experience. I will certainly not depreciate the importance of these: it may well be a matter of life and death sometimes to know how water tastes!

But it is propositional knowledge that is my concern here. The paradigm of such knowledge is "I know that p," where p stands for any proposition, that is, any statement that is either true or false, such as "Today is Tuesday" or "Eisenhower succeeded Truman." (We analyze the proposition as the unit of knowledge in Chapters 6 and 7.) Analysis of what is entailed by the assertion "I know that p" shows that four conditions are required:

1. That p be true. Thus, if I were to say "I know that 2 + 2 = 5," you would object, "You can't know that, because it isn't true." "Only what is true can be known," said Plato.
2. That I believe that p. Belief is an attitude or act of the mind, so to speak (we study belief in Chapter 8, and its influence on perception in Chapter 4). Belief is not a kind of knowledge, but a requirement for knowledge. I might say, "I believe that p, but I don't know it"; however, I could never seriously assert, "I know that p, but I don't believe it." Thus, belief is a necessary condition for knowledge, but not a sufficient one. That is, one can believe wholeheartedly without knowing, but one cannot know without believing.
3. That I have good reasons, or sufficient evidence, for my belief that p; my belief must be justified. A. J. Ayer terms this "the right to be sure"; Dewey's phrase is "warranted assertability." This condition is required in order to distinguish knowledge from a lucky guess. If I were to say that there are at this moment 6,485 people visiting the Louvre, and this figure turns out upon investigation to be correct, you would be quite reluctant to concede that I knew it. You would demand to know
how I knew it, or what my evidence was. In the play Three Men on a Horse, the hero regularly predicts the winners of horse races; but, regardless of his successful guesses, he does not know the winners. Similarly, the claims of astrology are not knowledge.

(Note that this condition for knowledge, like the second condition, does not operate inversely: I may sometimes have sufficient evidence, yet not succeed in knowing. When I finish reading a detective story, I may say, "I should have known!" When the cause of cancer is discovered, some scientists will undoubtedly feel that the answer was staring them right in the face all the time and that they "should have known." Thus, evidence is a necessary, but not a sufficient, condition for knowledge. This also raises the interesting question of whether knowledge can ever be unconscious. In order to know that p, must you also know that you know it? Do you know which shoe you always put on first? Or what the radio is playing while you read? Freud, in The Interpretation of Dreams, offers an interesting example of "unconscious knowing":

It is a very common event for a dream to give evidence of knowledge and memories which the waking subject is unaware of possessing. One of my patients dreamt ... that he had ordered a "Kontuszówka" while he was in a cafe. After telling me this, he asked me what a "Kontuszówka" was, as if he had never heard the name. I was able to tell him in reply that it was a Polish liqueur, and that he could not have invented the name. At first he would not believe me; but some days later he noticed the name on a billboard at a street corner which he must have gone past at least twice a day for several months.)

4. That I have no other evidence that might undermine my belief. Thus, I say correctly "I know that it is now 8:17 P.M." because my accurate watch reads 8:17. However, suppose that my watch had stopped this morning at exactly 8:17 A.M. Had I known that, the evidence for my true belief would have been destroyed. (We return to the analysis of these mental operations in Chapters 18, 19, and 20.)

**Good Reasons**

*Epistemology* is largely concerned with the third requirement of propositional knowledge, that is, with appraising the kinds of evidence or good reasons which are the basis of knowledge. Let
us list them:

1. I know that grass is green, because I can see it. *Sense perception* is the evidence for our knowledge about the world (we examine sense perception in Chapters 3 and 4).

2. I know that the sum of any two odd numbers is always an even number, because I can prove it. *Logic* is the basis of our analytic knowledge (we examine logic in Chapters 5 and 6).

3. I know that it is wicked to torture a person, because my *intuition* tells me so. Knowledge of right and wrong is often based on such inner convictions of certainty. "Yet I doubt not through the ages one increasing purpose runs," writes Tennyson. Mystics and transcendentalists rely on this sort of reason. (We appraise the claim of intuition in Chapter 19-I fear it will not prove a very reliable basis of knowledge.)

4. I know that I have a headache, because I feel it. *Self-awareness*, or introspection, is the basis for knowing one's own "self-presenting" states. If I were to say to you, I wish it would rain; or, I feel drowsy, you would not ask me, how do you know? One's wishes, feelings, thoughts, hopes; and so on seem to be self-evident; they do not have to be inferred from something else in order to be known. But there are some problems (we explore them in Chapters 18 and 20).

5. I know that I walked home yesterday, because I remember it. Knowledge of the past begins on the basis of *memory*. But memory is of course no guarantee of truth. David Hume long preceded Sigmund Freud in claiming that remembered events differ from imagined events only in being more vivid. To verify a memory, one can compare it only with another memory: the past event cannot be hauled forth and compared with the present recollection. So there is no way to avoid a certain skepticism. Descartes said that our memories may all have been breathed into us by a malicious demon; and Russell, in a well-known passage in *The Analysis of Mind*, asserts:

   Everything constituting a memory-belief is happening now.
   It is not logically necessary ... that the event remembered should have occurred, or even that the past should have existed at all.
   There is no logical impossibility in the hypothesis that the world sprang into being five minutes ago, exactly as it then was, with a population that "remembered" a wholly unreal past ... nothing that is happening now ... can disprove [that] hypothesis ....

But a totally delusive memory is not what is meant by memory at all; just as there can be no "counterfeit coins" unless at least
some coins are genuine, so a memory can be "erroneous" only if at least some memories are truthful. Undoubtedly we do in fact recall our past selectively; under hypnosis we recover forgotten experiences; we edit our memories, more or less deliberately. But all empirical knowledge (as we see in Chapters 9 and 10) is likewise selected and edited. Indeed, what is meant by "the present"? Literally, it is a dimensionless mathematical point, constantly vanishing. James called it "specious" and estimated that one can actually attend to a "present" time span of about twelve seconds. In this phenomenological sense, one may perceive as a unit a sentence, or a melody, or a chain of reasoning. A work of art (Chapter 21) likewise focuses the observer's attention on an extensive complex of sights or sounds so composed that it is experienced in a timeless present. (We return to the problems of memory in Chapters 17 and 18.)

6. I know that the velocity of light is 186,000 miles per second, because the physicists say so. We often rely on authority (Bacon's "idols of the theatre"). Of course, we should accept someone as an authority only if he can himself produce other types of good reasons, which we all can in principle examine. Authority as a justification for knowledge is worthless if it cannot be dissolved into its ingredients.

7. I know that the number thirteen is unlucky, because everybody says so. Before we discard the justification of knowledge by consensus gentium we must examine Peirce's criterion of truth (Chapter 8).

8. Joan of Arc knew that she would lead the French army, because God revealed this to her. Revelation as a justification for knowledge seems to me (unless I receive one) unverifiable and unreliable.

9. St. Thomas knew that he would be resurrected after his death, because he had faith. Let no one make the disastrous error of confusing faith with knowledge, or relying upon faith as a reason for knowledge. The attitude of belief, as I have said, is necessary for knowledge, but not sufficient; belief is a requisite for knowledge, but not a guarantee of it. To call belief "faith" does not improve it, whether that faith be in God, or in Jupiter, or in Destiny, or in human nature.
To recapitulate this chapter: descriptive knowledge (as contrasted with experience, knowledge by acquaintance, and knowing how) consists of propositions believed to be true for uncontroverted adequate reasons. *Five of these reasons warrant further careful examination: sense perception, logic, intuition, self-awareness, and memory.* It seems to me safe to deny the thoroughgoing skepticism of Gorgias, who argued that nothing existed; and if it did, it could not be apprehended; and if it could be apprehended, that apprehension could not be communicated. If he could tell us all that, how can knowledge not be communicated?

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