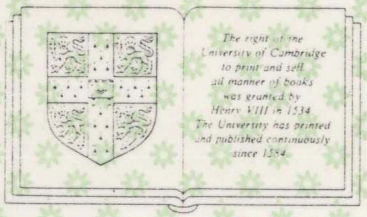
Knowledge in perspective

Selected essays in epistemology

ERNEST OSA



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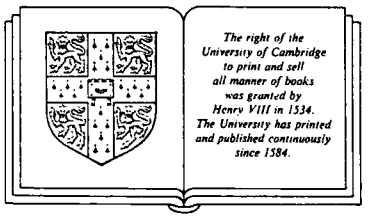
ERNEST SOSA



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To Sara, who likes knowledge in perspective

Contents

Sources and acknowledgments

This collection falls into four parts: one on knowledge, one on justification, and two that present and develop a view called virtue perspectivism. These parts share a pattern: Early essays within each part make proposals that later essays develop and defend, and the parts themselves form a similar pattern.

Three of these collected essays appear here for the first time: (1) "Back to Basics" – the Introduction, which provides some historical and contemporary context; (2) "Testimony and Coherence" – which also appears elsewhere concurrently; and (3) "Reliabilism and Intellectual Virtue" – which compares the present view with externalist reliabilism. In addition, "Theories of Justification: Old Doctrines Newly Defended" contains a new discussion of coherentism. And the final essay, "Intellectual Virtue in Perspective," contains new material – Sections E through G – that develops virtue perspectivism and makes it more precise.

All of the previously published essays have been revised, either with substantive changes or with minor changes for stylistic coherence and to avoid repetition. Finally, two of the chapters – 7 and 16 – combine materials from two or more publications.

Sources are listed below. I thank the editors and publishers who gave their permission for articles to be reprinted here.

"Introduction: Back to Basics." Previously unpublished.

Chapter 1. "The Analysis of "Knowledge that p," *Analysis* 25 (1964): 1–8.

Chapter 2. "How Do You Know?" *American Philosophical Quarterly* 11 (1974): 113–22.

Chapter 3. "On Our Knowledge of Matters of Fact," *Mind* 83 (1974): 388–405.

Chapter 4. "Presuppositions of Empirical Knowledge," *Philosophical Papers* 15 (1986): 75–87.

Chapter 5. "Epistemology Today: A Perspective in Retrospect," *Philosophical Studies* 40 (1981): 309–32.

Chapter 6. "Nature Unmirrored, Epistemology Naturalized," *Synthese* 55 (1983): 49–72.

Chapter 7. "Theories of Justification: Old Doctrines Newly Defended." Drawn in part from previously unpublished material; in part from "'Circular' Coherence and 'Absurd' Foundations," in Ernest Lepore, ed., *A Companion to Inquiries into Truth and Interpretation* (Oxford: Blackwell, 1986); and in part from "Beyond Skepticism, to the Best of Our Knowledge," *Mind* 97 (1988): 153–89.

Chapter 8. "Reliabilism and Intellectual Virtue." Previously unpublished.

Chapter 9. "The Foundations of Foundationalism," *Nous* 14 (1980): 547–65.

Chapter 10. "The Raft and the Pyramid: Coherence Versus Foundations in the Theory of Knowledge," *Midwest Studies in Philosophy* 5 (1980): 3–25.

Chapter 11. "The Coherence of Virtue and the Virtue of Coherence," *Synthese* 64 (1985): 3–28.

Chapter 12. "Testimony and Coherence," in B. K. Matilal and A. Chakrabarti, eds., *Knowing from Words* (Oxford: Oxford University Press, in press).

Chapter 13. "Knowledge and Intellectual Virtue," *The Monist* 68 (1985): 224–45.

Chapter 14. "Methodology and Apt Belief," *Synthese* 74 (1988): 415–26.

Chapter 15. "Equilibrium in Coherence?" in John Bender, ed., *The Current State of the Coherence Theory* (Dordrecht and Boston: Kluwer Academic Publishers, 1989).

Chapter 16. "Intellectual Virtue in Perspective." Drawn in part from "Knowledge in Context, Skepticism in Doubt," *Philosophical Perspectives 2: Epistemology* (1988): 139–57; and in part from "Beyond Skepticism, to the Best of Our Knowledge," *Mind* 97 (1988): 153–89.

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Much of this work was aided by the American Council of Learned Societies, the Canada Council, the National Science Foundation, and the National Endowment for the Humanities; and all of it, by Brown University. During the twenty-five years spanned by the collection, Brown provided me with ideal conditions, for which I am most grateful.

In *Recent Philosophers*,[1] the sequel to his classic *One Hundred Years of Philosophy*, John Passmore writes:

1 John Passmore, *Recent Philosophers* (LaSalle, Ill.: Open Court, 1985).

> [Philosophy] is still in many ways the most striking example of that familiar aphorism, "the more things change, the more they remain the same." To be sure, there are novelties, questions raised which Plato would not have understood. Yet for all the greater sophistication of method, the use of technical tools deriving from logic and semantics, it is surprising how much philosophical effort is still devoted to trying to solve problems which Plato, or Descartes, or Hume, first saw as such.
>
> A particular case will serve to illustrate two points, the familiarity of some of the issues and the novel manner in which discussion of them is now often carried on. One of the questions which greatly troubled Plato is how knowledge differs from belief. For a time it looked as if philosophers were happy to suppose that they had the answer, that knowledge is a kind of belief which has two peculiarities. First, it is true; secondly, the believer is fully justified in believing that it is true. In 1963 E. L. Gettier published a two-and-a-half page article in the journal *Analysis* which set out two counter-examples to this way of making the distinction. . . . Gettier's miniscule article generated some hundreds of replies, a clear sign that the old issues are by no means dead.[2]

What first gripped me in epistemology was this Gettier problem, then freshly published, which prompted the first chapter of the present volume.

The Gettier problem began to fill a gap in my schooling, which had included no course in epistemology. That gap was entirely filled soon after I arrived at Brown as a postdoctoral fellow in 1964, and I owe thanks for that above all to Roderick Chisholm – for that, for his seminars and writings, and for innumerable discussions. We often disagree on the answers, seldom disagree on the questions, and never disagree on the way to settle the matter – or, rather, I've long agreed with him.

My warm thanks, finally, go to friends and colleagues for helpful comments on one or another of these collected essays: to Felicia Ackerman, Robert Adams, William Alston, Anthony Anderson, Robert Audi, David Bennett, John Bennett, David and Jean Blumenfeld, Laurence Bonjour, Hector Castañeda, Earl Conee, Michael DePaul, John Gibbons, Alvin Goldman, John Greco, Gilbert Harman, Jaegwon Kim, Stephen Leeds, Keith Lehrer, Noah Lemos, David Martens, Michael Pendlebury, Martin Perlmutter, Alvin Plantinga, Philip Quinn, Nicholas Rescher, Jerome Shaffer, Robert Shope, David Sosa, Robert Swartz, and William Throop; and to James Van Cleve go special thanks for his comments on drafts of these essays over a span of nearly two decades.

2 *Ibid.*, pp. 13–14.

Introduction: back to basics

Foundationalism postulates foundations for knowledge. Here agree its two branches – the rationalist and the empiricist – even if they disagree in their respective foundations, and disagree on how to erect a superstructure.

For the rationalist, only rational intuition can give a secure foundation, and only deduction can build further knowledge on that foundation. Here the model of knowledge is the axiomatic system, with its self-evident axioms and its theorems derived through logical deduction. Rationalists, therefore, were the logicists, who tried to reduce all mathematics to self-evident axioms.

More ambitious yet, Descartes sketched in his *Meditations* a strategy for rationally founding all knowledge, not only mathematical knowledge. But his strategy required substantive commitments that turned out to be less than axiomatic – commitments of natural theology, for example.

The failure of rationalism is evident both in Descartes and in logicism.

For their part, empiricists accept not only foundations by rational intuition but also foundations by sensory experience. Equally unsuccessful, however, was their project of reducing all physical reality to sensory experience – whose apotheosis is Carnap's phenomenalism. Besides, as Hume showed, the future cannot be predicted deductively: The reasoning required outstrips logical deduction.

Empiricism thus becomes more liberal than rationalism in two respects: First, it accepts a broader foundation, provided not only by rational intuition but also by sensory experience; second, it admits not only deductive reasoning but also inductive reasoning.

Not even this liberalization suffices, however; we enjoy much knowledge not empirically buttressed by sensory experience, present or even recalled – almost everything one knows of history or geography or science, for example, as well as the names of friends and relatives, and a great diversity of knowledge about artifacts, about dishes and how they taste, about how people react, and so forth. None of that can be defended solely by induction on the basis of sensory experience present or recalled.

Consider also observational knowledge of immediate surroundings perceived without instruments. Not even this observational knowledge

can easily be explained merely by induction or deduction from what one knows by introspection of one's own sensory experience. Enumerative induction is not enough. That is clear. Nor is it clearly sufficient to use abductive inference – inference to the best explanation.

Accordingly, many have adopted an even more liberal empiricism, with a broader foundation that includes not only what we intuit rationally and what we know by introspection of our own sensory experience but also what we know by direct observation of our surroundings.

Let us pause, however, to consider in greater detail this broader foundation, in its three parts: the intuitive, the introspective, and the observational. What is a rational intuition? Is it a true belief, without inference, in something logically necessary? Not necessarily, for such a belief can arise and be sustained by guessing or by superstition or brainwashing – and, in any of these cases, even if one believes something logically necessary, this does not imply that one knows what one believes. The question remains: What is a rational intuition?

With respect to the other two parts of the empiricist foundations there are similar questions: What is introspection? What is observation? Suppose a well-lit, white, triangular surface against a black background. From a favorable angle and distance, the observer sees the white triangle and knows two things. He knows, first, that his visual experience has a certain character: that of being visual experience *as if* he had a white triangle before his eyes. And he knows also that in fact he does have before him at a certain distance a white triangular surface. These are indeed paradigms of knowledge by introspection of one's own experience, and by observation of one's immediate surroundings.

Once again, suppose an observation of a white surface, well lit and ideally situated, against a black background. But suppose this time it is not a triangle but a dodecagon (with twelve equal sides). The observer sees the white dodecagon and has two thoughts. He thinks, first, that his visual experience has a certain character, that of being visual experience as if he saw a white dodecagon. And he thinks, further, that in fact he sees a white dodecagon a certain distance away. Although he is twice right, however, he is right only by chance, for he lacks the capacity to distinguish dodecagons with a high probability of success – indeed, he often confuses dodecagons with decagons. Therefore, not every observational belief constitutes foundational knowledge.

Summing up: Foundational empiricism postulates three ways for a belief to constitute foundational knowledge – rational intuition, introspection of one's own experience, and direct observation of one's environment. For rational intuition there is the problem that one can be right in accepting some necessary truth although one is only guessing – which

means, of course, that one does not know. The problem here for the foundationalist is this: We need an explanation of what distinguishes beliefs that constitute rational intuition from those that do not, when both are beliefs in propositions true with apodictic necessity. Simplicity alone will not yield our distinction, moreover, because people differ widely in the relevant capacities, and some mathematicians are capable of rather complex intuitions (as was, e.g., the amazing Ramanujan).

Besides, neither introspection nor observation is always a trustworthy source of fundamental knowledge. As we saw with our dodecagon, a belief can be introspective or observational without constituting knowledge or a foundation for further knowledge. Once more the foundationalist needs to explain the difference between, on one hand, introspective or observational beliefs that constitute knowledge and, on the other, beliefs that are not knowledge, despite being introspective or observational.

Just how widely people differ in the relevant capacities – intuition, introspection, or observation – may be seen in a case described by the neurologist Oliver Sacks, a case of identical twins, John and Michael, idiots savants with a measured IQ of 60. Sacks described his first encounter with the twins as follows:

> A box of matches on their table fell, and discharged its contents on the floor: "111" they both cried simultaneously; and then, in a murmur, John said "37." Michael repeated this, John said it a third time and stopped. I counted the matches – it took me some time – and there were 111.
>
> "How could you count the matches so quickly?" I asked. "We didn't count," they said. "We *saw* the 111." . . .
>
> "And why did you murmur '37,' and repeat it three times?" I asked the twins. They said in unison "37, 37, 37, 111." . . .
>
> "How did you work that out?" I said, rather hotly. They indicated, as best they could, in poor, insufficient terms – but perhaps there are no words to correspond to such things – that they did not "work it out," but just "saw" it, in a flash. John made a gesture with two outstretched fingers and his thumb, which seemed to suggest that they had spontaneously *trisected* the number, or that it "came apart" of its own accord, by a sort of spontaneous, numerical "fission." They seemed surprised at my surprise – as if *I* were somehow blind; and John's gesture conveyed an extraordinary sense of immediate, *felt* reality.[1]

On another occasion, Sacks found the twins firing six-digit numbers at each other. He wrote the numbers down and later found them to be all prime numbers, whereupon he obtained a list of prime numbers and the next day joined the twins in their game:

1 Oliver Sacks, *The Man Who Mistook His Wife for a Hat and Other Clinical Tales* (New York: Harper & Row, 1987), ch. 23, pp. 199–200.

I decided to join in, and ventured a number, an eight figure prime. They both turned towards me, and then suddenly became still, with a look of intense concentration, and perhaps wonder on their faces. There was a long pause – the longest I had ever known them to make, it must have lasted a half-minute or more – and then suddenly, simultaneously, they both broke into smiles. . . . Then John, who always took the lead, thought for a very long time – it must have been five minutes, though I dared not move, and scarcely breathed – and brought out a nine figure number; and after a similar time his twin Michael responded with a similar one.[2]

The game continued, and in less than an hour the twins were up to twenty-digit numbers, which Sacks was unable to check because his book stopped at ten-digit primes.

Again, we need an explanation of what distinguishes beliefs that constitute foundations, an explanation that will do justice to the diversity of human capacities brought out, for instance, by Sacks's twins. Despite interesting progress towards this desideratum, especially in recent decades, to this day it remains elusive.

In spite of its failures, says W. V. Quine,

epistemology still goes on, though in a new setting and a clarified status. Epistemology, or something like it, simply falls into place as a chapter of psychology and hence of natural science. It studies a natural phenomenon, viz., a physical human subject. This human subject is accorded a certain experimentally controlled input – certain patterns of irradiation in assorted frequencies, for instance – and in the fullness of time the subject delivers as output a description of the three-dimensional external world and its history. The relation between the meager input and the torrential output is a relation that we are prompted to study for somewhat the same reasons that always prompted epistemology; namely, in order to see how evidence relates to theory, and in what ways one's theory of nature transcends any available evidence.[3]

Here are two central planks of Quine's epistemology:

(P1) Epistemology is now a branch of psychology that studies the causal relations between sensory input and theoretical output.

(P2) Engaging in such a study now leads to the conclusion that the sensory input that causes man's theoretical output does not determine it, and that man's theoretical output is hence nearly all arbitrary free creation.

The first thesis, P1, is already in the passage cited earlier. As for P2, we

2 *Ibid.*, p. 203. My thanks to Steven Hales for showing me the relevance of Sacks's writings.

3 "Epistemology Naturalized," in *Ontological Relativity and Other Essays* (New York: Columbia University Press, 1969), pp. 82–3.

are told in *The Roots of Reference* that science is in large measure a "free creation." Theoretical science is hence free-floating, but it is not alone. Even logic is in the same boat: "The steps by which the child was seen to progress from observational language to relative clauses and categoricals and quantification had the arbitrary character of historical accident and cultural heritage; there was no hint of inevitability."[4]

But in what sense is theory "arbitrary" relative to the available evidence? Completely arbitrary it cannot be, surely, lest it be as arbitrary as any superstition or mere conjecture. Quine seems to agree when he writes: "The channels by which, having learned observation sentences, we acquire theoretical language, are the very channels by which observation lends evidence to scientific theory. . . . We see, then, a strategy for investigating the relation of evidential support, between evidence and scientific theory. We can adopt a genetic approach, studying how theoretical language is learned. For the evidential connection is virtually enacted, it would seem, in the learning."[5]

If our theory of the world results from our free and arbitrary play of thought, and if nevertheless it is so related causally to observation as to be *by definition* "evident," that only prompts the question of how such "evidence" could possibly relate to knowledge. For Quine, "[the] answer is naturalism: the recognition that it is within science itself, and not in some prior philosophy, that reality is properly to be identified and described."[6]

But this is no answer unless science provides not only the measure but also the very content of reality. By definition, epistemology recapitulates the genesis of scientific theory, which in turn determines all of ontology and metaphysics, since, by definition, what exists is what science postulates. Science hence arranges a forced wedding of epistemology with metaphysics. Correct epistemology, linked by definition with science, cannot possibly fool us on the content and nature of reality, since, by definition, it is science's say-so that determines what is so. Thus we obtain a guarantee that scientific theory enjoys epistemic justification and fits reality correctly – for such justification and reality are both defined by reference to such theory.

Doubt begins with the question of how we are to distinguish any science worthy of the title. If both reality and epistemology are defined by reference to science, it would be viciously circular now to define science by reference to reality or epistemology. How, then, are we to

4 "The Nature of Natural Knowledge," in Samuel Guttenplan, ed., *Mind and Language* (Oxford: Clarendon Press, 1975), p. 80.

5 *Ibid.*, p. 76.

6 "Reply to Stroud," in *Midwest Studies in Philosophy* 6 (1981): 474.

distinguish science from pseudoscience? How are we to draw and understand this distinction?

Quine's positivist answer offers first the following criteria for a scientific "system of the world": (a) it must predict a certain number of observations, (b) it must be finitely axiomatized, and (c) it must contain nothing unnecessary for the prediction of observations or the derivation of observation conditionals – of the form "if such-and-such were observed, then so-and-so would be observed." Such a system of the world is a "tight fit" over the relevant observations or observation conditionals. (I have simplified somewhat, but, I believe, without serious distortion.)

Observation is hence crucial for Quine. Beyond observation is a symbolic network valued according to whether it fits observation tightly, according to its success in entailing correct observation conditionals.

Problems remain. For example, if truth and reality are determined by science, and the content of science is determined by appeal to correct observation conditionals, how is the correctness of such conditionals determined? What is the basis of such correctness? Is there some observational reality that is fundamental and not derivative from any science?[7]

And there is, in addition, a notorious problem always faced by positivism. Quine says approximately the following:

> (Q) Two things are determined by the genesis and content of science: first, what counts as "evidence"; second, the nature and content of reality; and correct science is itself determined by its "tight fit" over observation.

Nevertheless, we have seen that the third criterion for such a tight fit requires that any system that fits this tightly must contain nothing unnecessary for the derivation of correct observation conditionals. Consider now the very doctrine Q itself. Since Q is not needed for the derivation of any observation conditional, we must conclude that Q is *not* itself true. Apparently, if we combine Q with the account of a "tight fit," we obtain a self-refuting whole. This sort of self-refutation has always posed a serious problem for positivism, and Quine's positivism is no exception – as has been noted by Hilary Putnam.[8]

Putnam rejects positivism in favor of a doctrine that makes respectable room for itself, for philosophy in general, and even for values and norms. He proposes, therefore, an explication of truth and reality not in terms of science and observation but in terms of reason, of what would be rationally acceptable in ideal epistemic conditions. Now, the content of

7 Quine's naturalization is discussed further in Chapter 6.

8 "Why Reason Can't Be Naturalized," in *Realism and Reason*, Vol. 3 of his *Philosophical Papers* (Cambridge: Cambridge University Press, 1983).

what could thus turn out acceptable is not limited to the observable, nor even to what science may offer us, but includes also moral and other evaluations, as well as political views, philosophy, and the humanities generally. Putnam's doctrine is thus more sensibly inclusive than failed positivism – and has, of course, its attractions. Nevertheless, it is not entirely free of problems and must face, for example, the following:

Consider this proposition, which seems in fact true, but which in any case *might* be true (where the brackets function as a nominalizing device):

> (P1) [No one is in ideal epistemic conditions.]

Proposition P1 is equivalent to

> (P2) [P1 is true.]

which in turn amounts to

> (P3) [Anyone who were to consider P1 in ideal epistemic conditions would accept it.]

But P3 is absurd; yet it is said to amount to P1, which is surely not absurd. Putnam's doctrine suffers therefore from a sort of self-refutation.[9]

Having taken a wrong turn, let us return to our start. The doctrine of foundations was said to suffer essentially the same problem in each of its three parts. The given, what is present to consciousness, can be grasped either by intuitive reason (when it is a rational axiom) or by introspection (e.g., when it is a matter of one's present sensory experience). But in neither case can we see with clarity the general limits of the epistemic mechanism involved. What do we intuit rationally? Everything necessary and *simple*, as are, for example, the simplest logical truths? That seems promising until we recall that what is simple and obvious for Ramanujan may not be so for others.

As for introspection, does one know *foundationally* everything one believes through introspection of one's own experience? Perhaps one *is* able to know foundationally that one has sensory experience of a white triangle against a black background. What if the figure is not a triangle, but a dodecagon, however, and one lacks the capacity to distinguish dodecagons by sight? If so, then even if (a) one in fact has a visual experience as if before one there were a dodecagon against a black background and (b) one believes that one is having such an experience – that is, an experience as if one had before one a dodecagon against a black background – still it does *not* follow that (c) one knows foundationally

9 This argument is developed in detail by Alvin Plantinga in his "How to Be an Anti-Realist," *Proceedings and Addresses of the American Philosophical Association* 56 (1982): 47–70, where he kindly acknowledges its provenance.

what one thus believes, with no need of supporting reasons or inferences.

And the like is true of observation, as we saw earlier. Mere observation of a dodecagonic surface against a black background, giving rise to a belief that one sees such a surface, is not sufficient to make that belief a case of knowledge.

Note the realist posture of all such foundationalism. Criteria for knowledge are proposed on the basis of necessary truths, sensory experiences, or objective surfaces – all of which enjoy their own character independently of what anyone may believe. When such foundationalism fails, many turn away from the presupposed realism toward a conception of language or worldview or conceptual scheme as something that constitutes reality. This we saw in Quine, for whom science determines reality. And we saw it also in Putnam, for whom reality is again constituted by language and thought, the ideal if not necessarily the actual. But we also saw the problems of incoherence faced by these doctrines.

Yet others do not adopt antirealism but do turn coherentist. Davidson, for example, argues that an allegedly foundationalist idea, that of "confrontation between what we believe and reality," is "absurd," thus opening the way for coherentism, subsequently offered as a better alternative: "What distinguishes a coherence theory is simply the claim that nothing can count as a reason for holding a belief except another belief. Its partisan rejects as unintelligible the request for a ground or source of justification of another ilk."[10] In explanation and support we are referred to Rorty, who claims that "nothing counts as justification unless by reference to what we already accept, and there is no way to get outside our beliefs and our language so as to find some test other than coherence."[11]

Suppose

(a) that for a belief to be justified is for the subject to justify it or to have justified it;
(b) that for one to justify a belief (really, successfully) is for one correctly and seriously to use considerations, reasons in its favor; and
(c) that seriously and correctly to use considerations or reasons in favor of a belief is to use (i) other things one believes with justification and (ii) their (justifiedly believed) appropriate connection with the belief targeted for justification.

10 Donald Davidson, "A Coherence Theory of Truth and Knowledge," in Dieter Henrich, ed., *Kant oder Hegel?* (Stuttgart: Klett-Cotta, 1983), pp. 423–38, 426.

11 Richard Rorty, *Philosophy and the Mirror of Nature* (Princeton, N.J.: Princeton University Press, 1979), p. 178.

These are apparently involved in Davidson's and Rorty's view of epistemic justification as inevitably *argumentative*. So much seems defensible. What seems disastrous is the view of knowledge as a matter of just true belief that is thus (argumentatively) justified (even leaving aside the Gettier problem). If one is going to think of justification as thus essentially argumentative, then one must leave room for some other way in which a belief can amount to knowledge besides its being thus justified. But Davidson and Rorty oppose the very idea of a belief's amounting to knowledge through some causal process, through some sheer "confrontation" with reality.[12]

Fortunately, there is another way to overcome the problems of foundationalism. This alternative approach starts by recognizing those problems as follows: (a) Something is missing in a believer who accepts a necessary truth that is too complex for that believer to know it *just* on the basis of believing it; (b) something is also missing in the introspective belief that one has visual experience of a dodecagon when this figure is too complex for one to discriminate it and identify it *just* by introspection; and (c) finally, something is similarly missing in the observational belief that one has a dodecagonic surface before one when such surfaces are too complex for one to discriminate and identify them *just* by sight. What is missing in each of these cases is not just a matter of greater simplicity in the object of belief, however, because another subject might perfectly well have direct knowledge of similarly complex truths, by rational intuition, by introspection, or by observation. It is not just the intrinsic complexity of the truth involved that matters, therefore, but at most its excessive complexity *for that subject*. What the subject needs is a certain capacity, a certain faculty or intellectual virtue: that of distinguishing necessary truths up to a certain degree of complexity, or perhaps that of distinguishing dodecagons and other such figures by simple inspection.

According to this alternative approach, direct, foundational knowledge must be right not just by accident but by means of a noninferential faculty that enables the formation of beliefs on the matter in question with a high success ratio.

Other problems also yield to this approach. Recall our knowledge

12 This will be discussed later in some detail: with respect to Rorty, in Chapter 6, "Nature Unmirrored, Epistemology Naturalized," and with regard to Davidson, in Chapter 7, "Theories of Justification: Old Doctrines Newly Defended." If we view justification thus as essentially argumentative, then we probably need also a further idea of the *aptness* of a belief, an idea that is most likely to involve a causal relationship between that belief and reality, mediated though it might be by the intellectual virtue or faculty that gives rise to the belief. This conditional is defended most explicitly in Chapter 14, "Methodology and Apt Belief."

through memory of names, of places, of how things work, of history and geography, and so forth. When one recalls the name of one's own child, for example, one's belief derives neither from rational intuition nor from inference based on present or recalled observation or sensory experience. Accordingly, such belief is not based on the traditional foundations of reason, introspection, or observation, present or recalled. Despite its lack of such traditional foundations, such a belief surely does amount to knowledge. Surely the name of one's own child can remain knowledge through brute memory.

Our alternative approach in terms of faculties and intellectual virtues can, of course, make room for memory. Memory, like inference, is a faculty whose inputs are beliefs. Such faculties are virtuous in proportion to their capacity to emit true outputs from true inputs. In the case of inference, the outputs are different from the inputs. Memory, by contrast, retains its inputs and delivers the same later as outputs when appropriate. Such, anyhow, is the way of *good* memory. And someone blessed with good memory can know a name just by recall. According to our alternative approach, then, to know is to believe through a faculty or intellectual virtue.[13]

This approach also has its problems to face. It needs to be developed and defended. That is the main overall objective of the essays in this collection, which defend an account of knowledge with two main ideas: that of intellectual virtue and that of epistemic perspective.

Part I of the collection is on the nature of knowledge. The first chapter contains the following three things, among others:

(a) A distinction between "subjective," *internal* justification, on one hand, and "objective," *external* justification, on the other – both required for knowledge.

(b) A discussion of evidence one does not possess, and of the social aspect of knowledge, and of how these go beyond the subjective or internal rationality of belief.[14]

(c) A defeasibility framework of justification, according to which

13 My approach is in some respects akin to the reliabilist externalism of Ramsey, Armstrong, Dretske, Goldman, Nozick, Swain, and others. The most recent and extensively developed reliabilism is discussed in Chapter 8 and is compared with the present approach. My account is different in important respects from reliabilism, especially as concerns the need for doxastic ascent and epistemic perspective, as may be seen especially in Parts III and IV.

14 A further social aspect of knowledge is recognized through the place allowed to testimony (e.g., in condition oj_5), whose status as a source of knowledge is defended later, in Chapter 12. Also relevant here is a relativization of knowledge to epistemic community, which comes to the fore in Chapter 2. But note well: The commitment here is to a kind of benign relativism uninfected by any sort of subjectivism or conventionalism.

positive evidence for a belief can be defeated or overridden by additional facts.

A belief can amount to knowledge only if it is (i) internally justified, by being a rational belief that accords with the evidence given, and *also* (ii) externally justified, by meeting requirements like those imposed by (b) and (c) above. The second chapter widens the externalism thus present already in the first.

(d) It is required not only that the subject's *evidence* not be false – that there be no falsehood in any internal structure of assumptions, presumptions, premises, reasons, and so forth, that underlies any belief amounting to knowledge – but *also* that the subject who knows must be "in a position to know."

Whether or not one is thus in a position to know is, moreover, determined by factors beyond internal subjectivity, factors that go beyond rational justification and pertain, for example, to the faculties and context of the subject. And with these external factors comes also a relativization of knowledge to epistemic community.[15]

The recognition of a general distinction between internal and external factors relevant to whether a subject knows is supplemented (in Chapter 14) by a contrast between aptness and justification of belief and applied (in Chapter 15) to questions about the viability of reflexive equilibrium and of analytic epistemology itself, as well as to questions of relativism. However:

(e) The contrast between the aptness and the justification of a belief does not remove the need for two varieties of justification, the subjective and the objective, as in (a).

A subject may have an internally justified belief B that derives from fine faculties of perception, memory, introspection, and abduction, in an environment E generally favorable to such faculties, while yet in this particular instance the abductive and other rational support is essentially flawed by falsehood. Such a flaw must be precluded through a requirement of *objective* justification, something a belief needs – in addition to aptness and subjective justification – in order to constitute knowledge.

Chapter 2 – "How Do You Know?" – adds a further commitment:

(f) Normative epistemic properties must *supervene* or *derive* from properties that are *not* normatively epistemic, where normatively

15 This distinction between internal and external aspects involved in knowledge then plays an increasing role, especially in Chapters 8, 14, and 15.

epistemic properties are those involved in knowledge, such as those that specify how rational or how apt is someone's belief within certain circumstances.[16]

A modest *epistemic perspectivism* enters with the remaining chapters in Part I,[17] which present the following thesis:

(g) One needs an epistemic perspective for full reflexive knowledge – knowledge that surpasses mere "thermometer" or "servo-mechanic" or even "animal" proto-knowledge.

This thesis is developed later,[18] where the epistemic perspective is crucial to proposed solutions for the generality problem and the new evil-demon problem. It is this large role played by the epistemic perspective that prompts the label "virtue perspectivism" for the view under development.

Two main alternatives in epistemology today are reliabilism and coherentism:

(h) Reliabilism and coherentism each contain important insights, but any deep enough defense of either must make room for important elements of the other.

These competing alternatives are often discussed in what follows,[19] where virtue perspectivism emerges gradually as an irenic alternative, one variously defended in Parts II and III, and developed more positively and explicitly in Part IV.[20]

16 See the account of what it is for a set to *fully validate* an epistemic proposition, account I in the appendix to that chapter. This commitment remains throughout, but see especially Chapters 9 and 10. The appendix to Chapter 9 shows how a framework of prima facie justification is compatible with the supervenience of justification.

17 Chapters 3 and 4.

18 Chapters 8, 11, 12, and 16.

19 For reliabilism, see Chapter 7 and especially Chapter 8, which explains how virtue perspectivism differs from reliabilism. For coherentism, see especially Chapters 7, 11, and 12.

20 Much remains to be done, however; for example, virtue epistemology needs to be compared with virtue ethics, as each will likely support the other. Cf. John Greco, "Virtue Epistemology," in *The Blackwell Companion to Epistemology*, J. Dancy and E. Sosa, eds. (Oxford: Basil Blackwell, in press).

PART I

What is knowledge, and how is it possible?

1

The analysis of "knowledge that p"

On Edmund Gettier's interpretation,[1] the Ayer and Chisholm analyses of the concept of knowledge are sufficiently similar to analysis A, below, to be called the same.

Analysis A:

A person S has knowledge that p iff

(i) p is true;
(ii) S believes that p;
(iii) S is justified in believing that p.

Gettier presents us with two counter-examples to this view. I will now briefly set forth the principle of the second, which is both simpler than the first and not essentially different from it *qua* counter-example to A.

Suppose S has good evidence for his belief that p, from which in turn he deduces that $p \vee q$. But, unknown to S, $(\sim p)$ & q. So, all three conditions for knowledge specified in the view under examination are fulfilled; but we still do not want to say that S *knows* that $p \vee q$.

Here is a proposed analysis of the concept of knowledge, proposed as a solution to the Gettier problem:

If p is "basic," belief that p requires no justification, subjective or objective. If p is "non-basic," a person S has *subjective* justification for belief that p iff:

sj_1: There is a set of statements, $e_1, e_2, \ldots, e_n$, each of which S believes to be true.

sj_2: S's belief that e_i is true is itself subjectively justified whenever e_i is not a basic statement requiring no justification.

sj_3: S believes that the truth of the e_is provides strong-enough evidence for p, and either is subjectively justified in having this belief or the belief is a (basic) "canon" or "axiom."

sj_4: There is no set of statements, $f_1, f_2, \ldots, f_n$, which S believes to furnish strong-enough evidence for $\sim p$ and to be true.

sj_5: S is justified in not believing that there is any set of f_is with true members, which casts sufficient doubt on p to make it false that the union of the set of e_is and the set of f_is supplies strong-enough

1 Edmund Gettier, "Is Justified True Belief Knowledge?" *Analysis* 23 (1963): 121–3.

evidence for p; or else his not believing this requires no justification given the situation.

sj_6: S is subjectively justified in believing each of the e_is in the context of the others to have positive evidential force for p, unless his belief requires no justification.

sj_7: S would regard as not strong enough, in the context of the disconfirming evidence he might reasonably be expected to have, any set evidentially weaker *vis-à-vis* p than the set of e_is.

(The last two requirements allow us to include the first and second provisos in the analysis of objective justification.)

Making use of the concept of subjective justification one can also formulate a definition of objective justification.[2]

If p is non-basic, S has *objective* justification for belief that p iff:

oj_1: There is a set of e_is which subjectively justifies S in believing that p *and* such that each of the e_is is *as a matter of fact true*.

oj_2: This set of e_is does support belief that p with sufficient strength and there is no superfluous e_i, i.e., none in the context of the others lacking all evidential connection with p; nor is there any which, in the context of the others, supports ~p. Further, S is objectively justified in believing each of the e_is to have positive evidential force for p, in the context of the others, unless his belief requires no justification.

oj_3: There is no set of f_is which discredits p even in the context of the e_is, and the members of which are true and such that S could reasonably be expected to have found out or otherwise know their truth.

oj_4: If there is some evidence for ~p which S believes, the contrary evidence of the e_is overcomes it, i.e., is still strong enough even in this context to justify belief that p.

oj_5: If S's belief that p is true is based substantially on a report that p or that one or more of the e_is is true, then the reporter *has objective justification* for the belief that p is true or that the e_is in question are true, respectively.

The reason for including provisos sj_5 and oj_3 is counter-examples such as the following:

Suppose that A and B are outside room R and seven persons P_1–P_7 come out of the room. A takes four of these, P_1–P_4, into his office and B

2 A word of warning: In the discussion of the two types of justification I do not strictly adhere to ordinary usage. In particular, "objective justification" is a somewhat "technical" expression.

takes the remaining three, P_5–P_7, into his office. Each of the seven subjects is asked the same question: "Is there a chair in room R?" P_1–P_4 answer: "Yes." P_5–P_7 answer: "No." When P_1–P_4 emerge from A's office they are interviewed by B. A, however, does not think it necessary to interview P_5–P_7.

Now if we don't include the provisos in question, the following absurdity is countenanced by our analysis: A could know that there is a chair in room R on the basis of the testimony he heard, whereas B couldn't on the basis of the testimony *he* heard. But B has just as much evidence for the proposition that there is a chair in the room as A does, i.e., four affirmative answers. And, furthermore, he has a wider range of data bearing on the issue. It would thus be preposterous to deny him entitlement to knowledge while granting it to A. And this is just what our condition is meant to preclude.

A striking fact is brought to light by this part of the analysis: besides justification for "believing that . . ." or for "believing that not . . ." justification for "not believing that . . ." is also involved in the concept of knowledge. In our example we pass the judgment that A is not justified in *not believing* that there is any counter-evidence to his belief, inasmuch as the testimony of P_5–P_7 is readily available (where we presume, of course, that P_5–P_7 are honest, reliable, and so forth, and that A knows them to be so. One could make the counter-example more convincing by adding such conditions as: room R is known by A to be very large and to have thick columns which cast dark shadows, etc.).

An example will perhaps make it clear why I regard sj_5 and oj_3 as quite strong enough. An historian who is justified in believing that Caesar crossed the Rubicon does not necessarily *believe that* there never will be a set of f_is such as that in sj_5 or oj_3. A methodology-conscious historian might well have such a belief but he *need not* to justifiedly make the judgment concerning Caesar. On the other hand, it is certainly required that he should *not believe that* there ever will be any such set of f_is and that either he be justified in not so believing or that his not so believing require no justification.

It is worth observing that a definition of "knowledge" in terms of objective justification would be a recursive definition. Before trying to show this, let me explicate some terminology: In what follows, "Se_i" stands for "the set of e_is", and "Sf_i" for "the set of f_is". Also, a proposition is "basic" iff it does not stand in any need of justification. S knows it simply because it is true and he believes it. "I have two hands and am now writing with my right hand" is such a one, in an ordinary context. Philosophical doubt is surely possible with respect to it, but "knowledge" being at least partly a normative term, our question ultimately

calls for a decision. I won't here go into the matter of how one would identify a "basic" proposition. It may even be that a proposition which is basic in one context would not be so in another (e.g., when it conflicts with a whole body of established truth). Notice, also, that "basic" too is partly a normative term: "worthy of credence without any need for grounds." One thing at any rate is clear (at least within contexts): we do recognize "basic" propositions. Questions come to an end; and rightly so.

In conclusion, I advance as the correct (recursive) definition of "knowledge that p":

S knows that p iff

(i) p is true;
(ii) S believes that p;

(If p is "basic" (i) and (ii) are both necessary and sufficient for S's knowing that p. If p is "non-basic," (iii) too is needed:)

(iii) S is objectively justified in believing that p; that is,
  (1) there is an Se_i, such that: S knows that the members of Se_i are true, and that $Se_i \rightarrow p$;[3] where none of the e_is is superfluous or supports $\sim p$ in the context of the others, and S does not believe otherwise, being in fact justified in believing each e_i to have positive evidential force for p, in the context of the others, unless his belief requires no justification; and S would regard any weaker Se_i as not strong enough in the context of the disconfirming evidence he might reasonably be expected to have;
  (2) there is no Sf_i
    (a) which is true and discredits p to such an extent that "$Se_i \rightarrow p$", while true in a neutral context, is not true in the context of Sf_i; and
    (b) the truth of the members of which S could reasonably have been expected to have found out, or otherwise know, together with the truth of (a);
  (3) S does not believe there is any Sf_i which fulfills 2(a) and is justified in not so believing unless his not so believing requires no justification; and
  (4) if S's belief that p is based substantially on the report that p, or that e_i, then the reporter knows that p or that e_i.

3 "→" means "provides strong enough evidence for."

2

How do you know?

Despair of knowing what knowledge is dates back to Plato's *Theaetetus*. Most recently, the trinitarian view of knowledge as justified true belief has been refuted, and a multitude of problems has appeared. Progress on this question is perhaps fated to be asymptotic. But such progress as can now be made depends, in my opinion, on a careful study of the conditions within which a correctly believed proposition is a bit of knowledge. In what follows I hope to enhance our knowledge of knowledge by contributing to such a study.

I

An accepted truth is knowledge only if evident. What then is it for something to be evident? One short answer is this: a proposition is evident to someone provided he is (theoretically) justified in believing it.[1] But under what further circumstances is the truth of a proposition evident to someone? This is our first main question.

To begin with, there are two general situations where it is evident to someone *S* that *p*. *First*, there is the situation where it is self-evident to *S* that *p*, i.e., where from the fact that *S* correctly believes that *p* we may infer that it is evident to *S* that *p*. Our inference here cannot be logically valid as it stands, however, since logic alone will not enable us to infer that anything is evident just from the fact that it is correctly believed. Some extralogical principles must be invoked to validate such an inference.

Such principles are clearly needed, in any case, provided we want to account for (and not deny) our empirical knowledge. Accordingly, they have long been recognized and accepted. The Greek Sceptics perceived the problems involved clearly and made some definite suggestions.[2]

1 The parenthetical qualification is meant to rule out as irrelevant whatever practical reasons there might be for having a belief, such as those of a sick man whose belief that he will recover is essential to his recovery.

2 Thus the theory of Carneades of Cyrene is presented by Sextus Empiricus in his *Outline of Pyrrhonism* and in his *Against the Logicians*. This theory is discussed by Roderick M. Chisholm in his *Theory of Knowledge* (Englewood Cliffs, N.J.: Prentice-Hall, 1966), pp. 41–4.

Descartes and Hume were in fundamental agreement about epistemic principles: There is first the self-evident, which includes some obvious general truths and some particular claims, mainly about one's subjective states; anything else that is evident must be made so by being deduced from the self-evident. This much, it seems to me, they both accepted, even if it led them in very different directions: Descartes to his baroque system, and Hume to his desert landscape. Coming to more recent philosophy, the principles underlying the "criteria" of Wittgenstein and others seem best understood as epistemic principles.[3] Discussion of epistemic principles and epistemic scales is to be found in Chisholm's writings.[4] Finally, the third of Sellars' Matchette Lectures, delivered at the University of Texas, is a discussion of "Epistemic Principles."[5] (Among the correlates of such principles in Sellars' philosophy are his principles of "trans-level inference.")[6]

What would such epistemic principles look like? What would be some examples? Let us introduce the schematic letter "*p*" to be replaced by declarative clauses. The following might then be a correct epistemic principle schema: "If *S* correctly believes that it occurs to him that *p*, then it is evident to *S* that it occurs to him that *p*."

Other examples of correct principle schemata yielding self-evident propositions are those corresponding to basic a priori truths, such as "If *S* believes that either *p* or it is false that *p*, then it is evident to *S* that either *p* or it is false that *p*." Here again from *S*'s mere correct belief of a proposition that *p* (e.g., that either it is snowing or it is false that it is snowing) we may infer that it is evident to *S* that *p*, and hence such propositions count as self-evident for *S*. Moreover, as distinguished from the group about propositional attitudes the present group of propositions are self-evident-if-evident for every person. That either it is snowing or it is not snowing is self-evident-if-evident for everyone, but it is self-evident-if-evident only to Tom that it occurs to *him* that snow is white since it is true only of Tom that if he correctly believes that concrete proposition, we can infer that it is evident to him.

We have seen how the first general situation where it is evident to *S* that *p* is one where it is self-evident to *S* that *p*. But obviously there are known

3 Cf. Norman Malcolm, *Knowledge and Certainty* (Englewood Cliffs, N.J.: Prentice-Hall, 1963), pp. 113–17.

4 See *Perceiving: A Philosophical Study* (Ithaca, N.Y.: Cornell University Press, 1957), and *Theory of Knowledge*.

5 The lectures were delivered in 1970 but are as yet unpublished.

6 See *Science, Perception, and Reality* (London: Routledge & Kegan Paul, 1963), p. 88. Trans-level inference is also discussed in "Empiricism and the Philosophy of Mind," in *Minnesota Studies in the Philosophy of Science*, Vol. 1, ed. Herbert Feigl and Michael Scriven (Minneapolis: University of Minnesota Press, 1956). This essay is also Chapter 5 of *Science, Perception, and Reality*.

facts that are not self-evident. Hence if a fact can't be known without being evident, there must be facts that are evident but not self-evident. And, more generally, there are propositions that are evident but not self-evident. This is of course the *second* general situation where it is evident to someone *S* that *p*. Now when it is evident to *S* that *p* but not self-evident to *S* that *p*, then that *S* correctly believes that *p* is not sufficient to establish it as evident to *S* that *p*, even with the help of the epistemic principles. What then *is* thus sufficient?

The answer I wish to propose is, in first approximation, that in such circumstances what makes it evident to *S* that *p* is a non-empty set of propositions α such that α validates the proposition that it is evident to *S* that *p*. Vaguely put, the idea is simply that if you know that *p*, but it is not self-evident to you that *p*, then you must have grounds for believing that *p*, and these grounds must make it evident to you that *p*. But to give your grounds for believing that *p* is not necessarily to give a complete epistemic explanation of how it comes to be evident to you that *p*. For often grounds that you have for believing that *p* cannot be groundless but require grounds of their own, and these may require grounds in turn, and so on. A complete epistemic explanation will not stop until it has adduced the grounds for every ground that has grounds.

It therefore appears that we need more than just the idea of a set of grounds that grounds the proposition that *p* for *S*. We need the idea of a set of grounds that *fully* grounds the proposition that *p* for *S*, the idea of a set that gives a complete epistemic explanation of how it comes to be evident to *S* that *p*.

But how are we to define this idea of a set's fully grounding a proposition for a subject at a time? Shall we say that α fully grounds *x* (for *S* at *t*) when for every ground *y* in α there is a subset α' of α such that α' grounds *y*? But what if α = {that the triangular card is approximately equilateral, that the triangular card is approximately equiangular} and *x* = that each of the card's angles has approximately 60°? This appears to fulfill the conditions specified, and yet α can hardly be said to provide a complete epistemic explanation for how it comes to be evident that each of the card's angles has approximately 60°. For instance, how do we know that there is a triangular card at all, or that it is approximately equilateral in the first place?

Adapting an idea of Frege's, shall we say that α fully grounds *x* iff α is the class of ancestral grounds of *x*? (Here *y* is an ancestral ground of *x* iff $(\forall\alpha)\{[x \in \alpha \,\&\, (\forall z)(\forall w)[(w \in \alpha) \,\&\, (z \text{ is a ground of } w) \supset (z \in \alpha)]] \supset y \in \alpha\}$; i.e., *y* is an ancestral ground of *x* iff *y* is a member of every class containing *x* and all grounds of members.)

The main problem with this definition derives from cases of epistemic