

Reason II

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6 Reason II Meaning, necessity, and provability

The radical empiricist critique of rationalism is neither the only kind empiricists can mount nor the only plausible source of objections to it. Another important approach to understanding the truths of reason and our justification and knowledge builds on the undeniable connections between how we use our language—specifically, on our linguistic conventions—and our knowledge of truths expressible in that language.

The conventionalist view of the truths of reason

We have seen the importance of analyses for understanding the a priori. Definitions of certain kinds may be considered linguistic counterparts of analyses. On one view, analytic truths may be better seen as definitional than as “analytical.” This idea needs examination.

Truth by definition and truth by virtue of meaning

To see how this approach goes, suppose that analytic propositions may be said to be *true by definition*. On the assumption that the truth or falsity of definitions turns on linguistic conventions, one can now make moves parallel to the classical ones that are expressed in terms of concepts. Thus, ‘vixen’ is definable as meaning (the same thing as) ‘female fox’; ‘female’ is part of this phrase; hence, by grasping a definition (even if we do not call it to mind) we can *see* how the proposition that all vixens are female is true. The predicate, ‘is female’, expresses part of the meaning of the subject, ‘vixen’, just as the concept of being female is part of the content of the concept of a vixen. Thus, according to conventionalism, by *appeal* to the definition of ‘vixen’ as having the same meaning as ‘female fox’, we can also *show* that the proposition that all vixens are female expresses an analytic truth.

The conventionalist may grant that in the case of synthetic truths of reason, for instance the truth that nothing is red and green all over at once, we cannot make the same moves. For the relevant color terms are indefinable, or in any case not definable in the needed way. But we can still speak of truth by virtue of *meaning* or at least *convention*, in the limited sense that it seems to be a matter of the meanings of, or conventions governing, say, the terms ‘red’ and ‘green’, that if one of the terms applies to a surface at a time and place, the other does not. Why else would someone who sincerely denies that nothing is red and green all over at once seem to exhibit an inadequate understanding of at least one crucial term used in expressing that proposition?

What terms mean is a matter of convention. It depends entirely on agreement, usually tacit agreement, among the users of the relevant language, concerning the proper application of the term. We could have used ‘vixen’ differently; we in fact would have done so if the history of our language happened to differ in a certain way. Moreover, even now we could decide to use ‘vixen’ differently and proceed to do so.

The suggested account of the truths of reason—*conventionalism*— grounds them in conventions, especially definitional conventions, regarding meaning. Secondly, and related to this basic claim, it conceives our knowledge of them as based on our knowing those conventions. Since knowledge of conventions is reasonably taken to be empirical knowledge based on suitable observations of linguistic behavior, conventionalism (on this interpretation) turns out to be a kind of empiricism regarding the truths of reason, and it has been held by some philosophers in the empiricist tradition. The claim is not that these truths are *about* words, but that knowledge of them is *based* on empirical knowledge of linguistic usage.

Knowledge through definitions versus truth by definition

Some of the points made by conventionalism are quite plausible. In grasping the definition of ‘vixen’ as meaning the same thing as ‘female fox’, perhaps we can see that all vixens are female; and under certain conditions, by appeal to the definition we perhaps can show that this truth holds. But do these points undercut the classical view? If the points hold, that may well be because of something *non-linguistic*: perhaps, *in* grasping the definition we understand the *concepts* involved and thereby see a containment relation between the concept of a vixen and that of being female. In this or some other way, understanding definitions might be a ladder by which we climb to an understanding of concepts.

Furthermore, as a proponent of the classical account might also note, it seems possible to grasp the relevant conceptual relations, and thereby already know the analytic truth, even if one does not know any such definition. Indeed, it might be only on the basis of the analytic truths one knows—such as that all vixens are female, and that all female foxes are vixens—

that one is able to *construct* a definition of ‘vixen’—with its present meaning—in the first place. The definition would reflect what is already true in virtue of how the concepts in question are related; the concepts are not themselves created by or grounded in linguistic conventions.

Contrary to conventionalism, then, the knowledge of analytic truths would be essential in one’s route to the definitional knowledge, not the other way around. Understanding the relations between the concepts expressed by the words in question would be the basis for judging the definitions of those words; it would not be through first knowing the truth of those definitions that one understands the conceptual relations or knows the analytic truth. Hence, knowledge of analytic truths apparently does not *depend* on knowledge of definitions or conventions, even if the former can sometimes be gained through the latter.

The more general important point implicit here is that conventionalism fails to give a good account of what grounds the *truth*, as distinct from our knowledge—or some of our knowledge—of analytic propositions. It is not *because* ‘vixen’ means the same thing as ‘female fox’ that all vixens are female. For, as we saw in assessing the empiricist view, this analytic truth does not depend on what ‘vixen’ means. This truth holds whether there is such a word or not. It could be expressed in some other language or by other English terms. It could be so expressed even if the word ‘vixen’ never existed.

There is another way to see limitations on what we can learn merely from definitions. Suppose that, although ‘vixen’ had always meant the same thing as ‘female fox’, *both* terms had meant something else, for example ‘wily creature’. In that case, ‘All vixens are female’ would still have expressed an analytic truth, but not the one it now does. It would have meant what we now mean by ‘All wily creatures are wily creatures’.

Moreover, although one can come to know that all vixens are female *through* understanding definitions of terms that now express this truth, one cannot know it wholly on the *basis* of the truth of those definitions. A route to a foundation is not itself a foundation.¹ To know that all

¹ At least in his classic ‘Two Dogmas of Empiricism’, in his *From a Logical Point of View* (Cambridge, MA: Harvard University Press, 1961), W.V. Quine sometimes talks as if he thinks that a knowledge of synonymy (sameness of meaning) of words is necessary for any possible knowledge of analytic propositions. See, for example, section 4, on semantical rules. One important comment is that “definition turned out to be a will-o-the-wisp, and synonymy turned out to be best understood only by dint of a prior appeal to analyticity.” In the overall context, the suggestion may be that only an independent conception of synonymy would clarify analyticity.

vixens are female by virtue of knowing that, say, ‘vixen’ has the same meaning as ‘female fox’, we need a bridge between knowledge of linguistic convention and knowledge of vixens. Consider one thing such a bridge requires. We must be justified in believing a general principle something like this: that a proposition expressed by a subject–predicate sentence such as ‘All vixens are female’ is true if its predicate term—here ‘female’—expresses something contained in the concept designated by its subject term, here ‘vixen’. But this bridge principle is a good candidate for an analytic truth. If it is analytic, then, on pain of generating an infinite regress, one can know an analytic truth by knowing conventions only if one *assumes* some other analytic truth.

Moreover, to know, in the light of this bridge principle, that all vixens are female, we must take the relevant sentence, ‘All vixens are female’, to be the kind of thing the principle applies to, that is, to be a sentence with a predicate that expresses something contained in the concept designated by its subject. We are in effect using logic as well as knowledge of meaning to discern something about a particular sentence and to bring that sentence under a generalization about sentences. But how can conventionalism account for our knowledge (or justified belief) of the logical truths we thereby depend on, such as that if all sentences of a certain kind express truths, and this sentence is of that kind, then it expresses a truth?

The conventionalist cannot respond by doing the same thing all over again with this logical truth; for that would presuppose logic in the same way, and the procedure would have to be repeated. The problem would arise yet again. No finite number of steps would explain our justification, and an infinite number would not be possible for us, even if it would help. We could thus never account for knowledge of a given logical truth without presupposing knowledge of one. Since conventionalism presupposes (at least) logical truths of reason, in order even to begin to account for analytic ones, it cannot show—and provides no good reason to believe—either that every truth of reason is grounded in convention or even that all knowledge of such truths is grounded in convention.

Conventions as grounds for interpretation

These criticisms should not be allowed to obscure a correct point that emerges from reflecting on conventionalism. The meaning of ‘vixen’ *is* crucial for what proposition is expressed by the sentence ‘All vixens are female’, that is, for what one is asserting when (in the normal way) one uses this sentence to make an assertion. Thus, if ‘vixen’ came to mean the same as ‘wily creature’, that sentence would express a falsehood, since there are plenty of wily males. But from the fact that change in what our terms mean can result in our saying different things in uttering the same words, nothing at all follows regarding whether *what* we say in using these words is necessarily true, or true at all. Those matters depend on what it *is* that we say.

There are, however, insights underlying conventionalism: truths of reason are associated with meanings; they can be known when meanings are adequately understood; and they can sometimes be shown through pointing out relations of meanings. Moreover, without conventions, our “words” could not be said to have meanings: strictly speaking, we would have no words and could not plausibly call anything true by virtue of meaning.

Important as these points about conventions are, they do not support the conventionalist view that the truths of reason themselves, or even our justification or knowledge regarding those a priori propositions, are *based* on what words mean or on our conventions for using them. For all that these points establish, our understanding of word meanings (including sentence meanings) is simply a route to our grasping of concepts and shows what it does about the truths of reason only because of that fact.

Some difficulties and strengths of the classical view

Of the accounts just considered, then, the classical view of the truths of reason and our knowledge of them apparently stands up best. But there are other accounts and many variants on the ones discussed here. Moreover, I have sketched only the main lines of the classical view and only some of the challenges to it. There are still other difficulties for it.

Vagueness

Recall the problem of vagueness. Perhaps the concept of being red, as well as the term ‘red’, is vague. Is it, then, an a priori truth that nothing is red and (any shade of) orange all over? And how can we tell?

One answer is that although words are by and large vague, concepts are not, and what *is* red (i.e., what instantiates the concept of redness) is never orange even though we have no non-arbitrary way of precisely specifying the limits of colors. Thus, we might confront a sentence, say ‘That painting has a patch that is at once red and orange’, which we cannot assess until we see whether it implies the necessary falsehood that the patch is two different colors all over at once or, because of the vagueness of its terms, expresses (say) the possible truth that the patch has a single color that can be considered red just as appropriately as orange.

This answer is only the beginning of a solution to the problem of how to deal with vagueness and is less plausible for highly complex concepts such as that of a work of art. The more vague our terms, the harder it is to discern what propositions are expressed by sentences using those terms, and thus the harder it is to decide whether these sentences express truths of reason. None of this implies, however, that there are *no* clear cases of synthetic a priori truths. Perhaps the proposition that nothing is round and square, taken to belong to pure geometry, is an example. (There may also be examples in the moral domain, an important possibility considered in Chapter 12.)

Meaning change and falsification

A related problem for the classical view emerges when we consider the close connection (which some regard as an equivalence) between what a term means and the concept it expresses. With this connection in mind, notice too that meaning can change gradually, as when we discover things about vixens a little at a time and thereby almost imperceptibly come to mean something different by ‘vixen’. A point may then come at which it is unclear whether the term ‘vixen’ expresses the concept it now does or not and, correspondingly, whether or not what is then expressed by ‘All vixens are female’ is analytic.

This unclarity about what concept ‘vixen’ expresses need not give us reason to doubt, regarding the proposition which that sentence now expresses, that it is analytic; but it does show that it may be difficult to decide whether or not an utterance or sentence we have before us expresses an analytic proposition. That difficulty may drastically limit the usefulness of the notion of the analytic in understanding philosophical and other problems.

It might be argued, moreover, that on reflection the distinction between meaning change (semantic change) of the kind illustrated and falsification of the proposition we started with does not hold. This point is likely to be pressed by those who think that the basic epistemological standard, the fundamental standard for judging whether a belief is justified or constitutes knowledge, is what is required for an overall account of experience. This broad standard is compatible both with many versions of empiricism and with some versions of rationalism.

To understand the difference between meaning change in a sentence and falsification of what the sentence is used to assert, it is helpful to contrast two cases. Compare (1) scientists’ discovering that despite appearances vixens have such significant male characteristics that they are *not* really female—an outcome the classical theory says is, on the face of it, impossible—and (2) scientists’ making discoveries about vixens so startling that we come to use ‘vixen’ in a new sense, one such that, although scientists deny that ‘vixens’ in this new sense are always female, what they are thereby saying provides no reason to doubt that what we *now* mean by ‘All vixens are female’ is true. Is there really a clear difference between (1) and (2)—roughly, between falsification of the belief about vixens we now hold and a change in the meaning of the terms we use to express it?²

² Cf. W.V. Quine’s remark that “truth in general depends on both language and extra-linguistic fact. The statement ‘Brutus killed Caesar’ would be false if the world had been different in certain ways, but it would also be false if the word ‘killed’ happened rather to have had the sense of ‘begat’ ” (‘Two Dogmas’, section 4). Compare saying that the *sentence* ‘Brutus killed Caesar’ would have expressed a different, and false, proposition (which is what defenders of

Classical theorists take (2) to be possible and tend to hold that it is only because possibilities like (2) are not clearly distinguished from (1) that (1) *seems* possible. They regard the difference between (1) and (2) as clear enough to sustain their view and tend to conclude that what may seem to be a falsification of an analytic proposition is really only a change in meaning that leads us to substitute, for an analytic truth, what looks like a proposition inconsistent with it, yet is actually compatible with it. Other philosophers think that the difference is not clear at all and that future discoveries really can weigh against what the classical view calls analytic propositions.³

It is difficult to doubt, however, that there are *some* truths of reason, such as elementary logical principles, and such simple analytic propositions as that all vixens are female, that are both a priori and necessarily true.

Whether some truths of reason are also synthetic rather than analytic is more controversial, but it looks as if some of them are. Whether, if some of them are, those synthetic truths are also invariably necessary is also very controversial. I see no good reason to deny that they are necessary, but there may be no clearly decisive argument to show this.

If synthetic truths of reason are necessary, perhaps one must simply see that this is so by reflecting on the examples. In any case, our capacity of reason, our rational *intuition*, as it is sometimes (perhaps misleadingly) called, is a source of beliefs of simple truths of reason, such as the self-evident truth that if the spruce is taller than the maple then the latter is shorter than the former. We can know the *truth* of these *intuitively*, on the basis of understanding them rather than on the basis of premises for them or perceptual experience, even if more is required to know their *status* as, say, necessary or contingent, a priori or empirical. Moreover, reason,

the classical view would likely say). Has Quine provided any reason to think that the *statement* in question— understood as the historical truth we express using the sentence—would have been false if the English word ‘killed’ had meant ‘begat’?

³ For a valuable discussion of the notion of the analytic in relation to the conceptual, see M. Giaquinto, ‘Non-Analytic Conceptual Knowledge’, *Mind* 105, 418 (1996), 249–68. One of his major conclusions bears on the status of such cases as the proposition that all vixens are female: What the liberated position [Quine’s, freed of behaviorism] maintains is that any belief may be rationally rejected in the light of future findings; what it has to accommodate is that some beliefs may be rationally retained even when their customary linguistic expressions become unacceptable. These [positions] are not inconsistent.

(p. 266)

applied in our contemplating or reflecting on certain a priori truths, can yield both situational justification—hence justification for holding beliefs of them—and actual justified beliefs of them. Clearly, reason can also yield knowledge of them.

The possibility of empirical necessary truth

It is one thing to say, with the classical view, that every a priori truth is necessary; the thesis that every necessary truth is a priori is less plausible. Consider the truth that sugar is soluble in water. Ordinarily this is thought to be a law of nature and as such something that must (of necessity) hold. Yet it is not self-evident and apparently not even broadly a priori: one could adequately understand it without thereby being justified in believing it, nor does it seem to follow self-evidently from anything self-evident. Indeed, it seems to be the kind of truth that can represent an empirical discovery. Proponents of the classical view would maintain that the necessity in question is not “logical” in the sense of absolutely precluding falsehood, but *nomie* (from the Greek *nomos*, for law), in roughly the sense characterizing laws of the natural world as opposed to every possible world or situation.

It does appear that we can clearly conceive of a lump of sugar’s failing to dissolve in water, whereas we cannot clearly conceive of something that is (in overall shape) both round and square (if this is conceivable at all). But perhaps once the idea of solubility in water is properly qualified (in ways sketched in Chapter 12), there may no longer seem to be any more than a difference of degree between the two cases. I doubt that the difference is only one of degree, but let us leave the matter open and proceed to cases that pose a greater challenge to the classical view.

The truth that gold is malleable is arguably more basic to what gold is than solubility in water is to what sugar is. Is it even possible for something to be gold without being malleable? Compare the question whether a vixen could turn out to be male. This also seems impossible, but one difference is that whereas there are good ways of identifying specimens of gold without selecting them partly on the basis of malleability, there are no comparably good ways of identifying vixens without selecting them partly on the basis of being female. Still, even classical theorists grant that taking the proposition that gold is malleable to be necessary does not self-evidently commit one to considering it analytic. Critics of the classical view will maintain that it is not obvious that a specimen of gold could turn out to lack malleability, yet it is equally far from obvious that adequately understanding the proposition that gold is malleable is sufficient to justify it.

If we move to a theoretical identification statement, such as that water is H₂O, it seems even less likely that we have a proposition that is contingent rather than absolutely necessary, yet it also appears that the proposition is not a priori. The basis of our knowledge of it is confirmed

scientific theory, not understanding. To be sure, there is “heavy water,” but its existence bears on the kind of hydrogen atom, not on whether water of the everyday kind is necessarily H₂O. In any case, a different kind of example also strongly supports this conclusion that some necessary truths are empirical. This time we turn to the domain of biology.

Essential and necessary truths

As the identity of human beings is normally understood, who they are is essentially tied to their parents. Is it possible that *I* might have had (biologically) different parents? Surely anyone otherwise like me but born of different parents is only a fortuitously identical “twin.” Here, then, is an empirical proposition (that I am the son of R and E) which is apparently necessary.

Notice, however, that the proposition that I have the parents I do is singular and existential, implying the existence of the particular thing it concerns (me), whereas the clear cases of necessary truth we have considered are all general and non-existential. To say that nothing is both round and square, for instance, does not entail that there is anything round or square: it says roughly that anything which is round is non-square (and vice versa), and it would be true even if all the round and square things in the universe had been destroyed (and presumably even if there never had been any except perhaps in the mind of someone contemplating creating them).

What a proponent of the classical view might say of the parentage case is that the proposition that I have the parents I do is an *essential truth*—one attributing to a thing a property absolutely essential to it, roughly in the sense that it could not exist without it—but not a necessary truth. The idea is roughly this: a necessary truth holds in any possible world or situation; an essential truth holds in, but only in, those possible worlds or situations in which what it is about exists.⁴

⁴ The terminology of possible worlds traces especially to Gottfried Wilhelm Leibniz and has been influentially discussed in relation to a number of the issues concerning necessity and the a priori by Saul Kripke in *Naming and Necessity* (Cambridge, MA: Harvard University Press, 1980). Kripke offers a different kind of example of empirical necessities: true identity statements formed using proper names, as in ‘Hesperus is identical with Phosphorus’ (both being names of Venus). He also argues, using the example of the standard meter stick in Paris, that an a priori truth, say that the length of the standard meter stick in Paris at time *t* is 1 meter, may not be necessary. This is a highly controversial example (more often attacked than defended), which I cannot discuss here. For detailed criticism, see Albert Casullo, ‘Kripke on the A Priori and the Necessary’, *Analysis* 37 (1977), 152–9. Casullo also usefully distinguishes knowledge of the *truth value* (truth or falsity) of a proposition from knowledge of its *modal status* (its being necessarily true or false, or contingently true or false), and argues that the

One trouble with this view is that even in a world without water, we could speak of water and H₂O as we can of what is round or square. Perhaps the best the classical view can do here is, first, to distinguish between two kinds of necessary truth, those applicable to entities that must exist, such as (arguably) numbers, and those applicable to entities that need not exist, and second, to argue that the former truths are a priori. The idea might be that necessary truths are grounded in the nature of things, and that the nature of the kinds of things that must exist is knowable through the use of reason. The nature of water must be discovered by scientific inquiry; that of the abstract property of roundness is apparent to adequate reflection.

The idea that necessary truths are grounded in the nature of (the relevant) things has some plausibility. At best, however, it does not in any obvious way apply to purely formal necessary truths, such as that if some *As* are *Bs*, then some *Bs* are *As*, where *A* and *B* are variables and do not stand for anything in particular (they figure in indicating the form of the truth in question but provide no content).

Necessity, apriority, and provability

There is, moreover, a further objection to extending the idea to imply the apriority of all necessary truths. A theorem (in one sense of the term) might follow from a necessarily true proposition and thereby be a necessary truth—as what follows from a necessary truth is itself necessarily true—yet not be a priori because there is no way to know it simply through adequately understanding it or through adequately understanding its entailment by self-evident steps from something that is self-evident. We must not simply assume that every such theorem is self-evidently entailed by a *self-evident* proposition, or that some proof of it must proceed by *self-evident* steps from a self-evident proposition. This assumption is far from obvious and not self-evident, and the classical view must establish it by argument. It is not clear that a cogent one can be found.

It should be stressed, however, that although a provable proposition need not be self-evident, a self-evident proposition may be provable. Self-evident propositions are knowable *without* proof, on the basis of adequately understanding them, and hence are not, as are many theorems, *premise-dependent*. But many can be proved, and some may need proof in order to be accepted by some people.⁵

classical view could be mistaken in holding that the truth value of necessary propositions is always knowable a priori yet correct in holding that their modal status is knowable a priori.

⁵ Many philosophers have taken self-evident propositions to be unprovable, e.g. W.D. Ross (*The Right and the Good*, Chapter 2), apparently following G.E. Moore and others. A simple counter-example is the proposition that if *p* entails *q* and *q* entails *r*, then *p* entails *r*.

Moreover, even apart from those points, the only possible proof by self-evident steps from a self-evident axiom might be long; this would put the theorem a long inferential distance from the self-evident axiom(s). Granted, such a theorem would still be *provable* from what is self-evident. But simply being thus provable (yet not self-evident) entails only being what I call ultimately a priori. That status is consistent with the possibility that, for finite minds, knowledge of the proposition depends on memory. The status is thus not sufficient for an uncontroversial kind of apriority.

It appears, then, that there can be necessary truths knowable only through the work of empirical investigation or of arduous mathematical proof of a kind that cannot ground what we might call strictly a priori knowledge. Those truths, to be sure, might be both provable and knowable just on the basis of a use of reason—though knowledge based on a long proof also seems to depend on memory. Not just any use of reason, however, qualifies knowledge reached through it as a priori.

From the falsity of the classical thesis that every necessary truth is a priori, it does not follow, of course, that the classical view is mistaken in positing synthetic a priori knowledge or in claiming that every a priori proposition is necessary. (See Figure 6.1 for a brief representation of the classical and revised views of the a priori.)

Reason, experience, and a priori justification

Reason—conceived roughly as our mental capacity of understanding, especially in conceptual reflection or in inference—is a basic source of belief, justification, and knowledge. Like introspective consciousness and unlike

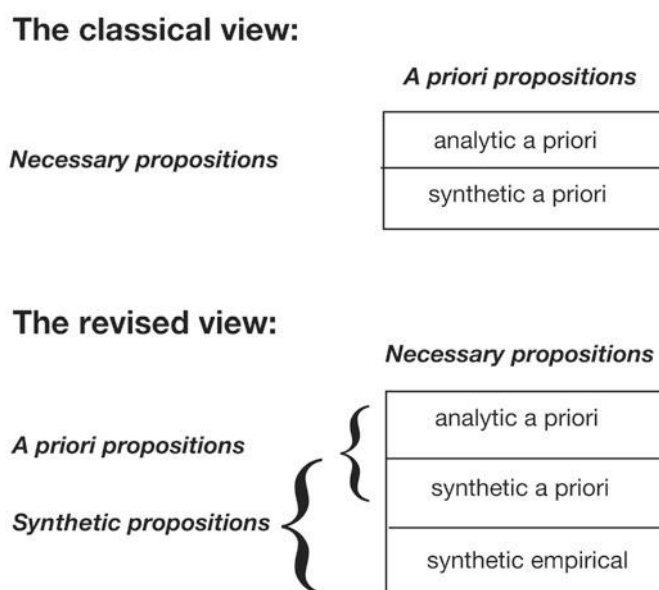


Figure 6.1 The a priori, the analytic, and the necessary.

perception and memory, it is an *active* capacity, in that we can, within limits, employ it successfully at will. I can, simply because I want to, reflect on logical and mathematical

propositions. But although I can look around me just because I want to, whether I perceive anything depends on there being something there: trees and roses and books are not available to the eye in the same unfailing way that concepts and numbers are available to the mind. Through reflection on the huge range of objects of thought, we can acquire a vast amount of justified belief and significant knowledge.

To maintain that there is a priori knowledge and justification does not commit one to denying that reason has a genetic dependence on experience. Reason yields no knowledge or justified belief until experience, whether perceptual, reflective, or introspective, acquaints us with (or develops in us) concepts sufficient for grasping a priori propositions. But despite this genetic dependence of reason on experience, in one way reason may be an even firmer basis of justification and knowledge than experience. If experience is the ground from which reason grows, it is not the sole determinant of the range or power of reason. The view from the top of the tree may be more comprehensive than the view on the ground.

A priori beliefs

The notion of the a priori is not commonly applied to beliefs, but it should be clear from what has been said not only that it has a significant application to them but also that apriority on the part of a belief tends to indicate some degree of justification. The following plausible *principle of justification for a priori belief* is a partial indication of the justificatory power of reason: *normally, if a rational person believes a proposition solely on the basis of (adequately) understanding it—believes it in a strictly a priori way—this belief is prima facie justified.*⁶ In the typical cases in which this applies, the proposition, upon comprehending consideration by a rational person, will intuitively seem to the person to be true. Such an *intuitive seeming*—which for some philosophers is the primary element designated by ‘intuition’—is a source of prima facie justification. We may leave open whether this, rather than the understanding in

⁶ Two comments are needed here. First, it might be desirable to widen the characterization to allow beliefs based *at least predominantly* on understanding the proposition in question (which requires understanding the concepts figuring in the proposition); but I want to avoid here the complications that arise from considering multiple bases; thus I shall not generally qualify ‘based on’ and similar terms. The main points in question will hold if it is taken as equivalent to ‘essentially based on’. Second, although the relevant beliefs might be thought to be *always* prima facie justified, there is at least one difficulty with this: perhaps there could be an abnormal case of a kind that prevents *any* justification from arising. This is not obviously possible, since if understanding is a sufficient basis for the belief, that might arguably carry some degree of justification. In any case, the normality formulation is significantly strong.

question, is the main source of the person's justification when the proposition in question is not self-evident. Plainly, however, the intuitive seeming presupposes at least a minimally adequate understanding of the proposition.⁷

There is a counterpart plausible epistemic principle—call it a *principle of knowledge for correct a priori beliefs*—to the effect that normally, if a rational person believes a true proposition in the a priori way just described, this belief constitutes knowledge. Believing in this a priori way is appropriate to (and typical for) beliefs of a priori propositions (though they may also be believed on the quite different basis of testimony), but it does not entail that the object even of a true a priori belief is a priori or a necessary truth.

It may also be true that normally, if one believes a proposition solely on the basis of one or more premises that self-evidently entail it and are themselves believed in the a priori way just described, this belief is prima facie justified. Again, such a proposition need not be a priori, but this principle is highly appropriate to what is a priori in the broad or the ultimate sense—not self-evident but either self-evidently entailed by something that is, or provable by self-evident steps from a self-evident proposition. What the principle expresses is the idea that normally self-evident entailment transmits the kind of justification that is based solely on understanding: specifically it carries that justification across a self-evident entailment. Hence, normally, if you believe a proposition on the basis of believing, with this kind of justification, a second one which self-evidently entails the first, then your belief of the first is also justified.

If these principles seem too permissive, note that we do not normally believe propositions in the strictly a priori way in question unless they are a priori and thus *can* be known on the basis of understanding them. We normally have no tendency whatever to believe, solely on the basis of understanding them, propositions indicating the state of the weather or describing the objects in our environment or the well-being or plans of others. Philosophers commonly say of such propositions that we cannot “determine a priori” (or tell or know a priori) whether they are true, and here ‘a priori’ designates an a priori way of believing rather than the status of the propositions in question. Compare how much we believe on the basis of perception, memory,

⁷ The view that phenomenal seemings (including perceptual as well as intuitive seemings) suffice for justification is commonly called *phenomenal conservatism*. The position is defended by, e.g., Michael Huemer in *Skepticism and the Veil of Perception* (Lanham, MD: Rowman and Littlefield, 2001). For critical discussion of the view see Matthias Steup, ‘Internalist Reliabilism’, *Philosophical Issues*, 14 (2004), 403–24.

and introspection; not only is this far more than is normally believed on the basis of conceptual understanding, it is also quite different in the kind of grounding of the resulting beliefs.⁸

Loose and strict senses of ‘a priori justification’ and ‘a priori knowledge’

So far, I have been speaking of knowledge and justification arising from believing in a strictly a priori way. This is not necessarily a priori knowledge or a priori justification, just as not everything perceptually believed is perceptual knowledge or perceptually justified. When knowledge or justification that arises from believing in an a priori way is not strictly speaking a priori, one might still call it a priori knowledge or a priori justification in the loose sense. Let us consider justification first.

Consider the proposition that people tend to feel offended when they are insulted. This is vague, but not too vague to enable us to see that it is not an a priori truth (it seems empirically true or false, since it concerns what psychological reaction a kind of conduct in fact tends to elicit). Still, imagine someone who thinks that insulting someone self-evidently entails being offensive to the person and that feeling offended is necessarily appropriate to what is offensive and tends to occur when one is insulted. Such a person might argue that, on the basis of understanding it, we can believe the proposition that people tend to feel offended when insulted, and that we may, on this basis, be justified in believing that. If one might be so justified, then we might speak of a priori justification in the loose sense. We may also say that the belief itself is a priori in the loose sense, since it is grounded in an a priori way: if it is not grounded in the strictly a priori way (based solely on an adequate understanding of the proposition), the belief is at least held in *an* a priori way—it is based solely on an understanding of the proposition. Just as a perceptual belief can be justified and false (as when one first sees a straight stick half submerged in water and thinks it is bent), this belief can be also.

Another case of a priori justification in the loose sense can occur when, although one believes a proposition that *is* a priori, one believes it on the basis of an *inadequate* understanding of it. This is still believing it in an a priori way, however, as the basis of one’s belief is one’s understanding of the content of the proposition. But it is not believing in a strictly a priori way, as that requires adequate understanding. One might, for instance, overlook a

⁸ The quantitative comparison may be challenged by those who think we have infinite sets of mathematical beliefs (e.g. that 2 is even, 4 is even, etc.) and beliefs based on others by trivial operations, such as forming new beliefs by adding an ‘or’, as when, given my belief that I am seated, I form the belief that either I am seated or I am flying to the moon. That this conception of belief is mistaken will be argued in Chapter 9, which also notes relevant literature. In any case, the contrast I am drawing here would be adequately strong even without its quantitative dimension.

subtlety or confuse one notion with a similar one, such as believing a proposition and being disposed to believe it. Suppose that, on the basis of my understanding of it, I believe a mathematical theorem that is a priori in the broad sense. Suppose further that this understanding, although inadequate, is not unreasonable (say because it represents a plausible though subtly misguided interpretation of the theorem). Then my belief may be justified. This is a second case of a belief held in an a priori way and exhibiting a priori justification in the loose sense. Here the proposition *is* a priori, but the justification, though based on a reasonable understanding, is defectively grounded. In the other case of a priori justification in the loose sense, the belief is also held in an a priori way, but the proposition is not a priori.

If a belief that is a priori justified in the loose sense could constitute knowledge, we might speak of a priori knowledge in the loose sense. But as both our examples of such justification exhibit a *defective* (though reasonable) understanding in the basis of the justification, they are not plausibly considered instances of knowledge. Beliefs resting on a basis embodying conceptual error are not plausibly taken to constitute knowledge, even if the conceptual error is justified.

Suppose, however, that I believe a mathematical theorem on the twofold basis of a self-evident axiom (which I adequately understand) and the justified true belief that the theorem is entailed by the axiom (we may assume the second belief to be grounded wholly in my mathematical knowledge and understanding). Suppose further that the theorem is entailed, but not *selfevidently* entailed or self-evident.⁹ It is not self-evidently entailed because adequately understanding the conditional proposition that if the axiom holds then the theorem does is not sufficient to justify believing this conditional. To see the truth of this conditional proposition, I must note several intermediate steps from the axiom to the theorem, so that I do not see its truth (or the entailment it expresses) on the basis of adequately understanding the proposition. Still, the entailment is provable, and by proving it I may know the theorem. This is surely a broadly a priori way of knowing it, and the proposition itself is, in my terminology, ultimately a priori. Correspondingly, we may speak of a priori knowledge in the loose sense here. The knowledge is not a priori in the *strict* sense because the theorem is not a priori, even in the indirect sense. By valid deduction, I can prove it using the a priori procedures illustrated, but

⁹ As indicated in explicating self-evidence, self-evident entailment (as opposed to entailment simpliciter) is not transitive. If it were then if an axiom, *A*, self-evidently entailed a theorem, which self-evidently entailed another, and this held for 100 steps to theorem *T*, the proposition that if *A*, then *T* would have to be self-evident. But reflection on axiomatic systems shows that this is not so.

such provability of a proposition is not sufficient for its being self-evident or even knowable a priori in the strict sense of that phrase.

By contrast, a priori knowledge in the strict sense is not only more than true belief held in a strictly a priori way; it is also more than knowledge of an a priori proposition. I could know a simple logical truth on the basis of testimony, even if it *can* be known on the basis of understanding alone. This would be knowledge of an a priori proposition that is not even a priori knowledge in the loose sense. Its grounding (wholly) in testimony does not prevent its being knowledge, but testimonial grounding of a belief does preclude its constituting a priori knowledge of any sort. Again, the analogy to perception is helpful. Just as perceptual knowledge is knowledge based on perception and thus more than knowledge about a perceptible, a priori knowledge is knowledge based on understanding and thus more than knowledge of an a priori proposition.

To achieve a more specific characterization of a priori knowledge we do well to begin with a crucial constituent of it—*a priori justification*. In the strict sense (the sense that mainly concerns us), this is justification based directly or indirectly on understanding a self-evident proposition (the justification will be only situational if the person in question does not believe the proposition). A priori justification (in the strict sense) thus divides into two kinds, depending on whether it is directly or indirectly based on understanding some self-evident proposition. (1) A priori justification for believing a proposition is based *directly* on such understanding when the justification depends only on understanding that proposition itself. This is a priori justification in the strict and narrow sense. (2) A priori justification for believing a proposition is based *indirectly* on such understanding when the justification depends on *also* understanding a self-evident entailment of that proposition by some self-evident proposition. This is a priori justification in the strict but broad sense.¹⁰

If this outline is correct then *a priori knowledge*, in the strict sense, might be plausibly taken to be knowledge that is based, directly or indirectly, in the way just indicated, on understanding one or more self-evident propositions. There is, then, in addition to a division between a priori justification and a priori knowledge in the strict and loose senses, a division between direct and indirect (non-inferential and inferential) a priori justification, and direct and indirect a

¹⁰ This implies that even if one justifiedly believed, and knew, an a priori proposition on the basis of a self-evident axiom, but *not* on the basis of a self-evident entailment of the former by the latter (say, by a chain of non-self-evident but valid inferences instead), the justification and knowledge would still not be a priori in the strict sense—though they might be very close to it.

priori knowledge, in both senses.¹¹ (Figure 6.2 represents the four dimensions of the a priori we have been exploring.)

The power of reason and the possibility of indefeasible justification

We have seen that, and perhaps to some extent how, the justificatory and epistemic power of reason enables it to ground a priori knowledge and a priori justified beliefs of a priori propositions. We have also seen its power to provide such knowledge and justification, in loose senses of ‘a priori knowledge’ and ‘a priori justification’, for propositions that are not a priori but invite belief on the basis of their conceptual content. These senses are especially appropriate for propositions that are provable from what is a priori. Is the power of reason such that it provides for something that even introspective experience apparently does not—indefeasible justification? It will help to focus on a concrete example.

There may be truths of reason that are so simple and luminously selfevident that they *cannot* be unjustifiably believed, at least at a time when one comprehendingly considers them. Could one comprehendingly consider, yet unjustifiably believe, that if Shakespeare is identical with the author of *Hamlet* then the author of *Hamlet* is identical with Shakespeare? This is doubtful. One could perhaps believe it partly on the basis of a bad argument; if one did, there would be something unjustified in the *way* one believes it. But if one believes it, one has some understanding of it, and if one understands something this simple to the extent required for believing it, it is at best difficult to see how one could fail to have an understanding of it adequate to yield

¹¹ Three comments are needed here. First, for one’s justification to be a priori, at least in the strict sense, it must not depend (epistemically) on memory. Thus, suppose there are too many self-evident premises for me to hold in mind at the same time as I understand the proposition that my conclusion follows from them. Or, suppose there are so many self-evident steps linking a single self-evident premise to a conclusion that I cannot hold them all in mind in a way that assures understanding the ultimate entailment of that conclusion by the premise. Then *my* justification for believing this conclusion is not a priori (though I may be able to prove the conclusion). Second, and related to this, so long as there can be a mind sufficiently capacious to understand the entire set of propositions in question (the premises and the proposition that if they are true, then the conclusion is also) without dependence on memory, a priori justification for *someone’s* believing the conclusion is possible. Third, as in this book generally, I regard the justification referred to as defeasible (a notion considered in this chapter and again in Chapter 11) unless otherwise specified.

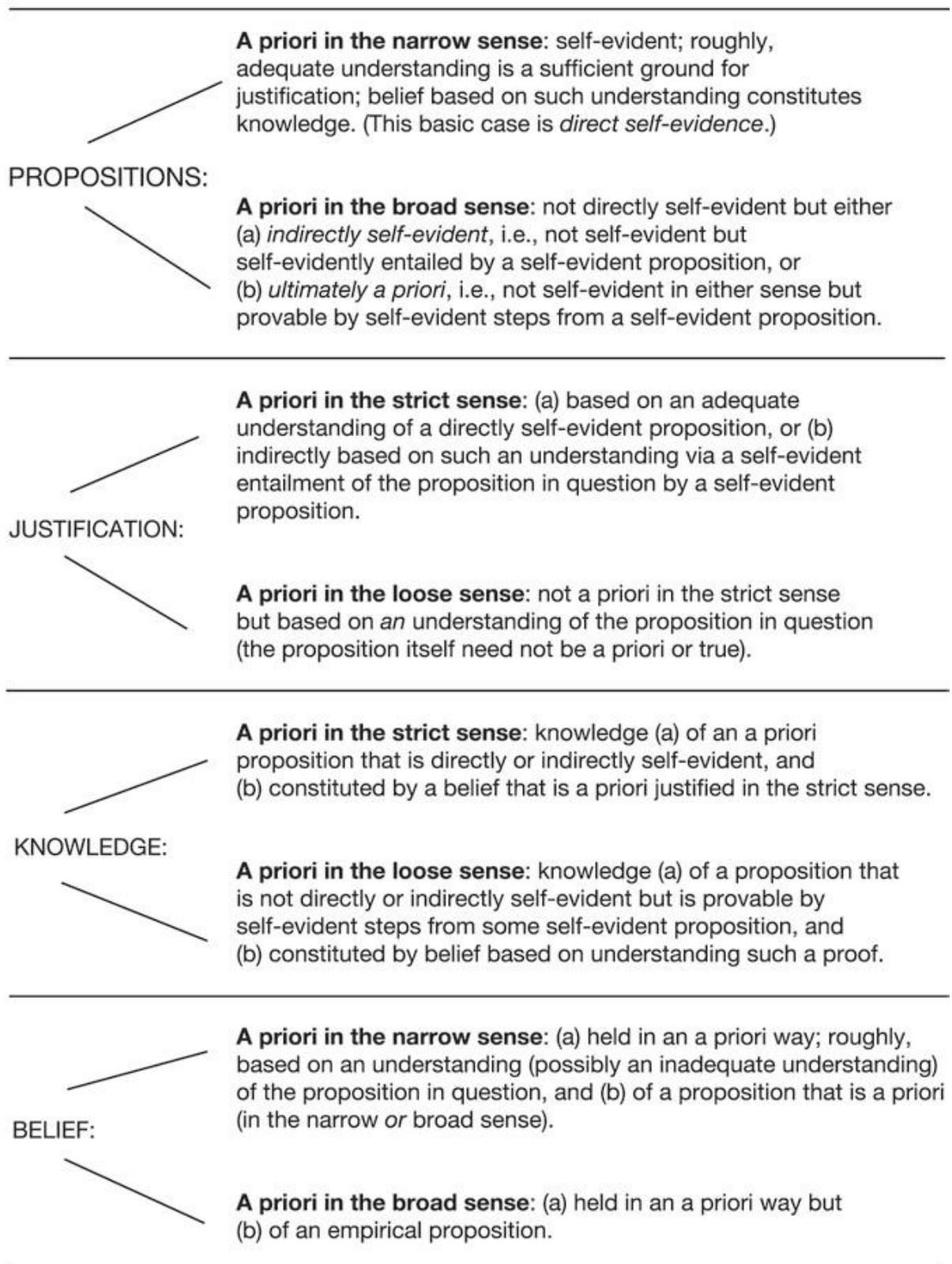


Figure 6.2 Outline of a four-dimensional conception of the a priori.

justified belief of it, at least at a time when one comprehendingly considers it. Perhaps, then, a belief held under these conditions would be—or at least could be—indefeasibly justified.

If there are propositions like this then there can apparently be indefeasible justification: justification so secure that those possessing it cannot be unjustified in believing the proposition

in question.¹² But not all a priori justification (even in the strict sense) should be considered indefeasible. Justification for believing even certain logical truths can be defeated by plausible skeptical arguments.

Perhaps, moreover, not all presumptively indefeasible justification need be a priori. Consider my justification for believing that I exist, a proposition that is neither a priori nor necessary but is arguably such that I cannot unjustifiably believe it. If there is indefeasible justification, this is important in dealing with skepticism (as Chapter 13 will), but plainly such justification is not a characteristic mark of either a priori or empirical justification. If, on the other hand, there is no indefeasible justification (something I leave open here), at least our understanding of simple self-evident truths of reason gives us both very secure justification for believing those truths and, when we do believe them on the basis of adequately understanding them, knowledge of them.

In summarizing some apparently warranted conclusions regarding the truths of reason, we might focus on how much seems plausible in the classical view that the a priori is coextensive with the necessary but includes the analytic as a subcategory: that any proposition that is a priori is necessary and conversely, but not every a priori proposition is analytic. Apparently, it is true that not all propositions knowable on the basis of adequately understanding them are analytic. The classical view seems correct in its claim that not everything a priori is analytic. It seems mistaken, however, in the idea that every necessary proposition is a priori, though probably not in the plausible idea that every a priori proposition is necessary.

More positively, in addition to our having a priori knowledge of self-evident propositions, on the basis of such knowledge we may know many truths that are at least ultimately a priori: not themselves self-evident but self-evidently entailed by, or provable by self-evident steps from, some proposition that is. Many of our beliefs, most clearly certain logical and mathematical ones, are grounded in understanding of their content. Reason, then, as manifested in our capacity for understanding, is one of the basic sources of belief, justification, and knowledge; and, in a way that the other three sources we have explored do not, it enables us to know truths that hold not only in the world of our experience but also in any circumstances whatever.

¹² It might be argued, however, that if one believed such a simple self-evident proposition *essentially* on the basis of a bad argument, one would not *justifiedly* believe it, though, by virtue of adequately understanding it, one would still *have* a justification for believing it which simply fails to serve as a sufficient ground of one's belief. I leave open whether one could believe such a proposition both fully comprehendingly and essentially on the basis of a bad argument (as opposed to one's being only influenced by such an argument).