

Chapter 25

THE A PRIORI

Christopher Peacocke

1. Introduction

The existence and nature of the a priori are defining issues for philosophy. A philosopher's attitude to the a priori is a touchstone for his whole approach to the subject. Sometimes, as in Kant's critical philosophy, or in Quine's epistemology, a major new position emerges from reflection on questions that explicitly involve the notions of the a priori or the empirical. But even when no explicit use is made of the notion of the a priori in the questions addressed, a philosopher's methodology, the range of considerations to which the philosopher is open, his conception of the goals of the subject, his idea of what is involved in justification—all of these cannot fail to involve commitments about the nature and the existence of the a priori. So understanding the a priori is not only of interest in itself. It is also essential for self-understanding, if we are to understand ourselves as philosophers. More specifically, issues about the a priori lie at the intersection of the theory of justification and the theory of meaning, or the theory of intentional content. Whatever the truths about the existence and nature of the a priori, they should in one way or another be explained by the theory of justification and the theory of content.

I distinguish five general questions about the a priori which must be addressed if we are to reach a sufficiently general and deep understanding of the notion:

1. How is the concept of the a priori to be characterized? What is the correct form to be taken by any true statements about what is a priori?
2. What is the scope or extent of the a priori?
3. What is the source of a priori status?
4. The existence of the a priori has been regarded as incompatible with some compulsory kind of naturalism. Is this so, and are naturalistically motivated surrogates for the a priori adequate?
5. What is the philosophical significance of the a priori, and what further philosophical tasks does it pose?

I will advocate specific answers to each of these questions. So this will not be a neutral discussion. Nor will it be a discussion of the history of thought about the a priori, a rich topic which merits independent discussion (see Coffa 1991; and for a historical discussion bearing on the relations between Frege and Kant, see Burge 2000). But I will try to outline some competing current theories of the a priori, and to do so in ways that are relevant to those who wish to pursue the history further.

2. Characterizing the A Priori

There is a diverse and structured family of notions of the a priori. This necessitates a certain amount of stage-setting in order to formulate the fundamental issues.

One core notion of an outright a priori belief is this: it is a belief for which the thinker's operative justification or entitlement is independent of the content or kind of any of his particular perceptual experiences. Derivatively, we can also speak of a justification or entitlement as being outright a priori, and of a content or proposition as being outright a priori. A thinker's justification or entitlement in forming a particular belief is a priori if it is independent of the content or kind of any of the thinker's particular perceptual experiences. A content or proposition is a priori if it can be known in virtue of a thinker's having an a priori justification or entitlement for it.

A thinker's belief in a generalization like "All bodies are extended" (Kant's example) or the logical principle "If A and B, then A" are paradigmatic cases of the a priori. The belief "That book has a red cover", based on visual perception of the book's cover as red, is paradigmatically a posteriori. This distinction is, however, only one of several in which one may have a legitimate theoretical interest. Diverse theoretical interests have quite properly motivated different theorists to generalize or precisify the characterization of the a priori in different directions.

One distinction of theoretical interest is the difference between perceptual experience and other mental states. If that is the distinction of interest to a theorist, then the fact that a thinker's operative justification or entitlement for a belief is the content or kind of some conscious state other than perceptual experience will certainly not prevent the theorist from classifying that belief as a priori. This was precisely Kant's position on arithmetic. Kant held both that arithmetic is a priori, and that our knowledge of it relies on our faculty of intuition, which, according to Kant, we employ in ordinary arithmetical calculation. Kant (1997: B15-6) said that this is how he reaches the judgement " $7+5=12$ ":

For I take first the number 7, and, as I take the fingers of my hand as an intuition for assistance with the concept of 5, to that image of mine I now add the units that I have previously taken together in order to constitute the number 5 one after another to the number 7, and thus see the number 12 arise.

So Kant was interested in the property of having a non-perceptual justification, even if this justification involves other conscious states. He was interested, we may say, in the property of being a priori in the non-perceptual sense. Kant also held that we could never derive the necessity of arithmetical propositions—nor the necessity of a priori propositions more generally—from experience. We will return later on to assess this view.

When one judges that one is in pain because one is experiencing the pain, or that one is in an enthusiastic mood because one is, consciously, in an enthusiastic mood, these are not judgements whose operative justification or entitlement depends on the content or kind of one's perceptual experiences. Yet there is an equally legitimate and different notion of the a priori on which they would not be classified as a priori. This is the notion one would use when one's concern is not with the distinction between perceptual experiences and everything else, but rather with a second distinction: the distinction between all conscious states, and everything else. The salient notion of the a priori under which such judgements as "I am in pain" and "I am in an enthusiastic mood" are not a priori is one under which we generalize from perceptual experience to all conscious states in the original paradigm. Under this more broadly characterized notion, a belief is outright a priori if

the thinker's justification or entitlement for it is independent of the content or kind of any of his conscious states. I will call this "being a priori in the broad sense".

A third distinction that may exercise a theorist is the boundary between that which is justified by a specific, particular perceptual experience, and that which is justified by perceptual experience in general. Our belief that our perceptions have spatial representational content is not dependent upon any one perceptual experience, but is supported by all our experiences. One could equally introduce a variant of the a priori to mark this distinction. Truths captured with that variant would equally be a legitimate object of investigation and explanation. In this third case, we can speak of being a priori in the non-specific sense.

The fact that a belief is a priori in the non-perceptual sense, or in the broad sense, does not mean that it is of a kind about which the thinker cannot be mistaken. We make arithmetical and logical mistakes. Similarly and correlatively, an a priori belief need not be certain. Nor need an a priori content be true purely in virtue of content, nor a sentence expressing it be true purely in virtue of meaning. I will below outline a theory which acknowledges a wide range of a priori truths, but on which they are true in virtue of their standard disquoted truth conditions, just like any other truth. (For critical discussions of the idea of truth purely in virtue of meaning, from both friends and opponents of the a priori, see above all Quine 1976b, and the particularly formidable 1976a, and for a more recent discussion, Harman 1996. For more recent critical discussion of the idea of truth purely in virtue of meaning from friends of the a priori, see Peacocke 1993, Boghossian 1996, and Bonjour 1998).

What of the relation of a priori status to necessity? Saul Kripke (1980) and David Kaplan (1989), and others following in their wake, gave convincing examples of the two-way independence of the a priori and metaphysical necessity. Belief in all of the following contents can be a priori, even though the contents are not metaphysically necessary: "If I exist, and I am located somewhere, I am here", "If something is uniquely F, then the actual F is F", "If **p**, then Actually **p**". In the other direction, the following are metaphysically necessary, but cannot be known a priori: "Water contains hydrogen", "Tully is Cicero".

Does this two-way independence completely undermine Kant's idea that there is a link between the a priori and necessity, and that the necessity of something cannot be known from perceptual experience? The above examples are indisputable, and Kant's formulations are indeed overly general. Nonetheless, the spirit of Kant's idea survives in at least three respects. First, nothing in these examples establishes that necessity can be learned from perceptual experience. Experience is necessary to establish that Tully is Cicero. To move from that identity to the necessity, however, we need the principle of the necessity of identity. That principle is a priori, and is not learned from perceptual experience.

The second respect in which Kant's idea survives is that it is arguable that the source of metaphysical necessity is always fundamentally a priori. There are theories of the truth conditions of modal statements according to which necessity is a matter of being true under all assignments which meet certain constraints on possibility, the so-called "Principles of Possibility" (Peacocke 1999, ch. 4). These Principles of Possibility include, for instance, the requirement that any genuine possibility involving a concept must respect the same rules for assigning semantic values to concepts as govern that concept's semantic value in the actual world. These fundamental Principles of Possibility all seem to have an a priori status. The a posteriori necessities seem always to result from taking some fundamentally a priori

necessity, like the necessity of identity, and then inferring from it, together with empirical but non-modal information (“Tully is Cicero”), some modal proposition. We do not seem to find cases of the necessary a posteriori that cannot be explained in this fashion.

A third source of support for the Kantian idea is that there is a variety of necessity which is much more closely connected with many cases of the a priori than is metaphysical necessity. This more closely connected variety is the property of a content of holding in the actual world, whichever world is labelled as the actual world. In the helpful terminology of Davies and Humberstone (ほやもべ), this is the property of holding “Fixedly Actually”. “Actually **p**” holds at a world in a model just in case **p** holds in the actual world of that model. “Fixedly **p**” holds at a world in a model just in case it holds at that world in any variant of that model which differs only in which world is labelled as the actual world. So “Fixedly Actually **p**” holds at a world in a model just in case **p** holds at the actual world of any variant of that model which differs only in which world is labelled as the actual world. The results of prefixing the propositions “The actual F is F” and ‘If **p** then Actually **p**’ with the operators ‘Fixedly Actually’ are true, even though the propositions so prefixed are not metaphysically necessary. None of the Kripke–Kaplan style examples cited above is a counter-example to the claim that what is a priori is Fixedly Actually true. We can then formulate the claim, still Kantian in spirit, that perceptual experience alone cannot tell one that a proposition is true in the actual world whichever world is actual. This reformulated Kantian claim is highly plausible.

When a belief is reached in a way that is both a priori, and guarantees that what is known is true in the actual world, whichever world is labelled as the actual world, let us say that the belief is **contentually** a priori (Peacocke 2004b). Within the general class of a priori beliefs, we can draw a further intuitive distinction. This is the distinction between those a priori beliefs which are true in part because the thinker is making a certain judgement, and those whose truth is independent of whether the thinker is making the judgement.

Consider the judgement “I am thinking”, or “I hereby judge that London is larger than Paris”. In both cases, the judgements can be a priori in the non-perceptual sense. They can also be a priori in the broad sense. The judgements can be made not as reports on the contents of the thinker’s current stream of consciousness, but can be made by a thinker whose grasp of the concepts involved allows him to appreciate that his making the judgements ensures their truth. These beliefs “I am thinking” and “I hereby judge that London is larger than Paris” are not, however, true in the actual world whichever world is labelled as the actual world. The world labelled as actual might have been one in which the thinker never existed, or is not thinking at the time in question, or is not making that judgement about London and Paris. That is, these beliefs “I am thinking” and “I hereby judge that London is larger than Paris” are not contentually a priori. They may be regarded as **judgementally** a priori, in the sense that they come to be made in an a priori way, and will be true in any world in which they come to be made in that way. But this is a much weaker property than being contentually a priori.

The phenomenon of the contentually a priori poses much more of a theoretical challenge than the judgementally a priori. The explanation of the judgementally a priori status of “I am thinking” is not hard to seek. A judgement with this content is self-verifying, and is establishably so given the nature of the concepts involved. The general phenomenon of the contentually a priori certainly does not have that explanation, and its range far outstrips such relatively unproblematic examples as

“The actual F is F”, or “If **p** then Actually **p**”. Even logic, mathematics, and the abstract sciences, let alone the wider range of examples we will consider in the next section, cannot be explained in the way in which we would account for the merely judgementally a priori.

The contentually a priori status of propositions in a given domain also strongly constrains an acceptable metaphysics for that domain. Here I signal just one such issue. If a known truth **p** about some given domain is contentually a priori, it seems that the property of truth in that domain could not be a mind-dependent matter, or at least not dependent upon any contingent propositions about minds. If there is some world in which those propositions about minds fail to hold, then if that world were actual, **p** would not hold there either. Hence knowledge of **p** could not be contentually a priori after all. This simple reasoning identifies just one of several points at which the significance of the a priori is not only epistemological, but metaphysical too (Peacocke 2001a, 2004c).

There are two last pieces of stage-setting before we turn to more substantive issues about the a priori. All of the above distinctions concern the outright a priori. There is also an important, and often neglected, relative notion. We can ask whether, given that a thinker is in a certain state **S**, he is justified or entitled in judging that **p** without any further reliance on the content or kind of his perceptual states beyond those included in **S**. The justification or entitlement in question need not be conclusive. When this condition on **S** and **p** is met, we can say that **p** is relatively a priori, given that the thinker is in state **S**. In an alternative terminology, we say that the transition from **S** to **p** is a priori. To illustrate: it might be argued that the transition to the perceptual-demonstrative content “That shape is square” from a perceptual state which represents that shape as square is an a priori transition. In the relativized terminology, that content is relatively a priori, given the thinker is in that perceptual state. Similarly it may be argued that “I am in pain” is relatively a priori given that the thinker consciously experiences pain. Neither of these contents is outright a priori in the broad sense; and the first is not outright a priori in the non-perceptual sense. It is, evidently, the notion of the relatively a priori, rather than the outright a priori, on which we need to focus when we are considering the epistemic status of transitions in thought from perception and other non-judgemental informational states to judgements.

Since relative a priori justification or entitlement need not be conclusive, we can take this as its canonical form:

State **S** a priori justifies or entitles the thinker in judging that **p**, in the absence of specific reasons for doubt.

Specific reasons for doubt would be evidence which suggests that one of the conditions holds under which being **S** is not sufficient for it to be the case that **p**. Use of this canonical form leaves open substantive questions of whether its true instances are derivative from some other kind of conclusive entitlement, or whether they are themselves fundamental. The form itself can be used by both parties to that discussion. In a longer treatment, we could modify the form to taken account of degrees of belief and a priori principles governing them.

3. The Scope of the A Priori

The range of propositions that are a priori is vast and varied. Even if we confine our attention to the outright a priori, the range of the a priori seems plausibly to include all of the following:

- The axioms and principles of logic, of mathematics, and of the other abstract sciences, such as set theory and category theory, are all plausibly a priori; as are
- the axioms of probability theory;
- the axioms of confirmation theory; and
- the principles of rational decision theory.
- The most fundamental principles of metaphysical necessity do not seem to be empirical.
- There are, famously, many a priori principles about the properties of colours: that no shade is both a shade of red and a shade of green; that orange is closer to yellow than it is to blue; and so forth.
- There seems to be a class of moral principles that do not require empirical evidence, but are a priori. This class seems to contain the principle that every conscious being has a prima facie equal moral claim; that causing avoidable suffering is wrong; that just institutions are, prima facie, better than unjust institutions. It is arguable that every true moral principle either is, or depends in part upon, some such a priori moral claims.
- Much of economics seems to have an a priori status. The proposition that an economy satisfying the specified conditions in some economic model will also display various other properties is frequently derived in a purely a priori way.
- Many true propositions of philosophy are apparently a priori, including apparently principles about the nature of particular concepts, objects, kinds, properties, and relations.

This list just scratches the surface.

The range and diversity of true a priori propositions places demands on any general explanation of the a priori. If any such explanation is possible, it must be sufficiently general to cover this range, and it has also to be sufficiently flexible to be capable of adaptation to the distinctive features of each of these many special kinds of case.

It is often clear that a proposition is a priori, while the nature of the justification or entitlement for belief in the proposition remains unclear. When this combination obtains, it is a task for a philosophical theorist of the a priori to explain what the justification or entitlement is. The task exists even for the a priori propositions of (relatively) clearly understood domains, such as that of logical and arithmetical knowledge. The model of derivation of a priori conclusions by a priori means from a priori axioms is a satisfying model for many examples. It is in the nature of the case, however, that this model cannot be applied to the primitive axioms themselves, nor to the primitive means of derivation. The question of how these are known a priori remains a lively subject of debate. The nature of the entitlement or justification is equally an issue for the striking phenomenon, which rightly so interested Gödel (1995a), of a thinker's ability to come to appreciate by a priori reflection upon a given domain new axioms which do not follow from those the thinker accepted hitherto. Indeed the axioms we currently accept will in many cases once have been new axioms, when a form of thought was already in use before its explicit axiomatization. The identification of the full nature of the entitlement that

sustains a priori knowledge, as opposed to its existence, is an open question in almost all the domains mentioned above.

The means by which we come to know outright a priori propositions in the above domains may involve any or all of the following: conversations and discussion with others; reading books which archive knowledge achieved many generations ago; our own workings-out on paper; musings and reflection on examples; computer simulations and computer proofs; and much else. Many in this array of methods involve perception at some stage or other. Does this fact undermine the status of knowledge so reached as a priori?

It does not. There is a distinction between what gives us access to the entitling conditions for a priori knowledge, and the entitling conditions themselves. Possession of what the thinker knows to be a proof (a tree-structure of contents) provides an a priori entitlement to accept a logical or an arithmetical proposition. Inscriptions, conversations, rough workings-out on paper may all help a thinker to appreciate that there is such a proof, and what it is. But these perception-involving activities merely facilitate: they are not the entitlement itself. Of two thinkers, one may discover a proof of a given proposition in his head, and the other may have to work it out on paper. The two thinkers may nevertheless have the same justification for their common conclusion. Only their modes of access to that justification differ. Respect for the distinction between a justification or entitlement on the one hand, and what makes it available on the other, is essential to a proper understanding of the a priori.

The distinction between an entitlement and what makes it available operates at the social level, as well as the level of the individual thinker. In his most recent discussion, after many years' consideration of the notion of the a priori, Philip Kitcher argues for what he calls the "tradition-dependence" of contemporary mathematical knowledge. He holds that this tradition-dependence is incompatible with that knowledge having an a priori status (Kitcher 2000, esp. 80-5; for the views of his earlier self, see his 1980). To say that a piece of knowledge is tradition-dependent is to say that its status as knowledge depends upon the history in the knower's society of such matters as the development and acquisition of various axioms and principles of reasoning, and the reliability of their developers' modes of thought. Whether someone now knows something can depend upon matters of intellectual history prior to his birth. The use of unreliable methods or fallacious reasoning in earlier generations could, Kitcher emphasizes, undermine the status of present beliefs as knowledge.

In my view, the friend of the a priori should agree with the thesis of the tradition-dependence of much mathematical knowledge; but he should also insist that it does not make the notion of the a priori inapplicable. It is an empirical matter which institutions, divisions of labour, and more generally psychologically characterized modes of acquiring, storing, and transmitting information result in beliefs for which an a priori warrant exists. This does not make the notion of an a priori warrant inapplicable. It means only that it is an empirical matter which conditions are conducive to the acquisition and transmission of beliefs for which such warrants exist. It is also an empirical matter which conditions are conducive to the acquisition and transmission of a priori warrants themselves.

Doubts about the applicability of the notion of the a priori can also flow from doubts about the very notion of an a priori warrant or entitlement itself. Philip Kitcher also argues that if we use only a defeasible notion of a priori warrant—what he calls the "Weak" conception—"We would have abandoned the traditional thought that a priori knowledge can prescribe to experience, that when we know something a priori we don't have to be concerned about what future experiences

may . . . bring' (2000: 77). Only an indefeasible conception of a priori entitlement will capture that function of the notion of the a priori (ibid.); the Weak conception 'abandons parts of the idea that a priori knowledge is independent of experience' (ibid.). This argument, which also influenced Kitcher's earlier writings on the subject, may seem compelling. Absolutely indefeasible entitlement is simply not to be had. There can always be some evidence that would rationally make us think we had made a mistake in believing something to be a proof. To have indefeasible grounds we would have to be infallible, and indeed to have conclusive grounds that we are so. So it may seem that in accepting there are a priori entitlements, we are committed either to something that is too strong, or that is too weak to be a philosophically interesting notion of the a priori. If Kitcher is right, we are committed either to infallibility, or else merely to defeasible entitlement that, he says, involves an empirical element.

The friend of the a priori should dispute both halves of this dilemma. The first step in doing so is to distinguish two kinds of defeasibility, which I will call **defeasibility of identification** and **defeasibility of grounds**. A ground for accepting a proposition can be conclusive even though our entitlement to believe that we have identified such a ground is defeasible. Identifying something as a conclusive ground is one thing; its being a conclusive ground is another. My confidence that something is a proof can be rationally undermined by the report of mathematicians whose competence I have reason to believe far outstrips my own. Nonetheless, a proof is a conclusive ground. Here we have defeasibility in respect of identification, but not defeasibility in respect of grounds.

By contrast, inductive evidence for a generalization, even evidence drawn from an extensive range of a wide variety of kinds of instance, is never conclusive. In this case we have defeasibility of grounds. If the generalization does not hold, that does not show that the inductive evidence did not hold. The corresponding conditional for proofs would not be true. If the last line of a sequence of propositions is false, it cannot be a sound proof.

With this distinction in mind, we can return to the claim that only indefeasible entitlements can capture a traditional notion of independence from experience, or can "prescribe to experience". Consider the case in which we have a genuine proof, but in which (as is arguably always so) we have defeasibility of identification. It is always possible that some mathematician tells us, mistakenly, that what we have is not a proof. It would then in those circumstances be reasonable for us to accept his word, and not believe that it is a proof. But how does this show that as things actually are we have not properly and knowledgeably identified the proof as a proof? It seems it does not; and if we have properly identified it as a proof, the proof itself provides an experience-independent derivation that its conclusion holds. Once again, we have to distinguish the nature of the entitlement from the question of what may be involved in identifying it as an entitlement. A notion of a priori warrant that displays defeasibility of identification need not import an empirical element into the entitlement for propositions that it counts as a priori.

What of defeasible a priori entitlements? Are they drained of philosophical interest on this approach? In my judgement, the relatively a priori character of some defeasible experience-based warrants is essential to a transition in thought being rational at all. If the supporter of the defeasible a priori is pressed by Kitcher for an explanation of the philosophical significance of these cases, his answer should be as follows. Defeasible entitlement is a notion that must be instantiated if

rational thought is to get started at all. Not all warrants can be empirical, on pain of regress. Acceptance of this point does not involve a commitment to infallibility, certainty, or indefeasibility. Kitcher himself (2000: 74) favours a purely reliabilist epistemology, and would find some place for defeasible a priori warrants in that reliabilist framework. By contrast, examples in the literature on epistemology seem to me to establish that pure reliability cannot capture the rationality required for a warrant or entitlement relation (BonJour 1985).

Kitcher was not the only one to argue that any philosophically significant notion of the a priori is not instantiated. One of the most-discussed and influential arguments of twentieth-century philosophy aimed to establish that nothing is a priori (or, in later versions, virtually nothing of philosophical substance). This was the argument of Quine's paper 'Two Dogmas of Empiricism' (1961). His argument started from the premiss that the meaning of a sentence, in so far as the notion is explicable at all, is to be characterized in terms of what would be evidence for the sentence's being correct. But, Quine continued, evidential conditions cannot in fact be associated with sentences one by one. Any piece of evidence is evidence for a given sentence only in the presence of various background conditions. Evidential conditions can be associated only with large classes of sentences. Almost any sentence can be rejected under some background conditions or other. The Quinean conclusion was that almost nothing is a priori.

At first glance, it may seem that Quine was targeting a rather narrow position, one that hardly exists today as a live philosophical position. He himself characterized the second dogma under attack in his famous paper as 'the belief that each meaningful statement is equivalent to some logical construct upon terms which refer to immediate experience' (p. 20). Virtually no one today has that of reductionist, phenomenalist belief. But if Quine's argument is sound, it works against a much wider range of positions than that of reductionism. If his argument is sound, it shows that any evidential theory of meaning—whatever notion of evidence it uses—implies that there is no possibility for a widely applicable and theoretically interesting notion of the a priori. Many current theorists of meaning would agree that evidential relations have some part to play in the explication of the meaning of certain sentences, even though they are not believers in a reductive phenomenism. So Quine's argument still presents a pressing challenge.

Only evidential theories of meaning received a serious consideration in 'Two Dogmas'. From 'Two Dogmas' through to his writings in the 1970s, Quine always held that any explication of meaning or content, in so far as it is possible at all, had to be given in terms of evidential relations (for a statement a quarter-century after 'Two Dogmas', see 1974: 38). But can meaning be exhaustively explained in terms of evidence, and is evidence always relevant to meaning?

We can identify three problems for evidential treatments of meaning. These problems can be formulated even before we turn to issues about the possibility of evidence-transcendent truth, which is also a challenge for evidential theories of meaning.

(i) The first problem is that of the informativeness of evidential relations. Understanding, even full understanding, of a sentence seems sometimes to precede any knowledge of what would be evidence for its truth. At a humble level, I have to work out, and work out from my understanding, and from my other background knowledge, what would be evidence that, say, my son has a French class this afternoon. At a more elevated level, it may be a great intellectual achievement to

work out what would be evidence for the hypothesis that there is a new kind of fundamental particle with certain properties. The hypothesis may be understood decades before anyone works out what would be evidence for it. Superstring theory in physics provides another example.

(ii) The second problem concerns the source of evidential relations. In cases in which the evidence for a sentence has to be worked out, and is not primitively written into the identity of its meaning, it seems that meaning must be what the evidence is worked out **from**, rather than consisting in the evidential relations themselves. There is a special problem here for the view that evidential relations are associated only with large sets of sentences. There are infinitely many such large sets. How do our finite minds grasp this association of evidential relations with the infinitely many sets of sentences? We must do so by tacitly using some finite basis. Could the finite basis be the individual word meanings in the sentences making up the sets? That certainly seems incompatible with the Quinean thesis that sentences do not have meanings considered one by one. Yet it is very hard to see what else the finite basis could possibly be.

(iii) The third problem is one of insufficiency, combined with a threat of parasitism on non-evidential accounts. Consider a most basic case, a content in which an observational concept is predicated in the present tense of some object given in a thinker's perception, a perception which represents that object as falling under that concept (or under a suitable corresponding non-conceptual content). Certainly it is part of grasping that whole intentional content that the thinker appreciates that such a perception gives reason for accepting the content. But grasping the content, and understanding a sentence which expresses it, also involves importantly more. The content is an objective one, in the sense that it could have been true without the thinker, or anyone else, perceiving that it is true. How could this feature of the understanding be captured evidentially? Of course one could mention evidence that the condition holds unperceived. But how are we to think of such evidence? What such evidence of unperceived instantiation would be is itself very much an empirical matter, and not something extractable from understanding alone. If the evidence for unperceived instantiation is characterized as evidence that the object in question has, unperceived, the same property required for the intentional content's truth when the content is perceived to hold, that is indeed much more plausibly involved in understanding. But that account then involves the notions of truth and reference in understanding, and is far from being a purely evidential account.

These three problems (i)–(iii) give grounds for thinking that purely evidential theories of meaning or content cannot succeed. Any argument for the nonexistence of the a priori which starts from a purely evidential theory of meaning is starting from a false premiss.

4. The Source of the A Priori

Understanding-based views of the a priori hold that it is the nature of understanding that makes available ways of knowing which are a priori. The initial, pre-theoretical attraction of understanding-based views lies simply in the fact that when we consider examples of a priori contents, grasp of those contents, and whatever is involved in that grasp, seem sufficient to permit a priori knowledge of those contents. Sometimes a priori knowledge is hard to attain. Attaining it may require deep

reflection on concepts in the proposition known. But deeper reflection, when successful, seems always to involve deeper understanding, rather than anything extraneous to understanding. This fact about deeper reflection enhances the intuitive support for understanding-based views of the a priori. An understanding-based view of the a priori is an important strand in rationalist thought, running through Leibniz (1981), Frege (1953), and Gödel (1995a) to such present-day rationalists as Bonjour (1998).

To understand an expression, completely or partially, is to know its meaning, completely or partially. So the task of explaining the a priori in terms of understanding is part of the more general task of elucidating the relations between the theory of meaning and the theory of knowledge. On the understanding-based view, the fact that a way of coming to know that **p** is an a priori way is something to be explained by the nature of the concepts comprising **p** and their mode of combination. The most satisfying forms of understanding-based views of the a priori will treat a priori entitlement as a special or limiting case of some more general species of meaning-based entitlement. This more general species will include both experience-dependent and experience-independent entitlement. Just as it is intuitive that understanding makes available some a priori ways of coming to know propositions, so it is equally intuitive that in some cases, understanding is sufficient to allow a thinker to appreciate that certain experiential evidence bears on the understood hypothesis (even if, as we have seen in discussion of Quine, such appreciation does not exhaust the understanding of the hypothesis).

An understanding-based theory might be quite minimal. That is, one variety of understanding-based theorist would hold that it is primitively written into the identity of a concept that certain ways of coming to know given contents containing those concepts are a priori ways. This minimalism seems to be available only to those who do not think that any substantive theory of meaning or intentional content is possible. If any substantive theory of meaning or intentional content is possible, then on the understanding-based view, we have to explain the fact that a way of coming to know has an a priori status from features of that content cited in the fundamental theory of meaning or content. If content is a matter of pure conceptual role, then the a priori character of a given way of coming to know must be explained in terms of pure conceptual roles. If content is substantively a matter of contributions to truth conditions, the a priori character of a way of coming to know a content must be explained in terms of the content's truth conditions; and so on. Understanding-based views that reject minimalism are views that have a commitment to the possibility of such explanations.

Here I will be presupposing a substantive theory of intentional content that elucidates content in the first instance in terms of truth conditions. Pure conceptual role theories have difficulties in explaining which roles determine meanings or genuine concepts. They have difficulties in explaining verification-transcendent truth. In my view (2002), they also have difficulties in explaining the aim of judgement without invoking substantive notions of truth and reference. I will not argue these points here. Readers tempted by pure conceptual-role theories can consider ways—where such exist—in which the arguments below can be adapted to theories that are not truth-conditional. Curiously, Quine's view as described above is an understanding-based view, one based on a substantive evidential conception of meaning. His thesis was simply that not very much of interest is a priori given what that would have to involve on his understanding-based conception thereof.

On the particular points on which I criticized a Quinean evidential conception

of meaning, a truth-conditional approach seems to do much better. The truth conditions of a complete sentence are determined by the contribution to truth conditions made by the sentence's constituents and their mode of combination. The truth-conditional approach is intrinsically componential. It has a finite basis lacking in evidential approaches that associate evidence only with large classes of sentences. In short, the truth-conditional approach avoids the problems of a non-finite basis that I summarized under the heading "the source of evidential relations".

In many of the examples I gave of understanding without knowledge of evidential conditions, a truth-conditional theorist will, in explaining understanding, likely appeal to grasp of an identity relation. We are capable of thinking of new particles of a size smaller than anything hitherto detected because we have the conception of them as things of the same general kind (matter, with its causal powers) as things already known about, and as having spatial properties whose instantiation is known in other cases. The truth-conditional theorist certainly has to give some account of what this understanding consists in, and it will have to be a nonevidential account. Some limited progress has been made in this direction (see Peacocke (1999, ch. 3). Though there is much in the general style of approach that remains to be worked out, it seems to me that this classical truth-conditional approach is much the most promising extant treatment of understanding.

How then can a truth-conditional approach explain why certain ways of coming to know a content are a priori? Any fully developed truth-conditional theory must be accompanied by an account of what it is to possess the concepts whose contributions to truth conditions are given in the truth-conditional theory. Without prejudging anything as to its correct form, I will here use the phrase "possession condition" for a true statement of what it is, fundamentally, to possess a given concept. The theory of possession conditions is the crucial resource on which truth-conditional theories need to draw in explaining why certain ways of coming to know are a priori ways.

There also has to be a theory connecting the account of possession conditions for concepts with the determination of the semantic values for those concepts. If sense together with the way the world is determines reference (perhaps relative to certain parameters), and possession conditions individuate senses, possession conditions together with the way the world is must equally determine reference (relative to any parameters involved). It was this theory connecting possession conditions and semantic values that I labelled "Determination Theory" in *A Study of Concepts* (1992).

The task for the truth-conditional theorist is then to use the above resources to coordinate and properly interrelate three apparently diverse things:

a way of coming to know that **p**;
the possession conditions for the concepts in **p**; and
the truth-value of the content **p**.

The task is to do this in a way that explains the distinctive characteristics of the a priori we have already identified.

The core idea of one approach to the a priori coordinates these three elements in the following two claims.

(a) An outright, non-defeasible, way of coming to know **p** is an a priori way if

the possession conditions for the concepts in **p**, together with the Determination Theory, jointly guarantee that use of that way leads to a true belief about whether **p** is the case. Similarly, a transition from one set of contents to a given content is an a priori transition if the possession conditions for the contents involved, together with the Determination Theory, jointly guarantee that the transition is truth-preserving.

(b) A content **p** is outright a priori if the possession conditions for the concepts comprising **p**, together with the Determination Theory, jointly guarantee the truth of **p**.

The claims (a) and (b) constitute the **metasemantic** theory of the a priori (this was the name I gave to the theory when proposing it in Peacocke (1993)). To illustrate with the most trivial case, consider the possession condition for the concept of conjunction. On any theory, this possession condition will entail that thinkers must find the transition from A & B to A compelling, and must do so without relying on any background information. A plausible Determination Theory will entail that semantic values are assigned to concepts in such a way as to make truth-preserving any transitions which, according to the possession conditions for a concept, must be found compelling without further information. It is thus a consequence of the possession condition for conjunction, together with the Determination Theory, that when A & B is true, A is true. That, according to the metasemantic theory, is why the transition is a priori.

More generally, the metasemantic theory holds that at each line of a valid proof of an a priori proposition, the transition involved is one whose truth-preserving character follows from the possession conditions for the concepts involved together with the Determination Theory for those concepts.

How does the metasemantic theory explain why the use of a priori ways generates not merely true beliefs, but knowledge? The theory of possession conditions and the Determination Theory for the concepts comprising a given content **p** give an account of what has to be the case for the content **p** to be true. The semantic values fixed by the Determination Theory must, when combined to fix a truth-value in the way determined by the structure of the content **p**, determine the truth-value True or the truth-value False. The conditions under which they determine that the truth-value True is a fundamental account of what it is, constitutively, for the content **p** to be true. According to the metasemantic theory, in using an a priori way of coming to judge that **p**, a thinker is using a method which guarantees, as a result of the very nature of **p** and the way in which its truth-condition is determined, that the thinker judges that **p** only if it is the case that **p**. When the soundness of a method is thus internally related to what it is for the content to be true, it is hard to see what more could be required for knowledge. Such a constitutive grounding of the soundness of the method goes far beyond merely reliabilist conditions for knowledge.

In providing this connection with knowledge, the metasemantic theory also meets the condition noted earlier, that the account of why a way or method is a priori should be a consequence of some more general thesis relating knowledge and understanding. I just gave an argument aiming to explain why ways whose soundness is underwritten by the possession conditions and the Determination Theory will yield knowledge. The same applies equally in empirical cases. Take a case in which a thinker applies an observational concept to a perceptually given object, in accordance with the possession condition for that observational concept. That is, the thinker's application of the concept to the object is an exercise of exactly

that sensitivity to perceptual experience mentioned in the possession condition for the concept. The natural Determination Theory for an observational concept *C* implies this: the semantic value of *C* maps any object *x* to the True if *x* has the property required for veridicality of a perceptual experience of *x* of the sort mentioned in *C*'s possession condition. If the thinker is indeed perceiving properly, that fact together with the natural Determination Theory for observational concepts will imply that in such a case the semantic value of the observational concept will map the perceived object to the truth-value True. The truth of the thinker's judgement in this empirical case, when made in accordance with the possession condition for the concept, is equally a consequence of an account of what it is for the content in question to be true. Again, the relation between the way of coming to judge and the account of what it is for the content to be true is so close that this is enough for knowledge. Once again, the relation goes far beyond reliability.

We noted that outright a priori ways of coming to know that *p* seem to be ways that ensure that *p* is true in the actual world, whichever is the actual world: that is, we have Fixedly Actually *p*. The metasemantic account can also explain this apparent datum. Possession conditions hold Fixedly Actually. The statement of the possession condition for a concept specifies what it is to be that concept, and this is something which is invariant under which world is the actual world. The same holds for the principles of Determination Theory. The rule by which the semantic value of a concept depends on the way the world is, and on the nature of the concept's possession condition, does not vary with which world is actual. Logical principles also hold Fixedly Actually.

Now consider the metasemantic theory. In one central kind of case in which a way of coming to know that *p* is a priori, there is a derivation from the possession conditions and the Determination Theory to the conclusion that the content *p* reached by use of that way is true. Since the premisses of this derivation and its rules of inference all hold Fixedly Actually, it follows that *p* holds Fixedly Actually. This style of argument can also be carried over to the more general case in which we are concerned with model-theoretic consequence, rather than derivability.

The metasemantic theory does not have any special account of truth for a priori contents. On the contrary, it explains the a priori status of certain contents by considering the consequences of entirely general rules which determine the semantic values of concepts, the rules being exactly the same whether the concept is featuring in an empirical content or in an a priori content. It thus differs from all kinds of conventionalism about a priori contents (or special subsets of them). On the metasemantic account, a single possession condition for each concept, and a uniform Determination Theory, explain the truth conditions and epistemic character of contents of whatever stripe.

In the examples given so far, we have not needed to appeal to mysterious mechanisms connecting thinkers who have a priori knowledge with a third realm of concepts. The metasemantic theory, properly developed, can thus be at the service of a moderate rationalism. The moderate rationalist holds that any case of a priori status can be explained as such by appeal to the nature of the concepts involved in the content known a priori, and without postulating mechanisms connecting thinkers with the third realm (for moderate rationalism in this sense, see Peacocke (2000).

The moderate rationalist who adopts the metasemantic view faces a range of tasks. In any case in which something is known a priori, it ought to be possible to identify the way in which it comes to be known a priori. It ought also to be possible to explain why that way of knowing is a priori on the basis of the possession

condition for the concepts that form the content in question. It is precisely because some extreme rationalists have not, on reflection, seen how to do this for certain a priori propositions that they have rejected a merely moderate rationalism. The moderate rationalist does, however, have more extensive resources in defending his position than may be apparent when one thinks only of the simpler and more familiar forms of possession conditions. I indicate two such resources here, each relevant to examples that some have cited against other forms of moderate rationalism.

Not every a priori truth involving a concept follows from the principles that a thinker must find compelling in order to possess the concept. This was the burden of Gödel's (1995a) effective points against Carnap (1937), that we can, on the basis of our understanding, discover new axioms for concepts that do not follow from the principles we have already accepted. The force of this point extends far beyond Carnapian conventionalist theories. The phenomena Gödel identified, concerning as they do the nature of understanding and the phenomenon of new, understanding-based a priori principles, present a challenge to all theories of the a priori. The metasemantic account itself would be unable to explain the phenomenon if the only cases of the a priori it admitted were those that followed from principles whose acceptance by the thinker is already mentioned in the possession conditions for the concepts in question. If that were the case, the metasemantic theorist would have two options. Either he would have to deny the existence of the phenomenon, which would be quite implausible; or he would have to say that not all cases of understanding-based a priori propositions can be captured by appeal to possession conditions, which is to abandon his version of the metasemantic theory.

The correct response to the phenomena is rather to acknowledge the existence of what I call implicit conceptions. In some cases, possessing a concept involves having tacit knowledge of some condition for something to fall under the concept, a condition the thinker may not be able to articulate correctly. Cases of this phenomenon run from the most humble, such as our possession of a condition for something to be a chair (a condition which it is very easy to misarticulate), through understanding of moral and political concepts, which can have a rich, hidden structure, to the early use of mathematical and scientific concepts. That tacit knowledge of one condition rather than another underlies understanding is shown by the thinker's pattern of application of the concept in question. The tacit knowledge of the condition explains that pattern of application. Such implicit conceptions are also capable of explaining the phenomenon of understanding-based a priori knowledge of new principles that do not follow from those previously accepted. Consider an ordinary person's possession of the concept of a whole number. I would say that underlying this person's grasp of the concept is possession of an implicit conception with the content:

0 is a whole number;
the successor of a whole number is a whole number;
only what is determined to be a whole number on the basis of the preceding two conditions is a whole number.

Now consider the principle that any whole number has only finitely many predecessors. This principle cannot follow from what the ordinary thinker explicitly accepts. What he explicitly accepts has non-standard models, in which some objects within the extension of "whole number" in those models do have infinitely many

predecessors. But our ordinary thinker can reflect on his own practice, can think about which things are whole numbers and which are not. By an a priori abduction from cases, he can come to the conclusion that the recursion displayed above, with its limiting clause, fixes what it is to be a whole number. This condition then rules out whole numbers with infinitely many predecessors. Abduction from cases, and thinking of hypotheses that explain the cases, is a creative matter that not everyone who possesses the concept of natural number either can or will engage in; not everyone who has the concept of a whole number needs explicitly to accept that whole numbers do not have infinitely many predecessors. The ordinary thinker who uses the concept of a natural number need not even possess the concept of finiteness or of infinity.

Under this approach using implicit conceptions, we explain the phenomenon of new principles consistently with the metasemantic theory. Unlike Gödel himself, we also remain within the bounds of a moderate rationalism.

The other resource available to the metasemantic theory can be drawn upon in cases in which we are, intuitively, inclined to say that it is because we see the nature of some kind of entity—a set, a colour, a number, a shape—that we appreciate a priori that certain principles about that entity are correct. What, an opponent of moderate rationalism may ask, can this possibly have to do with concepts and understanding? Do we not rather have direct insight into the nature of these entities, an insight that enables us to appreciate a priori that certain principles hold of them? The resourceful metasemantic theorist should agree that there is here a special class of examples of the a priori, but he should say that what distinguishes them is as follows. The conditions which individuate the entity in question (the set, colour, number, shape) actually enter the possession condition for certain canonical concepts of these entities. As one could say, in these cases, the concept is individuated by what individuates the object. The implicit conception detailed above which underlies mastery of the notion of a whole number already exemplifies this phenomenon. The content of that conception specifies what it is to be a whole number. The phenomenon is not restricted to implicit conceptions. There is a way of thinking of the colour green mastery of which involves sensitivity to the rough borders of which shades are shades of green, and which are not, when those shades are actually given in perception to the thinker. From this resource, it is possible to explain why certain principles about the colour green, when so conceived, are a priori. It arguably permits derivation of the principle that no shade is a shade of both red and green, for instance (Peacocke 2000).

If we step back from the data of particular a priori ways and propositions, and ask what more generally we should want of a theory of the a priori, there are two further natural demands. One is that the theory should explain why there should be a priori ways and truths at all. This condition is met by the metasemantic theory. In fact, the metasemantic theory predicts that for any concept at all, there will be a priori principles involving it. This is so because any concept will have some possession condition. By the account given in the metasemantic theory, that possession condition, and the Determination Theory applied to it, will generate some a priori principles, and generate a priori ways of coming to know contents containing that concept. There will be at least one such way for each clause of the possession condition.

The other demand is one which conventionalist theories of the a priori have conspicuously failed. Some properties, considered as subject matter for a philosophical theory, have a distinctive characteristic. It is that any adequate theory of

those properties must be self-applicable. For instance, a completely general account of truth must be self-applicable: for we want our account of truth to be true. Similarly, any fully general account of metaphysical necessity should be applicable to itself, if we are trying to provide an account of necessity which is not merely contingent. A theory of the a priori is another case in point. Our philosophical theories of the a priori are not merely empirical. Any theory of the a priori must therefore be applicable to itself, if it is to be acceptable.

Carnapian and other conventionalist approaches do not meet this condition, unless we are prepared to take the extremely unintuitive position that adoption of a philosophical theory is itself a matter of convention, a matter of choice of a framework. On the metasemantic approach, however, the same explanation of the a priori status of philosophical knowledge can be offered as is given for the a priori status of our knowledge of arithmetic, logic, and the rest. The metasemantic theory of the a priori draws upon our understanding of what it is for something to be a concept. To possess the concept of a concept is to have some implicit conception of something individuated by a possession condition. Our philosophical knowledge of the connection between the individuation of a concept and the existence of a priori ways of coming to know certain contents containing that concept results from an a priori abduction from a priori data about concepts. This abduction is not in its general structure and epistemic status any different from a priori abductions that allow us to reach new a priori principles in non-philosophical subject matters.

5. Naturalism, the A Priori, and a Surrogate Notion

Is the existence of a priori propositions incompatible with a naturalistic world-view? The impression that there is such an incompatibility is often voiced in the literature by those sympathetic to broadly Quinean ideas. It is, however, surprisingly hard to formulate a credible version of naturalism and a plausible view of the a priori on which there is any incompatibility at all. A neo-Gödelian view that we are in some kind of causal contact with abstract objects, and that this is the source of some of our a priori knowledge, is certainly non-naturalistic. It postulates causal processes which cannot be embedded in our conception of the kinds of things with which minds can interact, which are always things or events in the spatial or temporal realm. But the moderate rationalism I outlined above fully embraces the a priori, and eschews mysterious causal interactions. A reasonable view of the a priori need not be non-naturalistic in the way in which any neo-Gödelian view is non-naturalistic.

Quine, rightly in my view, also objected to Carnap's "internal"–"external" distinction, and insisted in effect that the notion of truth is uniform. Fundamentally the same notion of truth is applied to propositions of mathematics and logic as is applied to empirical sentences. But this doctrine of uniformity is equally endorsed in the metasemantic account of the a priori.

In *Theories and Things* (1981: 21) Quine formulates a broad naturalistic doctrine. He characterizes naturalism as 'the recognition that it is within science itself, and not in some prior philosophy, that reality is to be identified and described'. But it seems to me incoherent to suppose that the empirical ways of knowing employed in reaching empirical theories, including our theory of the layout of the observable world around us, could exhaust the ways of coming to know propositions. Any case of knowledge of an empirical theory exists only because some a priori entitlements also exist. Empirical knowledge is not merely inextricably entwined with the a priori. A

better metaphor would be that the a priori provides the girders without which empirical entitlement would collapse.

There are at least three ways in which any empirical theory involves the a priori. First, the methodology which is applied in reaching the theory has a fundamentally a priori status, even if the theory is empirical. The canons of confirmation, of inductive reasoning, and of abduction have an a priori status. Secondly, rational acceptance of any scientific theory rests ultimately upon some persons or other taking perceptual experience and memory at face value. The defeasible entitlement to do so also has an a priori status. Thirdly, almost any theory beyond the rudimentary must include some kind of logic, which also has an a priori status. Though the matter is controversial, in my judgement no one has developed a thorough epistemological and semantical account on which the result of essentially empirical investigation could make it reasonable to revise one's logic. Beyond these three points, there are also more limited but very important respects, identified by Michael Friedman, in which not all elements of a mathematical physics face the tribunal of experience in the same way (Friedman has a series of papers on this theme; see for instance his 2000).

One theorist who is much more explicit about why some naturalists have felt uncomfortable with the a priori is Hartry Field (2000). He identifies empirical indefeasibility as the characteristic they find mysterious. Field presents a radical treatment of the a priori, under which some propositions are said to be "default reasonable", a technical term by which he means that they are reasonably believed without any justification at all (p.119). According to Field, not all default reasonable propositions are a priori: 'there is no obvious reason why propositions such as "People usually tell the truth" shouldn't count as default reasonable, and it would be odd to count such propositions a priori' (p. 120). Field has a nonfactualist account of reasonableness: 'My proposal is that it [reasonableness] is an evaluative property, in a way incompatible with its being straightforwardly factual' (p.127). '... reasonableness doesn't *consist in* anything: it is not a factual property' (p.127).

This approach deserves an extended discussion, but here I will have to confine myself to four comments in favour of a competing position.

- (i) Empirical indefeasibility, the phenomenon Field says is puzzling on a naturalistic world-view, seems to me to be explained by, and made less puzzling by, the metasemantic account. If **p** is guaranteed to be true in the actual world, however the actual world is, by the nature of the concepts in **p**, together with the rules for determining their semantic values and their mode of combination in **p**, then nothing we empirically discover will genuinely refute **p**. (There may always be misleading evidence, of course.) Why should this explanation be thought to be defective? One complaint might be that various rules and axioms, including the possession conditions themselves, are used in the derivation that a certain content is guaranteed to be true. These rules and axioms must themselves be a priori if this explanation is to be fully successful. I agree. The rules of logic and the possession conditions do seem to be themselves a priori. The metasemantic account is intuitively applicable to them too, as we noted. It must be so, if the metasemantic account is to cover all the ground.
- (ii) It seems to me that non-factualism about the reasonableness of choosing one logic rather than another could be sustained only if one were a non-factualist about modality. If one is a factualist about modality, there will be truths about

which states of the world are genuinely possible, and which are not. If we are factualists about modality, and if there is a real, and not merely an apparent, problem about indefeasibility, it is not clear to me that the non-factualist account can solve it either. Suppose the selection of one logic rather than another as reasonable is not a factual matter. One theorist, after selecting classical logic, will say that it is a priori that $(A \rightarrow B) \vee (B \rightarrow A)$, and will say that this is guaranteed to be true in the actual world, whichever is the actual world. His intuitionistic colleague will disagree. But if there is fact of the matter of whether it is really possible that the actual world should fail, on empirical investigation, to verify $(A \rightarrow B) \vee (B \rightarrow A)$, it seems very hard to see why the rational choice of logic should not be answerable to this modal fact of the matter. The thoroughgoing non-factualist will say that these remarks simply prove a lemma: non-factualism about the a priori and reasonableness must involve non-factualism about modality. We cannot pursue that here either: here I am just indicating what comes with the territory of non-factualism about reasonableness.

(iii) It is not at all clear that there are default reasonable propositions that are not a priori. In the case of Field's own example—"People normally tell the truth"—I would say that one is default entitled to believe that a rational agent is telling the truth, and that relying on such a default entitlement is rational. But I would also say that it is an a priori entitlement, founded in the nature of rationality and interpretation (Burge 1993). The default entitlement is weaker than the "usually" claim. This parallels other cases of default entitlement. It is not outright a priori that experience is normally veridical; but one is entitled to take (at least the observational content of) experience at face value, in the absence of reasons for doubting it. This too is arguably founded in the nature of the individuation of the content of perceptual states (for some preliminary remarks, see Burge 2003 and Peacocke 2001b, 2004a, 2004b, chs. 2 and 3). I do, however, agree with a conditional which is an implication of Field's position: if one is to defend a factual theory of the a priori, such as the metasemantic theory, one is committed to the possibility of a substantive, though not necessarily reductive, theory of reasonableness and the rationality of methods. A factual theory of the a priori is stable and makes sense only in the context of such a more general account of reason.

6. Philosophical Significance and Further Tasks

A philosophical, explanatory account, if such a thing is possible, of the distinction between those ways of coming to know that a priori and those that are not would be of significance in itself. But the significance of an account of the a priori goes beyond that, in raising challenges in areas outside the domain of the a priori considered on its own. I mention in conclusion three such challenges.

(a) If we become convinced that true propositions in a given domain are contentually a priori—say, in the case of morality, or confirmation theory—that will have large effects on our metaphysics and epistemology of that domain. In the case of moral thought, for instance, if true moral propositions are contentually a priori, that is extremely difficult to reconcile with mind-dependent approaches to moral truth. We would need to develop a metaphysics, an epistemology, and a theory of understanding for moral propositions that is consistent with this contentually

a priori status (see Peacocke 2001a, 2004c).

(b) The above account has not explained how it is possible that there should be a priori defeasible entitlements to rely on certain informational states, most notably perceptual states. Why are there such entitlements, and what do they have to do with understanding and truth? Can they be accommodated within a natural extension of the metasemantic theory, and if so, how? This is a fundamental issue that needs to be addressed head-on.

(c) When we think of truth as a constitutive aim of judgement, and see the rationality of so many transitions in thought as founded in their a priori status, it is natural to conjecture that all instances of the entitlement relation are fundamentally a priori. This conjecture would in effect say that the a priori extends as far as all cases of the normative in epistemology. This too should be a focus of further investigation, both in respect of particular problematic transitions, and in respect of the general principles that would sustain it. Successful defence of the conjecture would, in the context of the metasemantic theory, constitute a case for a generalized rationalism (see also Peacocke 2002, 2004b).

REFERENCES

- Boghossian, P. (1995). 'Analyticity Reconsidered'. *Noûs* 30: 369-91.
- BonJour, L. (ほやもみ). *The Structure of Empirical Knowledge*. Cambridge, Mass.: Harvard University Press.
- (1998). *In Defense of Pure Reason*. Cambridge: Cambridge University Press.
- Burge, T. (1993) 'Content Preservation'. *Philosophical Review*, 102: 457-88.
- (2000). 'Frege on Apriority', in P. Boghossian and C. Peacocke (eds.), *New Essays on the A Priori*. Oxford: Oxford University Press.
- (2003). 'Perceptual Entitlement'. *Philosophy and Phenomenological Research*, 67: 503-48.
- Carnap, R. (1937). *Logical Syntax of Language*, trans. A. Smeaton. London: Routledge & Kegan Paul.
- Coffa, A. (1991). *The Semantic Tradition from Kant to Carnap*, ed. L. Wessels. Cambridge: Cambridge University Press.
- Davies, M., and Humberstone, L. (1980). 'Two Notions of Necessity'. *Philosophical Studies*, 38: 1-30.
- Field, Hartry (2000). 'Apriority as an Evaluative Notion', in P. Boghossian and C. Peacocke (eds.), *New Essays on the A Priori*. Oxford: Oxford University Press.
- Frege, G. (1953). *The Foundations of Arithmetic*, trans. J. L. Austin. Oxford: Blackwell.
- Friedman, Michael (2000). 'Transcendental Philosophy and A Priori Knowledge: A Neo-Kantian Perspective', in P. Boghossian and C. Peacocke (eds.), *New Essays on the A Priori*. Oxford: Oxford University Press.
- Gödel, K. (1995a). 'Is Mathematics Syntax of Language?', in *Kurt Gödel: Collected Works, III Unpublished Lectures and Essays*. New York: Oxford University Press.
- (1995b). *Collected Works Volume III*, ed., S. Feferman, J. Dawson, Jr., W. Gou, C. Parsons, and R. Solovay, iii. Oxford: Clarendon Press.
- Harman, G. (1996). 'Analyticity Regained?' *Noûs*, 30: 392-400.
- Kant, Immanuel (1997). *Critique of Pure Reason*, trans. P. Guyer and A. Wood. Cambridge: Cambridge University Press.
- Kaplan, D. (1989). 'Demonstratives', in J. Almog, J. Perry, and H. Wettstein (eds.),

- Themes from Kaplan*. New York: Oxford University Press.
- Kitcher, P. (1980). 'A Priori Knowledge'. *Philosophical Review*, 89: 3-23.
- (2000). 'A Priori Knowledge Revisited', in P. Boghossian and C. Peacocke (eds.), *New Essays on the A Priori*. Oxford: Oxford University Press.
- Kripke, S. (1980). *Naming and Necessity*. Oxford: Blackwell.
- Leibniz, G. (1981). *New Essays on Human Understanding*, trans. P. Remnant and J. Bennett. Cambridge: Cambridge University Press.
- Peacocke, C. (1992). *A Study of Concepts*. Cambridge, Mass.: MIT Press.
- (1993). 'How Are A Priori Truths Possible?' *European Journal of Philosophy*, 1: 175-99.
- (1999). *Being Known*. Oxford: Oxford University Press.
- (2000). 'Explaining the A Priori: The Programme of Moderate Rationalism', in P. Boghossian and C. Peacocke (eds.), *New Essays on the A Priori*. Oxford: Oxford University Press.
- (2001a). 'Moralischer Rationalismus. Eine erste Skizze'. *Deutsche Zeitschrift für Philosophie*, 49: 197-208.
- (2001b). 'The Past, Necessity, Externalism and Entitlement'. *Philosophical Books*, 42: 106-17.
- (2002). 'Three Principles of Rationalism'. *European Journal of Philosophy*, 10: 375-97.
- (2004a). 'Explaining Perceptual Entitlement', in R. Schantz (ed.), *The Externalist Challenge*. Berlin: de Gruyter.
- (2004b). *The Realm of Reason*. Oxford: Oxford University Press.
- (2004c). 'Moral Rationalism'. *Journal of Philosophy*, 101: 499-526.
- Quine, W. v. O. (1961). 'Two Dogmas of Empiricism', in Quine, *From a Logical Point of View*. Cambridge, Mass.: Harvard University Press.
- (1974). *The Roots of Reference*. LaSalle, Ill.: Open Court.
- (1976a). 'Carnap and Logical Truth', in Quine, *The Ways of Paradox and Other Essays*. Cambridge, Mass.: Harvard University Press.
- (1976b). 'Truth by Convention', in Quine, *The Ways of Paradox and Other Essays*. Cambridge, Mass.: Harvard University Press.
- (1981). *Theories and Things*. Cambridge, Mass.: Harvard University Press.