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Intuition, Understanding, and the A Priori[1]

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Introduction

Over the past several years, I have explored a particular version of the classical idea that we can explain the a priori justification that we have for certain of our beliefs by appealing solely to the *understanding* that we have of their ingredient concepts (see Boghossian 1996, 2003b, 2012). To use some terminology that has become standard, I have tried to show that some propositions are *epistemically analytic*, justifiably believable merely on the basis of being understood (see Boghossian 1996, Williamson 2007a).[2]

This proposal, I have argued, should be sharply distinguished from the idea that some propositions are *metaphysically analytic*, that is, true by virtue of their identity alone and without any contribution from the 'worldly facts'. The latter idea has been justly discredited: even paradigm examples of 'analytic' propositions, such as *All squares are four-sided*, are about squares and sides and not about the word 'square' or the concept *square*.[3] And when such an analytic proposition is true it is made true by the relevant worldly facts, in this case by facts about squares.

There are many reasons for taking an account of a priori justification in terms of epistemic analyticity seriously, not least among them being that, at least in certain cases, such an account seems true: for example, it is plausible that my justification for believing that all squares have four sides rests exclusively on my understanding of the ingredient concepts. Another consideration in favor of such an account is its promise to explain a priori justification without invoking the potentially obscure and problematic notion of *intuition*.

In what represents a substantial change of mind on my part, however, I have come to believe that this latter motivation—this fear of intuitions—is, ultimately, both futile and misguided.

It is futile in that one cannot escape appealing to intuitions in the theory of the a priori. And it is misguided in that intuitions are not as problematic or as obscure as I had previously thought. In this essay, I will make a start (but only a start) at explaining and defending these claims: an adequate treatment would have to be much longer than is possible in this volume.

I should clarify at the outset that I am not abandoning understanding-based accounts of the a priori altogether. I continue to believe that such accounts are correct for a certain range of cases. However, to this ongoing commitment, I would now add the following three observations.

First, that understanding-based accounts won't cover the entire range of propositions that are known a priori, and that, as a consequence, intuitions are needed if we are to give a complete picture of this type of knowledge. As Kant would have put it, there are *synthetic* propositions known a priori, not just (epistemically) analytic ones.

Second, in certain cases, the deployment of an understanding-based account *itself* relies on appeal to the notion of an intuition.[4]

Finally, intuitions are not quite as problematic or obscure as I had previously assumed.

Two Types of Understanding-Based Account: Constitutive vs Basis

A priori justified beliefs that are good candidates to be explained by an understanding-based account include the following:

(1)   All quadrilaterals have four interior angles.
(2)   If Mary ate the apple and the pear, then Mary ate the apple.
(3)   It is necessary that whoever knows p believes p.
(4)   In the Gettier scenario, Mr. Smith has a justified true belief but does not know.
(5)   In the standard Twin Earth scenario, Oscar's word 'water' has H_2O in its extension but not XYZ, while Toscar's word 'water' has XYZ in its extension but not H_2O.[5]

What has not been widely understood, however, is that there are *two* distinct, indeed, mutually incompatible, ways in which the understanding might be a source of a priori justification.[6]

On one type of account, S's understanding of p justifies S's assent to p in virtue of the fact that S's understanding of p is *constituted* in part by S's disposition to assent to p.

(Constitutive)   S's assent to p is justified by S's understanding of p in virtue of the fact that S's understanding of p is partly constituted by S's disposition to assent to p.

On the other type of account, S's understanding of p justifies S's assent to p in virtue of the fact that S's understanding of p serves as a good *epistemic basis* for S's assent to p.

(Basis)   S's understanding of p justifies S's assent to p in virtue of the fact that S's understanding of p serves as a good *epistemic basis* for S's assent to p.

Examples of both types of account may be found in the literature. Although they are very different, indeed, mutually exclusive, types of explanation, they are routinely conflated.[7]

The idea behind a Constitutive account is the thought that, under certain conditions, an assent that is constitutive of a thinker's understanding of a given proposition (or of one of its ingredient concepts), will be, eo ipso, an assent to which she is entitled.

To illustrate, suppose you are sympathetic, as many are, to a conceptual-role semantics for the logical constants. If so, you'll think that a disposition to assent to certain basic logical truths involving those constants (or to inferences involving them) is constitutive of your understanding them. For example, you may think that to possess the concept *and* you need to be disposed to assent to (at least some) instances of propositions of the form *If A and B, then A*.[8]

Of course, even if this were granted, there would still be a question about your justification for assenting to these propositions. Why should the metasemantic fact that your assenting to Conjunction Elimination (CE) is constitutive of your possessing *and* translate into the epistemic fact that you are *justified* in assenting to CE?

Clearly, the answer here can't be that your understanding of *and* provides an *epistemic basis* for your assenting to CE, since your disposition to assent to p is not in general a good basis for your assenting to p.

In the case of such understanding-constituting dispositions, explaining a priori justification in terms of the understanding will need to rely on the existence of true bridge principles of the form:

> (Concept–Justification Connection):   For certain propositions p, if a disposition to assent to p is constitutive of understanding p, then a thinker who understands p is eo ipso entitled to assent to p.[9]

It's a non-trivial question in the theory of the a priori whether there are such bridge principles. (For more details on this see my 2003b and 2012.)

However, even if their existence were considered unproblematic, our job would hardly be done, since it is clear that there are many understanding-based a priori propositions that could not be accounted for in this way.

The key reason is that there are many understanding-based a priori propositions assent to which is not understanding-constituting.

For example, my knowledge of (1), that all quadrilaterals have four interior angles, is understanding-based; but the usual understanding of *quadrilateral* will advert only to its being a closed figure consisting of four line segments linked end to end. And yet, although the definition of *quadrilateral* makes no mention of interior angles, my grasp of that definition can serve as the epistemic basis for my knowledge that all quadrilaterals have four interior angles.

For these sorts of non-constitutive understanding-based assents, a thinker's understanding of the concepts ingredient in p serves as the *epistemic basis* for her assent to p. The assent is not constitutively built into the understanding, as on a Constitutive account, but is prompted by that understanding. And when it is prompted by it in the right way, the understanding is sufficient for justifying it.[10]

Both Basis and Constitutive models are important, then, in that neither model, by itself, can account for the entire range of cases of understanding-based a priori justification.

Competent Dissent

Understanding-based accounts face many difficult challenges; of these, one has become very influential. It has been pressed with great force and detail by

Williamson (2007a). Although I've discussed it in other writings, it will be useful to consider it again, against the backdrop of the distinction between Constitutive and Basis accounts.

Williamson draws our attention to the following fact: not *everyone* who understands (3) assents to it.

Many philosophers, native speakers of English, have denied [(3)] ... They are not usually or plausibly accused of failing to understand the words 'know' or 'believe.'   (2007a: 168)

Some epistemologists, and hence, presumably, *experts* on the concepts of knowledge and belief, have officially rejected (3). This fact appears to pose a prima facie problem for understanding-based accounts of (3), a problem that we can formulate in a first pass as follows: If understanding (3) were sufficient for assenting to (3) with justification, how is it that these experts, who ex hypothesi understand (3) perfectly well, insist on rejecting (3)?

Of course, if (3) were just a special case, we could quarantine it. But Williamson's idea is that there is nothing special about (3). For *any* proposition p that we might think of as epistemically analytic, we can imagine an 'expert' on p who, having developed sophisticated theoretical misgivings about p, rejects p with full understanding.[11]

On the basis of such examples, Williamson puts forward a thesis that I shall label:

(Generalized Competent Dissent, GCD)   For any proposition p, it is possible for someone to dissent from p while retaining full competence with p (full understanding of p).

Thus, Williamson (2011) has maintained that not even assenting to instances of CE could be considered constitutive of possession of *and* since, even in that seemingly ironclad case, we could *imagine* someone developing sophisticated reasons for doubting CE, and so ending up refusing to assent to

(2)   If Mary ate the apple and the pear, then Mary ate the apple.

Williamson takes the phenomenon of competent, indeed expert, dissent, to refute understanding-based accounts of the a priori. But, how, exactly, does it do so?

The challenge assumes a different form depending on the type of understanding-based account at which it is directed. In both cases, though, the challenge proves to be answerable.

Competent Dissent and Constitutive Accounts

Let us start with a Constitutive account. With such an account, the threat from GCD looks quite direct, since a Constitutive account needs to rely on some constitutive understanding–assent links, the existence of which GCD denies.

To sharpen our focus, let us look at a classic formulation of a proposed understanding–assent link, Christopher Peacocke's account of the possession conditions for *and*:

(CPC) Conjunction is that concept *C* to possess which a thinker must find transitions that are instances of the following forms *primitively* compelling, and must do so because they are of these forms:

$$\frac{\begin{array}{c}p\\q\end{array}}{p\ C\ q} \qquad \frac{p\ C\ q}{p} \qquad \frac{p\ C\ q}{q}$$

To say that the thinker finds such transitions primitively compelling is to say this: (1) he finds them compelling; (2) he does not find them compelling because he has inferred them from other premises and/or principles; and (3) for possession of the concept C in question (here conjunction) he does not need to take the correctness of the transitions as answerable to anything else.   (1992: 6; emphasis added)[12]

According to Peacocke, in order to understand the concept *conjunction* you need to find CE inferences primitively compelling: that is, compelling when considered on their own and independently of any other considerations.[13]

Why this play with the notion of the 'primitively compelling'? The answer should be obvious: If you're thinking of understanding a concept in terms of assent, either to propositions or to inferences involving that concept, you want to include only those assents that are *necessary* for understanding. A logician may know all sorts of interesting truths about Conjunction; but most of those would be extraneous to what is required for understanding it. A physicist may know all manner of empirical truths involving the concept Conjunction, but these, too, would be extraneous to what is required for understanding it.

Now, this observation poses a problem for Williamson's recipe for generating expert-based counterexamples to any proposed understanding–assent link, since it is obviously consistent with your refusing, on the basis of sophisticated theoretical considerations, to assent to a given inference form, that you continue to find that inference form *primitively* compelling, that is, when it is considered on its own and independently of these sophisticated considerations. Indeed, a natural description of Williamson's expert, who develops theoretical misgivings about CE, is that she retains the *disposition* to assent to CE but refuses to act on that disposition as a result of the theoretical misgivings.[14] As we may put it, she may continue to find CE *primitively* compelling, even as she now finds it *derivatively* uncompelling.

Williamson's expert, then, is not yet a counterexample to the claim that CE is constitutive of understanding Conjunction.

Williamson's unerring sense of dialectic leads him to take the further required step. He invites us to imagine the following possible future for our expert: at first, she continues to find CE primitively compelling, even as she stops finding it compelling all things considered. After a while, though, she stops finding it even primitively compelling. It becomes second nature to her to refuse to assent to CE. When she now looks at CE, she no longer finds it tempting. She even forgets the theoretical reasons that first inclined her to give up CE. If you ask her why she doesn't follow virtually every other person in endorsing CE, she says she just doesn't see its plausibility. She may even say that it's obvious to her that CE is fallacious, but offer nothing further. As so developed, Williamson claims, the imagined expert constitutes a decisive counterexample to the claim that assent to CE is constitutive of understanding Conjunction.

Unfortunately, the argument doesn't work. The problem is that the more unself-conscious we make our expert's refusal to assent to CE, the more implausible it becomes that she really does continue to possess *and* (as opposed to possessing some closely related concept).

If our expert dissenter really did succeed in relinquishing any disposition to assent to CE, and *presented no particular reason for her refusal*, insisting, for example, that it was simply *obvious* that *She ate the apple* does not follow from *She ate the apple and the pear*, it would cease to be plausible that she is disagreeing with us about *and*.[15]

Let me put this point another way. If the expert's offering sophisticated reasons for refusing to assent to CE were playing *no role* in securing the verdict that she continues to possess *and*, then it ought to be possible to describe an entirely unsophisticated person, a child, for example, who has mastered Conjunction but who also refuses to assent to CE without offering any particular reason for that refusal.

But it is clearly not possible to do any such thing.

Recall here Wittgenstein's discussion in the *Philosophical Investigations* of the conditions under which we would be willing to say that a child has grasped the concept of expanding the series +2 (1953: §185). As Wittgenstein points out, one of the conditions we insist on is that the child be able to expand the series correctly in a range of simple cases. Unless and until the child has been able to do this reliably enough, we are unwilling to attribute mastery of the concept to him. Deviation from these conditions would require special explanation, if it is to be compatible with mastery of the concept.

Williamson's strategy of using experts on a concept C to secure counterexamples to any proposed understanding–assent link p(C) is flawed. The fact that the person is an expert on C serves to make it plausible that the person possesses the concept C. But the fact that she arrives at her refusal to assent to p(C) via sophisticated theoretical reasons means that she can at most claim to find p derivatively uncompelling, not primitively uncompelling. To the extent to which we develop the example so as to make it seem that the expert now finds CE *primitively* uncompelling, to that extent the example loses its force.

So much, then, for trying to use expert-based competent dissent against the existence of constitutive understanding–assent links.

Competent Dissent and Basis Accounts

Let us turn to asking how the phenomenon of competent dissent might be used against a Basis account.

On such an account, S's a priori justification for assenting to (1),

(1)   All quadrilaterals have four interior angle

is said to be given by her understanding of the concept *quadrilateral* (and the other ingredient concepts). She is justified in assenting to (1) *not* because assenting to it is *constitutive* of understanding (1), but because her understanding is, somehow or other, a sufficient epistemic basis for assenting to (1), and she bases her assent on that understanding.[16]

But, now, if GCD is true, a problem seems to arise for a Basis account of (1): For how could the justification provided by the understanding of (1) be sufficient for assenting to (1), when some people with understanding assent to it precisely because they understand it, while others refuse to assent to it, despite understanding it just as well as those who do? How could the justification provided by the understanding be visible to some and yet hidden from others?

Although this can look like an impressive objection, and some important philosophers have endorsed it (e.g., Sosa, 2007), it is answerable.

We are familiar from other epistemic contexts with the phenomenon of a perfectly good justification for believing p being occluded from a thinker by his believing some misleading considerations that seem to support not-p. Take a perceptual case. I may have perfectly good visual evidence that there is a fox in front of me. But I ignore this good visual evidence because of my strongly held background belief that there are no foxes in New York, and that the creatures that look like foxes in New York actually belong to a species of locally bred dog. In such a case, the occlusion of a pre-existing justification by what is taken to be, rightly or wrongly, a trumping consideration is not hard to understand.

And there is no reason that I know of why this type of occlusion should not also occur in cases where it is the understanding, rather than perception, that is providing the relevant justification. That takes care of any potential threat that the phenomenon of expert competent dissent may be thought to pose for a Basis account.

Two Ways of Believing a Basis-Explicable A Priori Proposition

Consider again the examples of a priori beliefs that are plausibly explained by a Basis account.

(1) All quadrilaterals have four interior angles.
(4) In the Gettier scenario, Mr. Smith has a justified true belief but does not know.[17]
(5) In the standard Twin Earth scenario, Oscar's word 'water' has H_2O in its extension but not XYZ, while Toscar's word 'water' has XYZ in its extension but not H_2O.

When we look at these examples of Basis Account-friendly propositions, we are liable to be struck by the fact that there seem to be two importantly distinct types.

In the case of an example like (1), it is plausible that you come to believe (1) because you *work out* that it is true. Indeed, it is plausible that you work it out by inferring it from the definition of *quadrilateral* that you have previously grasped.

Another case where you come to work out that a proposition is true on the basis of your understanding, but which is interestingly different from (1), is given by Elijah Chudnoff. Chudnoff (2013) considers a thinker who works out that

(6) Necessarily, any two circles of unequal radii can intersect at most at two points.

You visualize two circles of unequal radii and, by manipulating them in imagination, you come to realize that a proposition as strong as (6) is true.

This example is interesting in that, although it is clearly plausible that the truth of (6) is worked out and worked out on the basis of the subject's understanding of the ingredient concepts, it is *implausible* to think that it is worked out via an *inference* from the relevant definitions. Rather, the working out takes place partly in the imagination, with the understanding supplying the relevant images, and the license to generalize and modalize the proposition that they appear to illustrate.[18]

In both of these cases, your justification for believing p relies on your *working p out* on the basis of your understanding, whether this working out be via inference from a definition of one of its ingredient concepts, or via the imagination, or perhaps in other ways as well.

It's not easy to fully specify this notion of 'working out'. But the crucial aspect of the phenomenon it points to is that the subject ends up with some grip, on the basis of reasoning in a broad sense, on *why* the proposition in question is to be believed, on the *grounds* for believing it.

Consider, though, by way of contrast, the famous Gettier thought experiment. In that case, you are told that Mr. Smith stands in a certain relation to a given proposition p. After contemplating the situation for a bit, it comes to seem to you that, in the situation as specified, Mr. Smith has a justified true belief that p, but does not know that p.

This process could be represented in one of two ways. It could be represented as your performing a person-level inference from

(7)   Mr. Smith stands in the Gettier relation to p

to

(8)   Mr. Smith has a justified true belief but does not know.

Or, it could be represented as your considering the conditional

(9)   If Mr. Smith stands in the Gettier relation to p, then Mr. Smith has a justified true belief but does not know

and its coming to seem true to you, leading you to assent to it.[19]

Either way, the crucial point is that, in this case, while you may have a good grip on why Mr. Smith has a justified true belief in the scenario as described, you *don't* have a good grip on *why* Mr. Smith does not *know*. It simply strikes you that he does not know.

There is an important sense in which the transition from (7) to (8), or the conditional in (9), is simply found to be 'primitively compelling' (although, of course, this need not imply that the transition or the proposition is concept-constituting: being found primitively compelling is a necessary condition for being concept-constituting, not sufficient for it). You can identify no premises from which you worked out that (9) is true. You can identify no definition of *knowledge* from which you deduced it. (The only definition of knowledge you are aware of is the JTB definition, and that predicts precisely the opposite conclusion.) Although you know in virtue of which features of the situation Mr. Smith has a justified true belief,

you don't know in virtue of which features of the situation he doesn't *know* (philosophers have been arguing about that ever since the thought experiment was first put forward).

When (9) strikes you as true, you might develop some hypotheses about why it is true, hypotheses about the features of the contemplated scenario in virtue of which Mr. Smith does not know. You might think that it has to do with the fact that his reasoning involves false lemmas; or with the fact that the method by which he formed his belief could so easily have led to a false belief. And so on.

All these hypotheses, though, would have the status of conjectures. And even if every single one of them turned out to be false, this would not affect the probative value of the verdict elicited by the thought experiment. It would still count as a datum that anyone standing in the Gettier relation to p would have a justified true belief that p, but not know that p.

Similarly, in the Twin Earth case. You don't know in virtue of which features of the case it strikes you as true that Oscar's and Toscar's extensions of 'water' are non-overlapping. What you know is that it simply strikes you as true; and that fact sets off a search for the grounds of its truth.

This point is made even more vividly by Trolley examples.[20] When you contemplate the first Trolley case, the one where you sacrifice the one to save the five by flipping a switch that moves the trolley onto a side-rail, you might think you see that the moral is a consequentialist one: you have a duty to save the five, even if it involves sacrificing the one.

But that confidence is soon undermined by your reluctance, in the second variant of the thought experiment, to sacrifice the one to save the five where that act would involve actively throwing the large man standing next to you on the bridge onto the path of the oncoming trolley.

What, then, is the moral of the pair of thought experiments taken together? Is it that you are *required* to save the larger number under conditions where you can do so simply by letting someone die, but that it is *impermissible* for you to save the larger number if it requires you to actively kill someone?

We don't yet know what these pair of thought experiments show. Anything we say at this point would be conjectural, and subject to refutation by further considerations or further thought experiments. What we have is the raw *data* about what it is morally permissible to do under the two different scenarios.

Like the cases before them, this pair of Trolley cases illustrates that sometimes a proposition—in these cases, a conditional normative proposition—simply strikes you as true. You don't work it out from identifiable premises. You don't know *why* it is true. You don't know if there is a general principle that it exemplifies and which would predict the pattern of verdicts you are prepared to make.

All you have is that it vividly strikes you as true; and as such, you accept it. You treat it as a datum (defeasible, to be sure) that any acceptable theory of the topic should respect. In this respect, our intuitions about these cases resemble perceptions, and the verdicts based upon them resemble perceptual judgments. They are data awaiting proper explanation by a deeper theory.

A Role for Intuitions in Basis Accounts

Let us set aside for now the cases where an a priori justified proposition is believed because it is worked out. Let's look at cases where an a priori proposition is not worked out at all, but simply strikes you as true.

If we wish to say that, in these latter cases, your a priori justification for the proposition believed is given by your understanding of the concepts ingredient in the belief, how should we think about this? How could the understanding justify a proposition *other than* by showing it to follow from some premises (typically from a definition)? What could be the model for some *non-inferential* way in which our understanding of *knowledge* or *extension* could justify, respectively, the Gettier proposition, on the one hand, and the Twin Earth proposition, on the other?

Some philosophers, Ernest Sosa, for example, would have no great difficulty with this question. Since Sosa is, in effect, a Reliabilist about justification, he can simply say that 'we have a competence grounded in our understanding' for telling the true from the false in the particular domain under discussion. And it is that understanding-grounded reliability that explains (indeed constitutes) our justification.

However, since Reliabilism is a clearly inadequate view of epistemic justification, I cannot accept that answer. As a result, I face the problem of trying to say how our understanding of a proposition could *non-inferentially* justify our assent to that proposition. How could the relation between our understanding of p and our assent to p be analogous to the relation that obtains between our perception that p and our assent to p? This is the theoretical point at which *intuitions* seem to supply just what's needed in order to make Basis accounts work.

What I mean by 'intuition' I will explain in further detail below. For now, it will suffice to say that I intend to be invoking the classic (if still controversial) idea of an 'intellectual seeming'. This notion is to be sharply distinguished from any doxastic notion such as judgment, or an inclination to judge. It is to be thought of as the *intellectual* version of a sensory seeming (the sort of seeming that is caused in you by your vision, as when it visually seems to you that the cat is sleeping on the bed).

The sensory seeming is to be distinguished from the visual state that causes it. Two visual states may be identical, even as the sensory seemings that they cause are distinct. We know this most vividly from the case of aspect-seeing, as when one and the same diagram, and hence in the appropriate sense, one and the same visual state, sometimes seems to present a duck and sometimes a rabbit.

We see this phenomenon vividly in the intellectual case as well, as when a pun is experienced first with one meaning and then with another. For example:

(10)   I was wondering why that baseball was coming towards me so fast; then it hit me.

Most of us first hear (10) with the physical meaning of 'hit', and immediately thereafter with the cognitive meaning of 'hit'. This alternation between the two distinct meanings heard expressed (a phenomenon which rightly fascinated Wittgenstein) is not an alternation between states that have individuating sensory

phenomenologies; it's an alternation between two intellectual impressions of which thought is being expressed.

We get a similar phenomenon in the syntactic case. Most people, when they first hear the garden-path sentence

(11)   The horse raced past the barn fell.

hear it as ungrammatical. Eventually, though, they light on the passive sense of 'raced' and then experience the perfectly coherent thought that is expressed by the sentence under this grammatical guise.

These examples form part of the classical case for the involvement of intuitions, or intellectual seemings, in connection with ordinary cases of linguistic and syntactic understanding. And this no doubt explains why the idea that we manifest our syntactic and semantic competence through intuitions—about grammatical well-formedness, on the one hand, and analytic entailments, on the other—is hardly a new one.[21]

However, once we have made clear the distinction between Constitutive and Basis accounts of the epistemically analytic, and the difference between propositions that are believed because they are worked out, and those that simply strike us as true, we are in a position to see that, in addition to this standard observational evidence, there is a strong *theoretical* motivation, of a broadly internalist sort, for giving intuitions a role, even in what are meant to be understanding-based accounts. That role emerges when we ask, How does your understanding of p, in a case where your understanding does not supply you with a premise for inferring p, give you an epistemic basis for believing p?

It is hard to see what could count as an internalistically acceptable answer to this question, if not something along the following lines: The understanding of p, when appropriately prompted, supplies you with the intuition that p. If we were unable to provide an answer of this sort, we would be hard-pressed to say how the understanding of p could serve as an (internalistically recognizable) epistemic basis for believing p.

This, then, is part of the reason for why I have come to regard the avoidance of intuitions in the theory of the a priori as *futile*. The main stratagem by which intuitions were to be avoided was to be through understanding-based accounts of the a priori. However, it turns out that, once enough relevant distinctions have been made, the principal type of understanding-based account, the Basis version, will need to appeal to intuitions in order to tell a satisfying epistemological story.

Synthetic A Priori Propositions: Normative Truths

Be that as it may, there is an even stronger reason for doubting that the theory of the a priori can make do without appealing to intuitions—and that is that there are important cases of a priori justified belief that *cannot* be explained solely by the understanding that we have of them. To put it in Kantian terminology, there are *synthetic* a priori propositions. In particular, all *substantive* normative principles are synthetic a priori. I will illustrate my argument by focusing on the case of

moral principles, but the argument is, I believe, a general one that applies to all substantive normative principles.

What do I mean by a 'substantive moral principle'? Let us agree that the minimal content of a moral judgment claiming that some act of type A is wrong (typically) expresses the speaker's distinctively moral disapproval of A, and (always) claims of A that it *merits* that distinctive sort of disapproval. I shall take this to be the uncontroversial minimal core of a concept like (morally) *wrong*.[22] *Mutatis mutandis* for the other canonical moral concepts.

A non-substantive, or trivial, moral proposition would then be an obviously epistemically analytic claim such as, for example,

(12)   If an act A is morally wrong, then it merits moral disapproval.

By contrast, a *substantive* moral principle would involve claiming that some particular act-type was morally wrong, as, for example, in:

(13)   Inflicting severe pain on babies just for fun is morally wrong.
(14)   Another person's suffering is a prime facie moral reason for someone to help relieve it.

Substantive moral claims can thus be represented as being of the following form:

(Moral Norm, MN)   Necessarily, if x is D, then x is M

where 'D' is a canonical descriptive term and 'M' is a canonical moral term.

Consider (13). Most of us believe (13). Indeed, most of us believe that it is as fully justified a proposition as we are likely to encounter;[23] and that it is justified a priori. The question of concern to me at the moment is: Does our justification for believing (13) rest solely on our understanding of its ingredient concepts?

Some philosophers are inclined to think that Moore (1903a) already showed us that the answer to this question is 'No' (see Darwall, Gibbard and Railton, 1992, Fine 2002). Although I agree with Moore's conclusion, I believe that the considerations he adduced in its favor are vulnerable; I hope to do a little better.

How did Moore argue for the claim that substantive moral principles could not be (in my terms) epistemically analytic? Without delving into the exegetical details, his most famous argument involves an appeal to a *restricted* version of the doctrine we have previously encountered as (Generalized Competent Dissent, GCD). The restriction is to *substantive moral* propositions:

(Moral Generalized Competent Dissent, MGCD)   For any substantive moral proposition p, it is possible for there to be someone who dissents from p while retaining full competence with p.

The weaknesses in Moore's argument should be apparent from our previous discussion.

For one thing, as we have seen, there is no general warrant to believe GCD. If there is warrant to believe MGCD, the special case where GCD is restricted to moral principles, we would need an explanation as to why. But Moore offers no such explanation.

Second, and as we have also already seen, merely establishing that a particular assent is not constitutive of understanding doesn't imply that our justification for

that assent is not understanding-based, since it's possible that that justification is explained by a Basis model rather than by a Constitutive model.

For both of these reasons, Moore fails to justify the claim that our knowledge of moral principles cannot be explained by the understanding alone. In what follows, however, I will briefly supply an alternative argument for the claim that substantive moral principles are synthetic a priori.

Let's begin with the observation that, on either the Constitutive model or the Basis model, if a given proposition of the form MN were epistemically analytic, then mere reflection on the concepts *wrong* and *D* would suffice for you to justifiably believe that that instance of MN is true. However, mere reflection on the relevant concepts doesn't suffice for such belief.

To see why, suppose the opposite. Imagine that the concept that you would express by 'wrong' includes not only the minimal core that I previously outlined, according to which to call an act-type A wrong is to claim that A merits disapproval of the distinctively moral type, but also a *substantive* conception of which acts are wrong. For example, suppose it can be shown to follow from the concept that you express by 'wrong' (in the relevantly broad sense of 'follow'), that it is morally wrong to ignore someone else's pain if, at little cost to yourself, you could help relieve it.

About such a substantive concept, embodying a substantive view of which act-types count as wrong, it seems we can *always* competently ask:

(Concept Correctness Open Question)   Yes, but is that the *correct* concept of wrong, the one that specifies those acts that are genuinely deserving of moral disapproval? We can all agree that act-type A is ruled wrong by *your* substantive concept of 'wrong'; but is it *genuinely* wrong?

Consider the contrast here with the concept *quadrilateral*. If someone said: 'According to my concept *quadrilateral*, a quadrilateral always has four sides', it wouldn't make any sense to ask, 'Yes, but is that the *correct* concept *quadrilateral*? Is that the concept that delivers the genuinely correct verdicts about how many sides quadrilaterals have?' (Of course, one could always ask whether a particular concept expressed by a word w is identical to the one that other members of one's community also express by w; but that is a different matter.)

By contrast, it always seems to make sense to ask, about any moral concept that embodies a *substantive* view about what counts as right and wrong, whether it is correct, whether it correctly reflects whatever moral facts there are about the right-ness and wrongness of acts.[24]

Although the matter deserves a great deal more discussion than I can give it here, the argument I have offered seems not to be restricted to *moral* concepts but would appear to apply to any *normative* concept whatsoever, including those that are characteristic of the theories of rationality and justified belief.[25, 26]

If these considerations are correct, we cannot think of the a priori justified normative judgments that we are tempted to make as simply revealing to us some information that is already encoded within our canonical normative concepts.

Furthermore, if these a priori justified normative judgments are supported by intuitions, as they often seem to be, then those intuitions cannot be thought of as simply revealing to us the natures of our moral concepts (as on Basis accounts), but

must be thought of more ambitiously, as revealing to us the true natures of moral right and wrong.

Fine (2002) would resist this last conclusion. He has maintained that Moore's Open Question Argument defeats not only the claim that normative truths are built into our moral *concepts*, but also the view that they are built into the very *natures* of the *properties* of right and wrong. Since Fine takes it that all metaphysically necessary truths are grounded in facts about the natures of the implicated properties, he concludes that moral truths cannot be regarded as metaphysically necessary but must be thought of as involving a *sui generis* notion of necessity, namely, *normative necessity*. This view of moral truths makes them analogous to nomological necessities, like laws of nature—that is to say, contingent from a metaphysical point of view.

This is quite a startling picture of moral truths and makes it very hard to see how we could have any a priori *knowledge* of them—via intuition, or in any other way.

It is, therefore, important to see that Fine's conclusion about moral properties is not supported by the version of Moore's Open Question Argument that I have been presenting here. My version applies exclusively to the normative *concepts*, asking whether any particular normative concept could encode substantive normative facts. This might equivalently be put by asking whether any particular normative concept correctly reflects the essence of the properties of right and wrong that are designated by our normative concepts.

What does follow from my version of Moore's argument is that, if intuition-backed moral knowledge is to be possible, there must be intellectual seemings whose justificatory power is not sourced in the understanding alone.

The acknowledgement of such non-understanding-sourced intuitions will sit ill with the theories of many philosophers, even of those who are not skeptical about intuitions. Intuition-friendly philosophers like Sosa, Goldman, and Pust, for example, all insist that intuitions ultimately derive whatever probative power they have from being sourced in the understanding (see Sosa 1998, 2007; Goldman 2007; Pust 2000).

However, if my argument works, it shows the need for an epistemic resource in the theory of the a priori that is not merely grounded in our conceptual understanding. Since I believe that it is independently plausible that that resource is provided by the rationalist notion of an intuition, or intellectual seeming, I take it to be an argument for the existence of such intuitions, ones whose probative power derives not merely from our understanding of concepts.

To put this point another way, we must recognize a distinction between a proposition that is *self-evident*—that is justifiably believable simply on the basis of being understood—and propositions that are *intuitive*—that is justifiably believable not merely on the basis of being understood but also because, when one considers them, one has the intellectual impression that they are true.

Interim Summary

I have argued that there are two distinct types of understanding-based accounts of a priori justification, Constitutive and Basis. While the first type of account relies on there being constitutive assents, the second one does not.

I further argued that both types of theory survive the invocation of the phenomenon of expert competent dissent, a phenomenon that is widely taken to undermine any understanding-based account of a priori justification.

However, I noted that a Basis model needs to rely on the notion of an intuition in order to provide a satisfactory epistemology of a priori justification.

And that, in any case, there are important instances of a priori justification that cannot be explained at all by understanding-based accounts.

I concluded that this establishes the need to recognize intuitions as a source of a priori warrant, alongside the understanding.

The Non-Uniformity of Sources of the A Priori

If the argument up to this point is correct, justification in the a priori domain has more than one source—some a priori justification is grounded in the understanding, while some is grounded in intuition.

Is this a plausible outcome? Shouldn't all a priori justification derive from a single source in much the way in which (as we are prone to think) all a posteriori justification derives (ultimately) from the single source of sensory experience?

That the a posteriori has a single source is secured trivially and by definition—the a posteriori just is justification that derives ultimately from experience. (That's not to deny, of course, that there are different subspecies of a posteriori justification—for example, inferential and perceptual.)

A priori justification, by contrast, has a merely negative characterization: it is that justification which is not a posteriori. And this means that there is no definitional guarantee that everything that is a priori will have the same epistemic source. For all that the notion of apriority speaks to, it is possible that some a priori justification has its source in the understanding and the rest in some other source, for example, in intuition.

Basic Skepticism about Intuitions: Phenomenology and Intellectual Seemings

But how could intuitions reveal to us the true natures of such properties as right and wrong, or of any other property for that matter? Isn't this just to postulate one mystery in order to solve another?

I understand well this type of skepticism about the justificatory power of intuitions; I used to endorse it myself.[27] But, as I've indicated, I've come to think that an appeal to intuitions is inevitable and that many of the misgivings that philosophers have about them are misguided. Obviously, there is a huge number of issues to be discussed; here I'll only be able to make a start on some of the most basic.

An intuition, as I understand it (following many others), is an intellectual *seeming*.[28] An intellectual seeming is similar to a sensory seeming in being a presentation of a proposition's being true; yet dissimilar to it in not having a sensory phenomenology.

It is also to be sharply distinguished from any species of judgment; it must be understood as pre-judgmental and pre-doxastic, if it is to be capable of serving as an *epistemic basis* for a judgment.

To illustrate, let's go back to the case of the Trolley problem about whether to throw the large man off the bridge in order to save the lives of the five innocents trapped below. In thinking about this case, it can come to very vividly seem to you that it would be wrong to throw him off the bridge. But we can also imagine that even while it so seems to you, you hesitate to make the judgment, wanting to assure yourself that you have not overlooked anything. Finally, satisfied, you make the judgment that it would be wrong. The state of its seeming wrong to you was intellectual, not sensory; yet evidently pre-judgmental and pre-doxastic. When the judgment finally came, it was based on that pre-judgmental seeming.

This, and many other intuitive judgments appear to instantiate this type of *three-step process*: you consider a scenario and a question about it; after sufficient reflection, a particular answer to that question comes to seem true to you, either because, as we saw earlier, you work out that it is true, or because, without working it out, it just comes to strike you as true; finally, you endorse this proposition.

Recently, however, a great deal of skepticism has been directed at the very existence of intellectual seemings in the sense invoked here. Skeptics say that when they try to introspect intellectual seemings they come up empty (Cappelen 2012, Deutsch 2015, and Williamson 2005). All they encounter, they say, is either the judgment itself, or, if you insist on something pre-judgmental, an *inclination to judge*. Williamson, for example, says:

Although mathematical intuition can have a rich phenomenology, even a quasi-perceptual one, for instance in geometry, the intellectual appearance of the Gettier proposition is not like that. Any accompanying imagery is irrelevant. For myself I am aware of no intellectual seeming beyond my conscious inclination to believe the Gettier proposition. Similarly, I am aware of no intellectual seeming beyond my conscious inclination to believe Naïve Comprehension, which I resist because I know better.   (2007a: 217)

It is certainly true that a vivid phenomenology is not ordinarily associated with the intuitions we have in response to thought experiments. But I don't believe that this observation gives us an adequate basis for being skeptical about intuitions, that it marks a distinction between intuitions and other undeniably real phenomena of conscious mental life.

Consider the very thing that the intuition skeptic is *not* skeptical about—namely, *occurrent judgment*. As I survey this room, there is a sense in which I am making dozens of judgments, and acquiring the corresponding beliefs. If this way of putting things seems somehow too 'active', then let's say that as I survey this room I *note* various things and *accept* various propositions and thereby acquire the corresponding beliefs.

But it would be false to say that each of those occurrent noticings, acceptances, or judgments has its own distinctive phenomenology, at least not if what we mean by 'phenomenology' is the type of phenomenal quality that is characteristic of sensation. Certainly, I can make various judgments without saying the words of a public

language to myself (as John Broome seems to have been inclined to say at some point (see Broome 2013)).

Another interesting example of a conscious mental phenomenon that lacks a distinctive phenomenology is a phenomenon I have come to label 'taking'. I believe a strong case can be made for saying that what distinguishes person-level *inference* from mere *associative thinking* is that, in an inference, the transition from one thought to another is mediated by the thinker's *taking it* that the 'premise' thought supports the 'conclusion' thought (see Boghossian 2014). But it would be wrong to identify this taking with a mental state that has a distinctive phenomenology.[29]

Thus, the absence of a vivid phenomenology should not be regarded as decisive grounds against the existence of intellectual seemings.

Justification by Inclinations to Judgment

Well, perhaps there is no good reason *not* to believe in intellectual seemings; but what *positive* reason is there to believe in them? Why can't we do whatever needs doing simply with the notion of an 'inclination to judgment', as Williamson claims? Why do we need to recognize phenomenologically elusive states of conscious 'intellectual seemings' which are not themselves judgments, or inclinations to judge?

The main reason for being dissatisfied with any sort of doxastic substitute for intellectual seemings is that no such substitute could give us the means by which to explain, in any sort of internalistically acceptable way, how we could be *justified* in making the a priori judgments in question.

Consider again the Gettier scenario and the Gettier judgment that we end up with, that Mr. Smith has a justified true belief but does not know. This judgment, we believe, is strongly justified, indeed, so strongly justified that it is capable of refuting the very strongly entrenched JTB theory. Moreover, we take it to be justified a priori. Let us assume we are correct in these assumptions. How is the intuition skeptic, who believes only in inclinations to judgment, to explain these facts?

On the intuition-friendly story, the Gettier judgment is justified by the Gettier intuition: that Mr. Smith, in the circumstances as described, has a justified true belief but does not know is supported by its intellectually seeming to the thinker that Mr. Smith has a justified true belief but does not know. We shall shortly look at this story in greater detail. But it has an epistemic form that is familiar to us from the empirical case (the justification of judgment by sensory seemings).

But what can the intuition skeptic offer us?

He can try saying that your Gettier judgment is justified by your *inclination* to make it. But that wouldn't by itself be a good answer. Your being inclined to judge that p is not usually a good reason, all by itself, for your believing that p.

Here, once again, Reliabilism would be able to provide an easy solution. Suppose your being inclined to judge that p were, under the relevant conditions, a reliable means of arriving at the truth. Then, under the terms of Reliabilism, your judgment that p would be justified by your inclination, without there being any need to postulate intellectual seemings as the basis for the judgment that p.

Unfortunately, Reliabilism is false.[30] (It is striking how dramatically the landscape of epistemological issues would be affected if Reliabilism were a viable theory of epistemic justification.)

If we set Reliabilism aside, the only other conditions under which your inclination to judge that p would justify your judging that p would be if your inclination were based on its following, and on its seeming to you to follow, from some justified background theory of yours, that p.

If we apply this observation to the Gettier case, the only conditions under which your inclination to make the Gettier judgment could justify your making the Gettier judgment would be if it followed, and seemed to you to follow, from your background theory of knowledge, that Mr. Smith has a justified true belief but does not know.

The trouble (as we have already seen) is that your background theory of knowledge is presumably the JTB theory of knowledge. And far from its following from the JTB theory that Mr. Smith does not know, it is actually *inconsistent* with the JTB theory that Mr. Smith does not know. Indeed, the JTB theory is what gets refuted by the Gettier judgment.

So, how, on this account, could we be justified in making the Gettier judgment? However, if we are not justified in making the Gettier judgment, how could it be rational for us to have overthrown centuries of epistemological theorizing on its basis?

The problem here is a perfectly general one, as I hope is clear. Through thought experiments, and other exercises of the imagination and/or understanding, we arrive at (typically direct) a priori truths that can serve to refute previously well-established background theories.

The intuition-skeptic's story, that the a priori judgment flows from an antecedently justified background theory, is deeply problematic, because that background theory may not only not entail the judgment; it may actually be refuted by it.

Someone might believe this objection to the intuition-skeptic too hasty for the following reason. Admittedly, our intuitive judgment about the Gettier case does not derive from our *explicitly* held philosophical theory about knowledge, the JTB theory. But perhaps there is some *other* theory that we hold not explicitly, but *tacitly*, and that entails the Gettier judgment? When we react to the Gettier thought experiment with the Gettier judgment, might we not be manifesting our acceptance of this *tacit* theory?[31]

There are at least two reasons why this line of thought can't save the proposal on offer.

First, if appeal to such a tacit theory is to genuinely shore up an intuition-skeptical view, it had better be uncontroversial that the propositions of this tacit theory can themselves be justified without appeal to intuitions. However, if my previous discussion of the synthetic a priori status of normative propositions is correct, they cannot be.

Second, and putting this first objection to one side, we would still need to explain why we always trust the deliverances of the tacit theory *over* those of the explicit one. Why do we treat the putative Gettier truth as a *counterexample* to the JTB theory? Why not, rather, regard the thought experiment as showing that we hold a

false *tacit* theory on the grounds that it has been shown to be in conflict with what the received view, the JTB theory, predicts?

Think of the corresponding issue as it might arise in the empirical sciences. If we discerned a conflict between an innately acquired and tacitly held *folk physics*, and an explicitly arrived at physical theory, we certainly wouldn't immediately privilege the folk physics. On the contrary, we would typically consider it refuted.[32] With what justification, then, do we privilege the tacit theory of knowledge over a theory that had been developed by such giants as Plato and Russell, and which had been accepted as received wisdom by countless generations of philosophers?

The fact that we (nearly) always privilege the intuition-supported judgment shows that we regard it as more strongly justified than its negation, a negation which is supported by all those explicit arguments.

But we don't yet have an explanation of why we would be right to do so, if we are restricted to appealing solely to the resources provided by the intuition-skeptic. It remains to show, of course, that we don't face a similar epistemological difficulty, if we help ourselves to the idea of an intellectual seeming. Unfortunately, that is a huge task which cannot be undertaken within the confines of the present volume and so will have to await another occasion.

Conclusion

Understanding-based accounts are plausible for a range of important cases of a priori justification. They come in two importantly different versions, neither one of which is defeated by the phenomenon of expert competent dissent.

However, the theory of the a priori cannot hope to make do without appeal to a notion of intuition or rational insight. This is so both because the Basis version of an understanding-based account needs to rely on it in spelling out how it proposes to do its epistemic work; but also because, more importantly, there are propositions that are synthetic a priori.[33]

Notes

1. This paper is published here for the first time.
2. In my sense, a person has 'understanding' of or 'competence with' a concept if he has mastery of the concept. If we think of concepts as individuated by their conceptual role, then a master of a concept would have a full grasp of the concept's individuative conceptual role. He wouldn't be like the subject in Burge's (1979) famous thought experiment, Burt, who has an incomplete understanding or faulty understanding of the concept *arthritis*, believing that arthritis can also occur in the thigh. Burge advocates saying that there is a notion of concept possession according to which Burt possesses the concept *arthritis* despite having a faulty grasp of it. I need not deny that claim. But I do need to insist that the sort of understanding that is presupposed by understanding-based accounts of a priori knowledge has to be the sort of 'full understanding' characteristic of the experts, rather than the sort of 'partial understanding' that may be possessed by ordinary folks. (Alternatively, you could take me to be talking about a priori knowledge involving propositions containing 'non-deferential' concepts.)

3. I shall work within a Fregean framework. I shall designate concepts by italicizing the English words that typically express them and propositional contents by italicizing the English sentences that typically express them.

4. The first point is entirely consistent with my previous commitments; the other two are not.

5. Later in the paper, when I discuss our a priori knowledge of normative propositions, I will explain why (3) and (4) may not ultimately be good candidates for understanding-based accounts; at this stage of the argument, though, this won't matter.

6. This was not clear in my (1996) but was clarified in my (2003b).

7. Why should these two types of explanation be seen as mutually exclusive? Suppose that S's understanding of p is constituted by S's disposition to assent to p. It would follow that S's understanding of p cannot serve as a good epistemic basis for S's assent to p, since, in general, S's disposition to assent to p cannot serve as an epistemic basis for her assent to p, let alone a good one.

8. An alternative version, favored, for example, by George Bealer (1998), would run the theory in terms of a subject's needing to have the *intuition* that instances of 'If A and B, then A' are true. I am open to this version of a conceptual-role semantics.

9. In my 2003b, this type of bridge principle is called the 'Meaning-Entitlement Connection.'

10. The qualification 'in the right way' is there to accommodate the possibility of deviant causal chains, a complication that need not detain us.

11. For present purposes, 'rejecting p' and 'dissenting from p' are to be taken to be equivalent to 'refusing to assent to p'.

12. A similar emphasis on the conceptual role's being 'underived' can be found in Schiffer 2013.

13. For concreteness I focus on a particular case, that of *and*. In his 2011, Williamson claims that I have retreated to this case having conceded defeat for Modus Ponens and other logical rules. I have no idea why he says that. Everything I say about conjunction could be adapted to the case of the other logical constants and their constitutive rules. In any case, the question under consideration is whether he has succeeded in devising a *general* recipe for defeating any proposed understanding–assent link. It's perfectly fair to assess his claim to have done so in the way that best exposes its weaknesses.

14. Williamson himself describes his relation to Naïve Comprehension along similar lines: 'Similarly, I am aware of … my conscious inclination to believe Naïve Comprehension, which I resist because I know better' (2007a: 217).

15. This is also argued for in Boghossian 2012.

16. It is important to see that a Basis view is not committed to any *particular* conception of the understanding of a concept.

17. While it is common for friends of the a priori to include examples involving knowledge as examples of a priori propositions that are covered by understanding-based accounts, we will later see a reason for doubting that any normative proposition falls under such an account. For now, I will go along with the common assumption.

18. Precisely how to describe the epistemology of such cases requires a lot more investigation than it has received.

19. Indeed, not only may (9) strike you as true, but so might its modalized, quantified counterpart: $\Box$ ($\forall$x) ($\forall$p) [xGp $\rightarrow$ xJTBp $\wedge$ ¬xKp]. Williamson (2007a) has disputed this characterization of the content of the proposition that's judged in this and other thought experiments. Limitations of space prevent me from discussing his objections here. I will just record my conviction that this standard representation of the judgment involved in thought experiments seems to me correct.

20. I will soon be arguing that normative propositions are not knowable a priori on the basis of the understanding alone. But this will not affect the use to which I am putting them here,

which is to illustrate the way in which some a priori propositions can simply strike us as true, without our working them out, without our having much of a sense of which features of the situation ground their truth.

21. I'm grateful to Barry Smith for emphasizing to me that it is the same notion of intuition that is at work in this connection as in connection with philosophical thought experiments.

22. By a moral judgment, I will always mean here a pure moral judgment that predicates of some act type, some canonical moral property such as 'right' or 'wrong,' 'good' or 'bad'. Judgments that predicate moral properties of individuals—as in 'Donald Trump is evil'— will be impure moral judgments whose truth will partly depend on that of the pure ones and partly on the truth of nonmoral judgments (about e.g. Donald Trump's biography).

23. A committed relativist about morality once publicly rejected my claim that we all believe (13) to be true and justified, by saying that she thought it depended on how much fun was at issue, drawing gasps from the room.

24. It might be thought that this argument presupposes a realist view of morality and that this limits its applicability. It's not clear to me how much of a realist view it presupposes, but certainly not more than I take to be true.

25. This is why I earlier said, in footnote 5, that propositions (3) and (4), involving the normative notions of knowledge and justification, may not ultimately be explicable by understanding-based accounts.

26. You might worry that if this argument locates any interesting division at all between concepts, it's not one between the normative and the non-normative. For isn't there a correctness open question about, for example, natural kind concepts, which are not in any obvious way normative concepts? I don't believe so: the sense of the open question in the two cases seems to me to be distinct. In the case of a normative concept, we can ask whether any of the purported truths yielded by the substantive normative concept is true. In the case of a natural kind concept, we can ask whether it 'carves nature at the joints', we are asking not whether the propositions it encodes are true, but rather whether they are nomological or counterfactual-supporting, or something along those lines.

27. See my (2003a). For another exposition of skepticism see Wright (2004).

28. See, for example, Bealer (1992). Some philosophers deny that intuitions are best understood as a species of seeming. John Bengson (2015), for example, thinks that intuitions should be thought of as presentations, rather than seemings. The difference between them is supposed to be that while the content of a seeming would be explicitly available to a subject, the content of a presentation need not be. I believe that, in this sense, presentations won't be able to epistemically justify a belief that is based upon them, but I won't go into this issue here.

29. In Ned Block's (1995) terminology, these states may be taken to be 'access conscious' without being 'phenomenal conscious'.

30. See Cohen (1984), Foley (1985), and Bonjour (1985).

31. Some who hold this view might be tempted by the thought that this tacit theory constitutes our grasp of the concept knowledge.

32. An example I learned from Gilbert Harman: humans seem innately to believe that an object (like a bomb) thrown from a moving object (like an airplane) will fall in a straight line. According to our best physical theories, however, such an object would move in a parabolic path in the direction in which the plane was moving when it released it.