1 The A Priori

In the previous chapter, I argued for a restricted version of Conditional Scrutability by arguing that all ordinary truths are a priori scrutable from $PQT_I$. In this chapter I extend those arguments to A Priori Scrutability. In particular, I argue that all ordinary truths are a priori scrutable from $PQT_I$. First, however, it is worth taking some time to clarify the notion of the a priori that I am using.

Standardly, the notion of apriority applies most fundamentally to knowledge and justification, and perhaps derivatively to propositions. Typically, one says that a subject knows a priori that $p$ when they know that $p$ with justification independent of experience. A subject knows a posteriori (or equivalently, knows empirically) that $p$ when they know that $p$ with justification that depends on experience. One can then say that $p$ is knowable a priori, or more simply that $p$ is a priori, when it is possible that someone knows a priori that $p$.

It is somewhat less standard to associate apriority with sentences. One could start with the definitions above and simply say that a sentence $S$ is a priori when it expresses an a priori proposition. But to get the right results, this would require a fine-grained Fregean conception of propositions. As I discussed in chapter 2, given my dialectical purposes I cannot simply stipulate this conception of propositions. And given alternative conceptions of propositions, this notion of apriority will behave in quite different ways that will not serve my purposes. So instead I have defined apriority in a way that does not obviously depend on the choice between various accounts of propositions. On this approach, the apriority of sentences is defined in terms of the apriority of thoughts, the mental states that are expressed by sentences.

On the definition in Chapter 2, we can say that a thought is a priori justified when it is justified independently of experience. A thought constitutes a priori knowledge when it is a priori justified.
and constitutes knowledge in virtue of that justification. A thought constitutes potential a priori knowledge when it is possible that on (perhaps idealized) reflection, it can come to constitute a priori knowledge. In this case, we can also say more simply that the thought is a priori.

Correspondingly, for a context-independent sentence $S$, we can say that $S$ is known a priori by a subject when the subject has a thought that constitutes a priori knowledge and is apt to be expressed by $S$. $S$ is justified a priori when $S$ expresses a thought that is justified a priori. $S$ is knowable a priori or just a priori when it is possible that someone knows $S$ a priori.

When $S$ is context-dependent, its apriority may depend on context. For example, it may be that ‘bald’ is context-sensitive in such a way that ‘Someone is bald iff they have no hairs on their head’ is a priori in some contexts but not others. Following the discussion of context-dependence in chapter 2, we can say that $S$ is known a priori in a context (in which $S$ is uttered) if the utterance of $S$ in that context expresses a thought that constitutes a priori knowledge. (Equivalently, a sentence token is a priori if it expresses such a thought.) $S$ is justified a priori in a context when it expresses a thought in that context that is justified a priori. $S$ is knowable a priori, or just a priori, in a context when it expresses in that context a thought that constitutes potential a priori knowledge.

This conception should be understood as stipulative. One could define ‘a priori’ in different ways, but most alternative definitions will not serve my purposes as well. There is no need to adjudicate the terminological question of which of these conceptions is the correct one. In what follows, I will remark on some other features of this conception.

**Mode-of-presentation sensitivity:** Intuitively, ‘Hesperus is Phosphorus’ express a posteriori knowledge. Some theorists (e.g. Salmon 1986; Soames 2002) hold that the sentence expresses a trivial singular proposition (that Venus is Venus) that can be known a priori, and for this reason classify the sentence as a priori. These theorists are invoking a different conception of apriority from the one defined above, however. On the current definition of apriority, the sentence is not a priori in a typical context. The thought expressed by a typical utterance of ‘Hesperus is Phosphorus’ clearly cannot be justified independently of experience: there is no process of reasoning that starts with this very mental state and ends with its constituting a priori knowledge. At best, a different thought (one expressible by ‘Hesperus is Hesperus’, for example) associated with the same singular proposition can be so justified.

It might be objected that if expression of a thought by an utterance requires only that the thought and the utterance have the same content, and if the contents of both are singular propositions, then ‘Hesperus is Phosphorus’ might express a thought that Venus is Venus, which is a
priori. Likewise, it might be objected that if persistence of a thought over time requires merely sameness of content, then a thought that Hesperus is Phosphorus might become justified a priori in virtue of persisting as a thought that Hesperus is Hesperus. In response, we can note that the notions of expression and persistence, as discussed in Chapter 2, certainly require more than sameness of content: they require appropriate causal, psychological, and inferential connections, of a sort that are absent in the purported case of expression and persistence above.

On the current definition, the apriority or non-apriority of a sentence is not simply a function of the referents of the parts of the sentence. For example, although ‘Hesperus is Phosphorus’ above is not a priori in a typical context, and the same goes for ‘If Hesperus exists, Hesperus is Phosphorus’, ‘If Hesperus exists, Hesperus is Hesperus’ is plausibly a priori in all typical contexts. On this approach, as on the intuitive understanding, apriority is sensitive to mode of presentations. The last two sentences differ in apriority despite the expressions used having the same referents, and differing only in the way that those referents are presented. We do not need to make any explicit stipulations about modes of presentation to obtain this result. The phenomenon in question results from the stipulation that the apriority of a sentence in a context depends on the epistemic properties of the thought expressed by an utterance of the sentence, where these epistemic properties are tied to the inferential role of the thought in cognition. There is no doubting that the thoughts associated with the two sentences above are associated with quite different inferential roles.

To say that sentence $S$ is a priori in a context centered on speaker $A$ is not to say that a knowledge ascription of the form ‘$A$ knows a priori that $S$’ (or ‘$A$ can know a priori that $S$’) is true. Clearly ‘If I exist and am located, I am here’ may be a priori for a speaker even if that speaker cannot know a priori that if I exist and am located, I am here. The criteria may also come apart in cases where ascriber and ascribee use the expressions in $S$ with different modes of presentation. The current construal of apriority requires no commitment on the semantics of attitude ascriptions (although in Chalmers forthcoming, I have argued for a Fregean treatment of these ascriptions). What I have said here about the non-apriority of ‘Hesperus is Phosphorus’ is even consistent with a Russellian semantics for attitude ascriptions, on which ‘$A$ knows a priori

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2I note, though, that Russelians who accept guises or modes of presentation can define something close to the current notion by appeal to these entities. For example, Salmon (1993) allows that a proposition is $w$-apriori relative to a given way of taking it if the proposition can be known a priori under that way. One could then suggest that a sentence $S$ is a priori in a context (in which $S$ is uttered), in the current sense, if the proposition it expresses is $w$-apriori relative to the way the proposition is presented in the utterance of $S$ in that context. The apriority of a thought could be defined in a similar way. In this sense, ‘Hesperus is Phosphorus’ will certainly not be a priori in typical contexts, even on a Russellian view.
that Hesperus is Phosphorus’ is true.

The notion of apriority I have defined here presupposes the notions of thoughts, expression, and persistence. If one rejects these notions, one will have to define the apriority of a sentence in some other way. One could appeal to Fregean propositions, or to associated guises, or perhaps to ancillary propositions. But again, at least once general skepticism about the a priori (discussed in the seventh excursion and in the next chapter) is dismissed, it is something of a datum that utterances of sentences such as ‘Hesperus is Hesperus (if it exists)’ correspond to a priori knowledge in a way that typical utterances of ‘Hesperus is Phosphorus (if it exists)’ do not. So any satisfactory theory will have to give an account of this distinction.

**Idealization.** The current notion of apriority involves an idealization away from a speaker’s contingent cognitive limitations, and even away from contingent human limitations. A sentence token (of a complex mathematical sentence, for example) may be a priori even if the speaker’s actual cognitive capacities are too limited to justify the corresponding thought a priori. To a first approximation, what matters is that it is possible that the corresponding thought be justified a priori.

On a second approximation one can dispense with the modal definition. As we saw in chapter 2, that definition leads to problems both with semantic fragility and with views on which certain conceivable cognitive capacities are not metaphysically possible. For example, if it turns out that no possible being can construct a proof with more than a million steps, then a statement whose proof requires more steps than this will not be knowable a priori by any thinker. But it will still count as a priori in the idealized sense I am invoking here.

One might invoke a normative idealization here, understanding apriority in terms of what a thinker ideally ought to accept. But perhaps the best option is to understand the apriority of a sentence in terms of the existence of an a priori warrant for that sentence, as discussed in chapter 2. We can say that context-independent sentence S is a priori when there exists an a priori warrant for it (for some speaker), and that a context-dependent sentence S is a priori in a context when is an a priori warrant for accepting it for the speaker of that context. In the mathematical case above, for example, there exists a proof for the sentence, even if it is impossible that the proof be used to prove the sentence. Correspondingly, one can say that there exists an a priori warrant for the sentence, even if it is impossible that the warrant be used to justify the sentence. One can argue that all a priori knowledge is grounded in an a priori warrant, so that a priori warrant is the more fundamental notion around here.

In principle, we can understand the apriority of both sentences and propositions in terms of a
priori warrants. If we do so, the notion will be unaffected by brute constraints on the metaphysical possibility of a priori knowledge. As a bonus, this construal gives us a notion of propositional apriority that is unaffected by the problems of semantic fragility discussed in chapter 2: the propositions expressed by relevant sentences of the form ‘S iff actually S’ may not be knowable a priori, but there exist proofs for these propositions, and the propositions still have an a priori warrant.

Non-experiential justification. The definition of apriority says “justified independent of experience”. Here, what is excluded is a justifying role for experience. It is a familiar point that even in a priori knowledge (say, knowledge of ‘Red is red’), experience may play an enabling role in giving one the concepts that are required for this knowledge. Furthermore, in a priori deduction of one logical claim from another, it is not out of the question that the experience of thought plays a causal role in the inference process. Apriority is compatible with enabling roles and other causal roles for experience: only a justifying role is ruled out. One could capture this notion more precisely in the framework of support structures by saying “has a nonexperiential justification”, where a justification is nonexperiential (to a first approximation) when it is not grounded in experiential evidence.

The paradigm cases of experiential justification are cases in which a subject’s phenomenal experience serves as evidence. For example, a belief that there is a red cube in front of one can be justified by perceptual experience as of a red cube, and an introspective belief that one is in pain can be justified by the pain experience. But there are tricky cases that do not obviously involve an evidential role for phenomenal experience: what about beliefs produced by unconscious perception, or by introspection of other beliefs without involving experience? These should count as a posteriori for our purposes. (On some conceptions, introspective knowledge counts as a priori, but it does not on mine: we do not want “I am hungry” to be a priori scrutable for me from any base, just because I can know it by introspection.) So one might instead stipulate that an experiential justification is one grounded in perceptual or introspective evidence, where this leaves open whether conscious experience per se is involved.

In principle one might also count other sources of justification as experiential: testimonial justification, for example. I will not explicitly include this, as I think that perceptual justification is always involved in testimonial justification, but if someone disagrees, these can be included too. More generally, we might have a category of basic empirical evidence, as in chapter 2, and say that a justification is a posteriori when basic empirical evidence plays a justifying role and a priori when it does not. Basic empirical evidence includes at least perceptual and introspective evidence, but the definition leaves open that it includes more. This question is revisited at the end of the
seventh excursus, following this chapter.

**Conclusiveness.** It is often held that a priori knowledge must meet higher standards than those ordinarily invoked for empirical knowledge. For example, it is sometimes held that a priori knowledge must meet the sort of conclusive standard associated with proof and analysis, rather than the weaker standard associated with induction and abduction. On this conception, an inductive generalization from instances each of which is known a priori—say, generalizing to the truth of Goldbach’s conjecture on the grounds that all even numbers so far examined are the sum of two primes—does not yield a priori knowledge, even though there is some sense in which it is justified as well as most empirical inductive knowledge, and justified a priori. Likewise, an abductive conditional from total evidence to a conclusion that is grounded in and goes beyond the evidence might have some sort of a priori justification, but on this conception it will not yield a priori knowledge.

One might say that this conception is that of the conclusive a priori, since it require that one can conclusively rule out (in a certain intuitive sense) the possibility that the relevant conclusion is false. In the cases above, although one may have non-experiential justification for believing a conclusion, one is unable to conclusively rule out the possibility that the conclusion is false. This standard is higher than the standard typically invoked for empirical knowledge, where one typically allows that induction and abduction can yield knowledge, even though one cannot conclusively rule out (in the same intuitive sense) the possibility that the relevant conclusion is false.

I think there is some intuitive force to the idea that a priori knowledge requires conclusiveness (or at least potential conclusiveness), but we need not adjudicate this matter here. Instead, we can stipulate a notion of the conclusive a priori, which builds in a requirement of conclusiveness, and a notion of the nonconclusive a priori, which does not. Both notions are useful for different purposes, including my own purposes. On the face of it, A Priori Scrutability is still a strong and interesting thesis if it is cast in terms of nonconclusive apriority. Still, for some of my purposes (notably the modal and semantic purposes discussed in the ninth and tenth excursuses), conclusive apriority is the most important notion, and a scrutability thesis cast in terms of it will play an important role.

This raises the question of just how conclusiveness should be understood. Here it is natural to understand conclusive knowledge as certainty. We might take this notion as primitive, or understand it as requiring a justified credence of 1 (though this will not quite suffice, for reasons discussed in Chapter 3), or understand it intuitively as knowledge beyond skepticism: knowledge that enables one to absolutely exclude any skeptical scenarios in which the relevant belief is false.
This epistemological notion should be contrasted with mere psychological certainty, which requires something like full confidence without requiring justification. We might say that certainty in the epistemological sense is justified psychological certainty.

On a traditional view, processes such as induction, abduction, and perception do not yield certainty, but other processes such as deduction, introspection, and perhaps conceptual analysis can yield certainty. For example, it is widely held that a priori reasoning can yield certainty of mathematical claims. Perhaps it is not obvious that we non-ideal reasoners can be certain here, but there is some appeal to the idea that idealized reasoning about logic and mathematics could yield certainty. Likewise, it is arguable that there is at least an ideal warrant for being certain of various mathematical truths.

One complication is that even with ideal a priori reasoning, certainty can be undermined by self-doubt concerning one’s cognitive capacities, as discussed in Chapter 2. To handle this, one might suggest that conclusive knowledge is knowledge that falls short of certainty at most in virtue of this sort of self-doubt. Or perhaps better, one might invoke the insulated idealization discussed in chapter 2, and hold that a thought is conclusively a priori if insulated idealized reflection on the thought would lead to its being accepted with psychological certainty (or: if there is an insulated ideal warrant for its being accepted with psychological certainty).

Even setting aside self-doubt, it is not undeniable that there can be epistemological certainty even for ideal reasoners. Someone might hold that even logical truths are not certain in this way, even on an insulated idealization. If so, then one should probably characterize conclusive knowledge in terms other than certainty (perhaps characterizing it instead by example). Still, it is at least arguable that there can be certainty of this kind. My own view is that the scrutability conditionals I have discussed are in principle knowable with this sort of certainty. But I will leave open the possibility that conclusive knowledge can be defined in some other way.

2 From Conditional Scrutability to A Priori Scrutability

The a priori scrutability thesis that I will consider holds that all ordinary truths are a priori scrutable from $PQTI$. That is, for all ordinary truths $M$, $M$ is a priori entailed by some conjunction of members of $PQTI$. If $PQTI'$, as before, is a conjunction of all truths in $PQTI$, this thesis is equivalent to the claim that for all ordinary truths $M$, $PQTI'$ a priori entails $M$. I will sometimes put this by saying that the material conditional ‘$PQTI' \rightarrow M$’ is a priori: strictly speaking, this formulation applies only to the case where $M$ is a sentence type, but in the case of sentence tokens,
we can understand it naturally in terms of the apriority of a corresponding material conditional in thought.

The arguments in the last chapter—the Cosmoscope argument, the argument from elimination, and the argument from knowability—were all put forward as arguments for Conditional Scrutability, although they can also be interpreted as arguments for A Priori Scrutability. Still, opponents are likely to resist the arguments on the latter interpretation, holding that these arguments at best establish Conditional Scrutability. So here I will assume that the arguments for Conditional Scrutability are successful, and will argue from there to A Priori Scrutability.

One might initially argue from Conditional Scrutability to A Priori Scrutability as follows. If Conditional Scrutability is true, then one is in a position to know from the armchair that if \( PQT I \), then \( M \). If one can know from the armchair that if \( A \), then \( B \), one can also know from the armchair that it is not the case that \( A \) is true and \( B \) is false. It follows that one can know the material conditional ‘\( PQT I \rightarrow M \)’ from the armchair.

There are two main complications here. A minor complication is that although the inference above is plausible when Conditional Scrutability is formulated in terms of conditional knowledge, it is not so obviously plausible when formulated in terms of high rational credences. That is, it is not obvious that whenever \( cr^*(B|A) \) is high, one can know ‘\( A \rightarrow B \)’. Certainly, for any \( x < 1 \), there will plausibly be cases in which \( cr^*(B|A) \) is greater than \( x \) but the subject does not know ‘\( A \rightarrow B \)’. For example, such a case might obtain when \( A \) is ‘I have one ticket in a fair lottery with \( n \) tickets’ and \( B \) is ‘I will not win the lottery’.

If we understand Conditional Scrutability in terms of conditional knowledge, this issue is not a problem. It is plausible that the earlier arguments from the Cosmoscope and the like all work when Conditional Scrutability is understood this way. One can still invoke high conditional credences, as long as “high” is understood as “high enough for conditional knowledge” (perhaps given that relevant background features are in place). This threshold will presumably be context-dependent, but in any case it is again plausible that the arguments will go through. Alternatively, one could understand Conditional Scrutability as making the stronger claim that \( cr^*(M|PQT I) \) is 1. We have seen earlier that this claim is defensible. And it is plausible that the claim that \( cr^*(B|A) = 1 \), one can infer that ‘\( A \rightarrow B \)’ is knowable. Perhaps there are exceptions in cases in which a credence of 1 does not reflect certainty (say, one’s conditional credence that \( x \) is irrational given that \( x \) is a randomly chosen real number), but the case of \( cr^*(M|PQT I) \) is not such a case: the argument for a credence of 1 is also an argument for certainty. In this sort of case, the inference to knowability of ‘\( PQT I \rightarrow M \)’ goes through.
A more serious worry is that armchair knowledge does not entail a priori knowledge. Conditional Scrutability allows that rational credences \( cr^e(B|A) \) may depend on a subject’s existing empirical evidence and beliefs. So any corresponding knowledge of ‘\( A \rightarrow B \)’ may likewise depend on existing empirical evidence or beliefs. The conditional will be knowable from the armchair, in that the subject need not go out and acquire new empirical evidence, but it need not be knowable a priori. So one cannot make a direct inference from Conditional Scrutability to A Priori Scrutability.

For example, Block and Stalnaker (2001) suggest that although conditionals for scenario specifications to truths such as ‘water is H\(_2\)O’ are knowable from the armchair, they are not knowable a priori. They hold that knowledge of these conditionals depends essentially on considerations about simplicity (leading is to identify water with a natural kind, for example), and that these considerations depend essentially on background empirical knowledge: for example, knowledge that the world is simple.

In what follows, I will build on the arguments for Conditional Scrutability to yield arguments for A Priori Scrutability. In the next section, I will argue that in the case for Conditional Scrutability, existing empirical beliefs play no essential justifying role. In the following section, I argue that even if empirical beliefs do play such a role, they can be incorporated into a base that will then support A Priori Scrutability. In section 5, I offer a diagnostic to help determine whether putative empirical evidence (such as evidence that the world is simple in the case above) plays a merely causal role, a mediating role, or a justifying role in knowledge of a scrutability conditional.

### 3 The argument from suspension of belief

An initial, somewhat flat-footed argument for A Priori Scrutability extends the arguments in chapter 3 as follows. Before supposing \( PQT I' \), one could engage in a Cartesian suspension of all empirical beliefs. Even under such a suspension, upon supposing \( PQT I' \) one could rationally conclude \( M \) on that basis just as well as one could have without the suspension. If so, then empirical beliefs play no essential justifying role in justifying one’s conditional belief in \( M \) given \( PQT I' \). Likewise, even suspending empirical beliefs, one can exclude the possibility that \( PQT I' \) is true and \( M \) is false. If so, empirical beliefs play no essential role in justifying belief in the material conditional \( PQT I' \rightarrow M \).

One might object that one’s conditional belief in \( M \) given \( PQT I \) might be justified by experiences rather than by beliefs. To handle this issue, we can note that the justifying role of experiences
is plausibly screened off by its role in justifying certain perceptual beliefs and introspective beliefs. So if one suspends judgment concerning all perceptual and introspective beliefs, then one will remove the justifying role of experience. But it remains plausible that on doing so, one could have a justified conditional belief in $M$ given $PQTI'$. If so, experience plays no essential role in justifying the conditional belief.

I think that this argument gives at least prima facie support to A Priori Scrutability. It is not entirely conclusive, though, as we may be fallible in our reasoning about what counts as suspending all empirical belief. Perhaps the situation that we imagine when we imagine suspending empirical beliefs is really one in which we suspend a proper subset of empirical beliefs. Perhaps some of the beliefs that are purportedly suspended are still playing a subterranean role in justifying one’s reasoning in this scenario. Or perhaps there are empirical beliefs that we do not suspend because we do not realize that they are empirical beliefs.

Still, I think that at least the following is plausible. For any obviously empirical belief $E$, one could suspend judgment in $E$, and one could still come to be justified in accepting the conditional belief that if $PQTI'$ then $M$, and in accepting the material conditional $PQTI' \to M$. The same goes for any class of obviously empirical beliefs. These will include beliefs about most of the things that are most commonly invoked as empirical evidence: conscious experiences, qualitative properties of objects in the external world, and so on. At most, what is left is a possible role for empirical beliefs that are not obviously empirical.

For example, suppose that someone thinks that some or all of the following beliefs are empirical: two is greater than one, all bachelors are male, everything is self-identical. It is not obvious that one could suspend judgment in these beliefs and still be justified in inferring $M$ from $PQTI'$ (though it is also not obvious that one could not). So the argument here does not immediately rule out the hypothesis that the inference is justified by empirical beliefs of this sort. Still, I do not find it plausible that these beliefs are empirical, and empirical justification of this sort would be very different from the way that empirical justification is usually conceived. So if the rest of the argument is successful, then it makes a strong prima facie case against empirical justification.

Another worry is that we may be once again assuming a foundationalist picture on which all knowledge is grounded in reasoning from perceptual and phenomenal beliefs. If that picture is right, then suspending judgment about experience ought to lead to suspended judgment about all knowledge grounded in perceptual beliefs. If that picture is wrong, however, experience may play a more subtle role in knowledge, perhaps a role unknown to the subject and one that the subject cannot undercut. To deal with this worry, as in the last chapter we can invoke the weaker Core
Knowability thesis, according to which all knowable truths are knowable through reasoning from core evidence. If the same applies to conditional knowledge, then even if our own conditional knowledge is not justified in this way, the conditional knowledge in question could be justified in this way. One can then run the suspension of judgment argument on this knowledge to make the case that it is justified independently of experience.

One might also worry that reasoning from core beliefs may itself be empirically justified, being justified by background experience. Now, if the reasoning survives suspension of one’s current empirical background beliefs, this suggests that the reasoning does not depend essentially on those beliefs or on current experience. A remaining possibility is that the reasoning is justified by long-forgotten experience or empirical beliefs, so that suspending current empirical beliefs will not affect the reasoning. I discuss this possibility later in the chapter.

4 The argument from frontloading

Another argument proceeds by “frontloading” any empirical evidence $E$ that might play a role in conditional scrutability into the antecedent of one’s conditional knowledge.

Suppose that one has conditional knowledge that if $PQT'\&E$, then $M$. And suppose that this knowledge is justified by some empirical evidence $E$. Then one is plausibly in a position to know that if $PQT'\&E$, then $M$. Furthermore, $E$ will not play an essential role in justifying this conditional knowledge: there is no need for it to do so, as $E$ is built into the antecedent, and its justifying role in reaching the conditional conclusion that $M$ from the supposition of $PQT'$ can be equally played by supposing it. Perhaps the knowledge that if $PQT'\&E$, then $M$ is itself justified by some further evidence, but then one can repeat the process by conjoining this evidence to the antecedent. If one repeats this process for all relevant empirical evidence, one will eventually end up with a large conjunction $E'$ of evidence statements such that one can know that if $PQT'\&E'$, then $M$ without justification from any empirical evidence. That is, one can know ‘If $PQT'\&E'$, then $M$’ a priori.

This reasoning is especially natural in a Bayesian framework. Suppose that $cr^*(M|PQT \cup E)$ is high, and that this credence is justified by some empirical evidence $E$. Then $cr^*(M|PQT \cup E)$ will also be high. By an extension of the Bayesian principle of conditionalization (which I will discuss shortly), if acquiring total evidence $E$ enables one to have a high rational credence $cr^*(M|PQT \cup E)$, then even before acquiring evidence $E$, one is in a position to have a high rational credence $cr^*(M|PQT \cup E)$. So it is plausible that $E$ plays no essential role in justifying one’s
high rational credence $cr^*(M|PQT I \cup E)$. By repeating this process, one will end up with a large conjunction $E'$ such that a high rational credence $cr^*(M|PQT I \cup E')$ is justified a priori.

If our basic empirical evidence (the empirical evidence in which all empirical justification is grounded) consists in phenomenal states, then $E'$ will itself be implied by $Q$. If so, then $cr^*(M|PQT I)$ is a priori. If our basic empirical evidence consists in claims about external states of affairs that are implied by $P$ (or by $PQT I$), the same applies. If our basic empirical evidence consists in more than this, then $PQT I \cup E'$ will go some distance beyond $PQT I$. And repeating this process for arbitrary $M$ may lead to a larger class, $PQT I \cup E'$, that goes further beyond $PQT I$. But as long as the relevant empirical evidence is itself constrained in form, then $PQT I \cup E'$ will be a compact scrutability base from which all ordinary truths are a priori scrutable. Only if basic empirical evidence is open-ended—for example, if one must make irreducible appeal to evidence sentences about water, kangaroos, trees, and so on—will there be a problem for scrutability.

At this point, one might appeal to the Core Evidence thesis from chapter 3. This thesis holds that all knowledge is grounded in core evidence: evidence about phenomenal states and primary and secondary qualities. However, as in chapter 3, we do not need a thesis as strong as this, or as strong as the claims in the previous paragraph. Instead we can again appeal to the Core Knowability thesis, which holds that all knowable (non-Fitchian) truths are knowable with grounds in core evidence. It is easy to extend the Core Knowability thesis to conditional knowledge, using the arguments in chapter 3. We can also argue for a subject-specific version: when $s$ is in a position to know $A$ conditional on $B$, then $s$ is in a position to know $A$ conditional on $B$ with this knowledge grounded in core evidence.$^3$

These versions of the Core Knowability thesis enable an argument from Conditional Knowability to A Priori Scrutability. From Conditional Scrutability, it follows that $s$ is in a position to know $M$ given $PQT I'$. The Core Knowability thesis above entails that $s$ is in a position to know $M$ given $PQT I'$, with the knowledge grounded in core evidence $E$. So by the reasoning above (discussed more below), $s$ is in a position to know $M$ given $PQT I' \& E$, with justification independent of $E$. So $M$ is a priori scrutable from $PQT I \cup E$. Furthermore, $PQT I \cup E$ is certainly compact, and $E$ is plausibly a priori scrutable from $PQT I$. If so, $M$ is a priori scrutable from $PQT I$.

This argument requires what we might call a frontloading principle. A simple frontloading

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$^3$It is arguable that there is no analog of Fitchian phenomena for conditional knowledge from $PQT I$. On the analysis in chapter 2, Fitchian phenomena are tied to alethically fragile sentences: cases where $M$ is true but properly investigating $M$ would render $M$ false. In a case where if $PQT I$, then $M$, it is hard to see how properly investigating this conditional could render it false.
principle holds: if a rational agent knows $M$ with justification from $E$, then they can have conditional knowledge of $M$ given $E$ with justification independent of $E$. Strictly speaking, we need a slightly more complex frontloading principle: if a rational agent has conditional knowledge of $M$ given $N$, with justification from $E$ (perhaps along with other sources $F$), then they can have a conditional knowledge of $M$ given $N&E$ with justification that is independent of $E$ (and that involves no sources outside $F$). I will focus on the simpler version for ease of discussion, but everything below applies to the more complex version.

We can also put these principles in the probabilistic framework. Simple version: if having a high credence $cr^*(M)$ is justified by $E$, then having a high conditional credence $cr^*(M|E)$ is justified independently of $E$. Complex version: if having a high credence $cr^*(M|N)$ is justified by $E$, then having a high conditional credence $cr^*(M|N&E)$ is justified independently of $E$.

These frontloading principles have strong intuitive support. One can argue for the simple frontloading principle as follows. Given that $E$ justifies $M$, then one could in principle (i) suspend judgment concerning $E$, (ii) suppose (for the purposes of conditional reasoning) that $E$, (iii) conclude (under this supposition) that $M$, with justification provided by $E$’s support for $M$, and (iv) discharge the supposition, yielding a justified conditional belief in $M$ given $E$. This conditional belief is justified even though one has suspended judgment concerning $E$, so that $E$ played no non-suppositional role in its support. So the conditional belief in $M$ given $E$ is justified independently of $E$.

This argument requires an appeal to suspension of judgment, but here it is just a single act of suspension of judgment concerning a clearly empirical truth, so that many of the concerns in the previous argument do not apply. The main question concerns step (iii): could it be that $E$’s support for $M$ itself somehow depends on $E$, in a way such that suspending judgment about $E$ also undermines the epistemic connection between $E$ and $M$? This would be at least odd. Typically, if $P$’s support for $Q$ itself depends on support from some further claim $R$, then one can combine these elements of support, yielding a combined support by $P&R$ for $Q$ that does not depend on $R$’s support in this way. On the face of it, in this fashion one could combine all the ways that $E$ provides support into a single support relation that does not depend on $E$. And typically, we take it that evidential support can be provided equally whether the evidence is accepted (to support a conclusion) or merely supposed (to conditionally support a conclusion).

Indeed, something like this claim is at the foundation of the Bayesian principle of conditionalization. The ordinary principle of conditionalization says (in the relevant version):
Conditionalization: If \( pr^*(M|E) = \phi \) at \( t_1 \), and if one acquires total relevant evidence \( E \) between \( t_1 \) and \( t_2 \), then \( pr^*(M) = \phi \) at \( t_2 \).

One might think that Conditionalization entails a reverse principle:

Reverse Conditionalization: If \( pr^*(M) = \phi \) at \( t_2 \), and one acquires total relevant evidence \( E \) between \( t_1 \) and \( t_2 \), then \( pr^*(M|E) = \phi \) at \( t_1 \).

If this principle were correct, then it could be used to support the frontloading argument: clearly \( pr^*(M|E) \) could be justified independently of \( E \), as one does not possess evidence \( E \) at \( t_1 \). And the principle has a certain plausibility. After all, if \( pr^*(M|E) \) had a value other than \( \phi \) at \( t_1 \), then conditionalization itself would be violated. However, reverse conditionalization is not entailed by conditionalization alone. The gap between the two theses arises because it is compatible with conditionalization that \( pr^*(M|E) \) at \( t_1 \) is undefined. Some versions of Bayesianism require that all conditional and unconditional credences are defined, and these versions will be committed to reverse conditionalization. But there is room in logical space for exceptions.

For example, an opponent might suggest that an exception will arise if the subject is unable to even entertain \( E \) at \( t_1 \) because they lack crucial concepts. Here one might imagine that \( E \) specifies a certain sort of color experience, such that one could not even possess the concepts prior to having a relevant sort of experience.

Still, it is not clear that exceptions of this sort threaten the argument from frontloading. For a start, it is not clear that there are concepts of this sort. For example, it is plausible that at least in principle one could come to have any phenomenal color concept through brain surgery, without having had the relevant experiences. If so, then we can change events prior to \( t_1 \) so that the subject has the concepts in this way, without any relevant new evidence. Then the obstacle to a conditional credence in \( E \) given \( M \) will be removed, and on acquiring evidence \( E \) the subject will presumably come to have the same \( pr^*(M) \) at \( t_2 \) as before. Here it is plausible that \( pr^*(M|E) \) will be high and justified independently of \( E \).

To be more precise, we can appeal to a weaker principle:

\textit{Diachronic Frontloading: If} \( pr^*(M) = \phi \) \textit{at} \( t_2 \), \textit{and one acquires total relevant evidence} \( E \) \textit{between} \( t_1 \) \textit{and} \( t_2 \), \textit{and} \( pr(M|E) \) \textit{is defined at} \( t_1 \), \textit{then} \( pr^*(M|E) = \phi \) \textit{at} \( t_1 \).

\footnote{It should be noted that if one moves to a framework (such as Jeffrey Conditionalization) on which \( pr(E) \) can be less than 1 for evidence statements, then one will have to restate the consequent of reverse conditionalization principles to say that \( pr^*(M|E) \geq \phi \). This will still be good enough for the purposes of the argument.}
Diachronic Frontloading is weaker than Reverse Conditionalization, because of the extra requirement that \( cr(M|E) \) is defined at \( t_1 \). Because of this extra requirement, Diachronic Frontloading is certainly entailed by Conditionalization. Furthermore, in the case just mentioned, it appears that \( cr^*(M|E) \) will be defined: certainly any obstacle due to the possession of concepts will be removed. Then Diachronic Frontloading entails that \( cr^*(M|E) \) will be high, and justified independently of \( E \). This suggests strongly that \( cr^*(M|E) \) is justifiable independently of \( E \) in the original case.

If there are concepts whose possession requires having certain experiences, the last observation will not go through. But even here, the observation merely suggests an enabling role for \( E \) in entertaining the conditional belief in \( M \) given \( E \). Nothing here suggests a justifying role, which is what an opponent of the current argument needs.

Furthermore, one can extend the thesis to cover any remaining cases. Given Diachronic Frontloading, the following closely related Synchronic Frontloading principle is extremely plausible.

**Synchronic Frontloading**: If \( cr^*(M) = \phi \) at \( t_2 \), and one acquires total relevant evidence \( E \) between \( t_1 \) and \( t_2 \), and if \( cr(M|E) \) is defined at \( t_2 \), then \( cr^*(M|E) = \phi \) at \( t_2 \), with justification independent of \( E \).

Here we simply change \( t_1 \) to \( t_2 \) in the latter parts of the statement of Diachronic Frontloading. In this case, the conditional probability \( cr^*(M|E) \) will be temporally posterior to the acceptance of evidence \( E \). But the same reasons as before suggest that it is epistemically prior to the acceptance of \( E \), and can be supported even without the assumption of \( E \). If so, the argument goes through.

Of course it is formally possible to deny these principles. One could deny conditionalization entirely, perhaps holding that the introduction of new evidence fundamentally reconfigures the support relation between sentences, in a way that could not have been anticipated beforehand as conditional support.\(^4\) Or one could at least deny Synchronic Frontloading, holding that there are cases in which new experiences can simultaneously expand the hypothesis space and justify new support relations in the expanded hypothesis space, in a way so that this justifying role is ineliminable even at the level of conditional belief. I think that denying these principles is something of a last resort, however.

\(^4\)Weatherson (2007) and Pryor (unpublished) have developed non-Bayesian frameworks that deny conditionalization as standardly understood in order to accommodate dogmatism about perception. In Weatherson’s case, this denial is partly driven by the worry that reversing conditionalization will lead to a priori knowledge of material conditionals such as ‘If I have an experience as of hands, then there are hands’. Pryor grants a sort of apriority here, but thinks that it is
The objection from lost evidence in the previous section might still be raised: when a belief in $M$ is justified by long-forgotten evidence $E$, one may no longer have high credence in $E$ and suspending judgment in it may have no effect. Still, in such a case, if $E$ supports $M$, $cr(M|E)$ should be high. Furthermore, the high credence should be justifiable independently of $E$, for much the same reason as above. We can also invoke a counterpart ideal reasoner who has access to the past evidence $E$. If $E$ plays a justifying role for an agent who has forgotten it, it will equally play a justifying role for an agent who remembers it. The argument from frontloading will then constrain the justifying role of $E$ for the agent who remembers it, and we can use this conclusion to constrain the justifying role for the agent who has forgotten it.

5 Causal roles, mediating roles, and justifying roles

A third analysis yields not so much a conclusive argument for A Priori Scrutability as a sort of diagnosis of the status of purported empirical evidence that plays a role in conditional knowledge of $M$ given $PQT I$.

For example, I noted earlier that Block and Stalnaker (1999) hold that our conditional knowledge of various truths about water (given a specification of underlying states of the world) is itself justified by empirical background knowledge, such as our knowledge that the world is simple. This knowledge may play a central role in our taking water to be a natural kind rather than a superficial kind, for example.

Here we need to distinguish a number of roles that empirical information might play in knowing these conditionals. There is no question that empirical information can play a causal role in acquiring conditional knowledge. For example, empirical information often plays a causal role in the acquisition of concepts with certain a priori connections, and it sometimes play a role in triggering changes in the a priori connections associated with a term. In these cases empirical information plays a causal role in the possession of concepts that underwrite conditional knowledge.

Grounded in the nature of experience. These frameworks will presumably deny frontloading principles as understood here. It is not clear, though, that the reasons for worrying about apriority of the material conditional involving hands translate into reasons for worrying about the apriority of conditionals involving $PQT I$. In the hands case, a natural worry is that for sentences like this that are neither certain nor uncertain, many a priori prior probabilities are equally reasonable. In the $PQT I$ case, by contrast, there is a reasonable case that the conditional from $PQT I$ can be known a priori with certainty. The credence in this conditional does not depend on the assignment of prior probabilities to uncertain sentences. In a way it is more akin to credence in logical, mathematical, and analytic truths, for which this worry does not arise.
For example, the simplicity of the world might play a causal role in our coming to have concepts whose a priori connections work in the way that is distinctive of ‘water’.

There is also no question that empirical truths \( E \) could play a mediating role in conditional knowledge. It might be that \( E \) is itself implied by \( PQT1 \) and that one can then use \( E \) in combination with \( PQT1 \) to deduce \( M \). In the case of simplicity, it is very plausible that \( PQT1 \) describes a simple world, so that ‘The world is simple’ is implied by \( PQT1 \). This claim might then be used in turn to help deduce that water is \( H_2O \).

However, in neither of these cases does \( E \) play a role in justifying the conditional knowledge of \( M \) given \( PQT1 \). In fact, I think that in all cases where \( E \) plays a role in conditional knowledge of \( M \) given \( PQT1 \), it plays a causal role or a mediating role rather than a justifying role. One can attempt to diagnose the matter as follows.

If \( E \) plays a causal role in conditional knowledge of \( M \) given \( PQT1 \), then one expects that \( E \) plays the same sort of role in almost all conditionals involving the same concepts. In particular it will play a role even in knowledge conditional on those \( X \) such that \( \neg E \) is conditionally scrutable from \( X \). If a belief that the world is simple plays a causal role in our acquiring a certain concept of water, then we expect that this role will affect our judgments about both simple scenarios and about non-simple scenarios.

If \( E \) plays a mediating role in conditional knowledge of \( M \) given \( PQT1 \), then one expects that \( E \) plays the same role only for some conditionals involving the same concepts. In particular it will play a role in knowledge conditional on those \( X \) such that \( E \) is conditionally scrutable from \( X \), but not for those \( X \) such that \( \neg E \) is conditionally scrutable from \( X \). If the claim that the world is simple plays a mediating role in our judgments about water, then we expect that this role will affect our judgments about simple scenarios but not about non-simple scenarios.

So to diagnose the matter: given an \( E \) that is said to play a role in conditional knowledge of \( M \) given \( PQT1 \), one can ask: does \( E \) play the same role in knowledge conditional on \( X \), for some \( X \) such that \( \neg E \) is conditionally scrutable from \( X \)? For example: does simplicity play the same sort of role in our judgments about simple scenarios and about nonsimple scenarios?

If yes: then this role for \( E \) is almost certainly a causal role and not a justifying role. If \( \neg E \) is conditionally scrutable from \( X \), then \( E \) cannot justify conditional knowledge of \( N \) given \( X \) for any \( N \). If one came to accept \( X \), one would accept \( N \) and rationally reject \( E \), so that \( E \) could play no justifying role in accepting \( N \). Even if one only supposes \( X \), one can conclude \( N \) by the same reasoning process, so \( E \) will play no essential justifying role here either. For example, if one came to accept that we are in a nonsimple scenario, the belief that the world is simple could...
not play a role in justifying further beliefs about water. Our conditional beliefs about water given a nonsimple scenario will be justified by a similar reasoning process, so the belief that water is simple will not play a role.

If no: then this role for $E$ is very likely a mediating role. Given a no answer, $E$ plays a justifying role only for knowledge conditional on $X$ for which $E$ is itself conditionally scrutable from $X$. This strongly suggests a mediating role. If $E$ were to play a justifying role in only these cases, one has a nonuniformity in the justifying factors across the various cases. A picture on which the same factors justify conditional knowledge of $M$ given $PQTI$ and (for example) $\neg M$ given $PQTI^*$, where the latter is another $PQTI$-style sentence from which $\neg E$ is conditionally scrutable, is much more attractive. For example, if the belief that water is simple played a justifying role only in judgments about simple scenarios, then there would be an odd nonuniformity in our judgments, whereas if it plays a mediating role, this nonuniformity is to be expected.

This is not a knockdown argument. An opponent can always deny generalized conditional scrutability, and in particular generalized conditional scrutability from $PQTI$-sentences. It might be that empirical evidence $E$ justifies $PQTI \rightarrow M$, but given that $E$ is unavailable to justify inferences from $PQTI^*$, conditional scrutability from $PQTI^*$ fails completely. At best one will have conditional scrutability from a base larger than $PQTI^*$, and then it will not be as surprising that $E$ is not involved in the justification.\(^5\)

Still, if an opponent grants a uniform sort of conditional scrutability, then these considerations make their view uncomfortable. And certainly, if one already has the reasons for accepting \textit{A Priori Scrutability} laid out in the previous arguments, then these considerations can help us to classify purportedly relevant empirical sentences as playing either a causal role or a mediating role.

In the case of simplicity, we asked: does simplicity play a role in judgments concerning scenarios that are not simple themselves? If yes, then it seems that the role of simplicity cannot be a justificatory role, for the reasons given above. At best it might play a causal role in the acquisition of a concept whose application-conditions across scenarios involve simplicity. If no, then it is plausible that simplicity plays its role in virtue of the fact that the fact that the world is simple is itself conditionally scrutable from $PQTI$. On this view, it appears that simplicity may play a mediating role in reasoning from $PQTI$ to simplicity to $M$, but it is not essentially required to justify conditional belief in $M$ given $PQTI$. Either way, a posteriori evidence regarding simplicity plays

\(^5\)I think that a version of this reply can also be given to the earlier version of this argument presented by Chalmers and Jackson (2001).
no essential role in justifying the conditional itself. So the role of this evidence is no obstacle to a priori scrutability.\footnote{For more on the various possible roles of empirical evidence, see the discussion of Williamson in the seventh excursus.}

### 6 Generalized A Priori Scrutability

If all is well (in this chapter and the next) we have made a case for A Priori Scrutability: there is a compact class of truths from which all truths are a priori scrutable. Let us assume that this class is $PQT_1$. If all truths are a priori scrutable from $PQT_1$, then $PQT_1$ is epistemically complete: that is, there is no $H$ such that $PQT_1' \& H$ and $PQT_1' \& \neg H$ are both epistemically possible (where $PQT_1'$ is the conjunction of sentences in $PQT_1$, and $S$ is epistemically possible iff $\neg S$ is not a priori).\footnote{For more on these notions and for a discussion of indeterminacy in this context, see the ninth excursus.}

What can we then say about Generalized A Priori Scrutability: the thesis that there is a compact class of sentences such that all epistemically possible sentences (whether true or false) are a priori scrutable from sentences in that class? If this thesis is right, then this compact class can be used to generate epistemically complete classes that can play the same role with respect to other scenarios that $PQT_1$ does for the actual scenario.

If my argument for A Priori Scrutability were itself entirely a priori, then we would have good reason to accept some version of Generalized A Priori Scrutability. But the argument is not obviously a priori. It appears to rely on various a posteriori claims about the character of actual-world truths: that there are microphysical truths and phenomenal truths, for example, and that macroscopic truths have a certain character.

Still, there is good reason to believe that the argument applies to more than the actual world. The argument does not turn on the precise microphysical truths specified by $P$, or the precise phenomenal truths specified by $Q$: it could not, as I do not know most of these truths. So the argument would still go through if $P$ and $Q$ were somewhat different. This already suggests that there will be many $PQT_1$-like classes that can play the role of $PQT_1$. That is, for many false sentences $M$, such as ‘There is water in this cup’, $M$ will be a priori scrutable from some $PQT_1'$. And if $PQT_1$ is epistemically complete, so are many analogous classes $PQT_1''$.

We can extend things further. The argument turned on very little that was specific about $P$, except that it enabled us to recover information about the spatiotemporal and mass properties of arbitrary objects. It is arguable that for many different hypotheses about the character of funda-
mental physics, the argument will still go through. Likewise, the argument will go through for many different hypotheses about the distribution of conscious experiences (including everything from solipsistic to panpsychist hypotheses). So one can extend the argument to a very broad variety of epistemically possible hypotheses, making the case that these are scrutable from $PQT\text{-}I$-style classes with a physics and a distribution of phenomenology that is quite different from the actual world.

Of course there are epistemic possibilities that are more distant than this. It is arguably epistemically possible that nothing has spatiotemporal properties, or that nothing has conscious experience. There will be no straightforward $PQT\text{-}I$-style scenario corresponding to these hypotheses. One might also think that it is epistemically possible that the world has a sort of complexity that goes far beyond what can be specified by a $PQT\text{-}I$-style sentence. To handle hypotheses of this sort, the appeal to $PQT\text{-}I$-style classes in a Cosmoscope argument gets little grip.

Still, it remains plausible that for such hypotheses, there will be some analog of a Cosmoscope that could deliver information from which the truth of the hypothesis is conditionally scrutable: such a Cosmoscope would serve in effect as a guide to the character of a scenario in which the hypothesis is true. The Cosmoscope might be very different from an actual-world Cosmoscope, but as long as it works by storing and conveying information of certain constrained sorts, and thereby allows a sufficiently ideal user to determine the truth-value of arbitrary hypotheses, an analogous case for a scrutability thesis will go through. Furthermore, many of the arguments given in the next chapter, for example suggesting the a priori scrutability of mathematical truths, moral truths, truths involving names, and so on, are a priori in character, suggesting that truths of this sort are a priori scrutable from truths not of this sort however the world turns out to be.

I cannot claim to have established Generalized A Priori Scrutability here. But I think that the sort of considerations that have gone into the case for A Priori Scrutability at least make the generalized thesis a highly attractive one. I will return to the generalized scrutability thesis in chapter 8.

7 Objections to A Priori Scrutability

There are a number of objections that might be made to the A Priori Scrutability thesis. I have in effect considered a few objections already: objections from the absence of definitions in Chapter 1; objections from knowability, from self-doubt, from indeterminacy, and from Liar-like paradoxes in Chapter 2; objections from idealization and recognitional capacities in Chapter 3. I discuss
objections from Quinean skepticism about the a priori and from conceptual change in chapter 5, and objections from specific sorts of truths—mathematical, moral, metaphysical, and so on—in chapter 6. In the remainder of this chapter I will focus on some further objections.

*The objection from imperfect self-knowledge.* It is sometimes suggested (Dowell 20xx, Melnyk 20xx) that scrutability claims and related methods in conceptual analysis rest on an overconfident empirical claim about self-knowledge. This is the claim that we can know how we would react to discovering that $PQT I$ is true (for example, whether we would then say that $M$ is true or false), simply by considering now the hypothesis that $PQT I$ is true and observing our reaction. According to the objection, this claim may well be false: as a matter of psychological fact, our reactions on discovering that $PQT I$ is true may be quite different from our reaction on merely considering the hypothesis that $PQT I$ is true.

In response: nothing in the arguments I have given requires this empirical claim. Claims about how we would react on making a certain discovery play no role in the arguments. The closest thing to such a claim arises in the case of Inferential Scrutability, with the thesis that were the relevant subject to come to know $PQT I$, he or she could come to know $M$ (on ideal reflection). But even this thesis does not make any empirical claims about how the subject would react, let alone about how we ourselves would react. In the case of Conditional and A Priori Scrutability, there is nothing even as close as this. The former concerns an (idealized) conditional credence $cr^*(M|PQT I)$, and the latter concerns knowability of a material conditional $PQT I \rightarrow M$. Claims about one’s own future reactions are irrelevant here. A high conditional credence in $cr^*(M|PQT I)$ is certainly not equivalent to a belief that one would accept $M$ if one accepted $PQT I$, for example.

Translated into the current framework, perhaps the nearest counterpart of the objection would run as follows. A subject might now accept the conditional claim that if A, then B, but then later on learning A (and only A), might nevertheless reject B. If so, conditional scrutability and inferential scrutability will come apart, so both cannot be a guide to the truth. In response: certainly there can be such a subject. But as with the previous objection, standard Bayesian principles entail that such a subject cannot be fully rational throughout, or else must have engaged in conceptual change. So as long as we characterize scrutability so that both require a rational idealization, and so that inferential scrutability requires no conceptual change, then conditional and inferential scrutability cannot come apart in this way.

*The objection from methodological principles.* Block and Stalnaker (1999) suggest that general methodological principles, such as simplicity and conservativeness, play some role in determining the extension of our terms given empirical information. But these principles are not
themselves a priori. So scrutability conditionals are not a priori.

In response: if these principles are not known a priori, then they are known empirically. If they are empirical, it is plausible that they are themselves at least conditionally scrutable from \textit{PQT}I. One can then run arguments of the sort given in this chapter to establish that they are a priori scrutable from \textit{PQT}I. For example: let \textit{S} be the relevant principle about simplicity. If \textit{S} is empirical, there will presumably be \textit{PQT}I-sentences \textit{D} such that \textit{cr}^{*}(\textit{S}|\textit{D}) is low. \textit{S} cannot justify any credences \textit{cr}(\textit{M}|\textit{D}) for such a \textit{PQT}I-sentence. So \textit{S} only justifies credences \textit{cr}(\textit{M}|\textit{D}) when \textit{S} is itself scrutable from the \textit{PQT}I-sentence \textit{D}. In such a case, we have good reason to think that \textit{S} plays only a mediating role in justifying one’s \textit{D} \Rightarrow \textit{M}: that is, one reasons first from \textit{D} to \textit{S}, and only then from \textit{D} and \textit{S} to \textit{M}.

\textit{The objection from self-observation.} It is occasionally held (e.g. Henderson and Horgan 2000) that alleged a priori knowledge depends on introspective observation of our own judgments. Correspondingly, Yablo (2002) suggests that scrutability inferences from \textit{PQT}I to \textit{M} may depend on considering \textit{PQT}I and then introspectively observing (or “peeking” at) our own reactions. If so, the inference is not a priori.

In response: in the arguments I have given, there is little reason to think that self-observation plays a role. In the case of inferential scrutability of \textit{M} from \textit{PQT}I, self-observation plays no more role than in any other case of empirical knowledge. Likewise, in the case of conditional scrutability of \textit{M} from \textit{PQT}I, self-observation plays no more role than in any other conditional credence. And in the case of knowledge of the material conditional ‘\textit{PQT}I \rightarrow \textit{M}’, self-observation plays no more role than with any other material conditional. If self-observation is not needed to justify an empirical inference from knowing \textit{PQT}I to knowing \textit{M}, it is likewise not needed to justify conditional belief in \textit{M} given \textit{PQT}I, or to justify belief in the corresponding material conditional. In each of these cases, one needs to deploy the concepts involved in \textit{M}, but one need not observe their deployment.

Of course there are some expressions such that in order to determine their extension, one needs to observe one’s own reactions. Perhaps one determines what is green by determining what causes green experiences, or one determines what is funny by determining what one finds funny. In cases of response-dependence like these, however, the relevant observations should be seen as packed into the antecedent. In the case of inferential scrutability of claims involving ‘green’, one’s green experiences will be specified by \textit{Q}, and knowledge of this part of \textit{Q} will be part of what enables one to know what is green. Likewise in the case of conditional scrutability, one’s conditional credence in ‘\textit{X} is green’ given ‘\textit{X} causes green experiences’ will be high: the relevant experiences are built
into the antecedent, and play no role in justifying the conditional credence itself. Correspondingly, they play no role in justifying the corresponding material conditional.\footnote{I think that a similar diagnosis applies to what Yablo (2002) calls “response-enabled” concepts. See Chalmers 2002.}

*The objection from theories of concepts and reference.* A common objection holds that certain theories of concepts or certain theories of reference are incompatible with a priori scrutability. On certain atomist theories of concepts (e.g. Fodor 19xx), for example, the referent of a concept such as *water* or *horse* is held to be quite independent of its inferential role. Likewise, some hold a version of the causal theory of reference on which the referent of an expression is determined by what an expression is causally connected to, quite independent of its role in cognition and thought. On these views, our a priori inferences about reference in a scenario may tell us little about an expression’s actual referent.

Of course a proponent of this sort of objection needs to say where the arguments for a priori scrutability go wrong. I think that such a proponent will naturally end up denying Conditional and Inferential Scrutability too. Once Inferential Scrutability (or even limited versions of it in specific cases) is granted, we then have the materials for an argument to Conditional and then to A Priori Scrutability. Furthermore, even a weak form of Inferential Scrutability—say, the claim that there are underlying non-’water’-truths such that knowing those truths suffices for us to know that water is H$_2$O—already gives us enough of a connection between reference and inferential role that the force of the objection is already blunted.

So a proponent of this objection needs to deny even these weak forms of Inferential Scrutability, holding that knowledge of non-’water’-truths does not suffice for us to know that water is H$_2$O. For example, knowledge of the appearance, behaviour, composition, and distribution of H$_2$O in our environment (as well as its relation to us) does not suffice to know that it is water. Perhaps the most consistent form of this objection holds that our judgments about reference, even given full relevant information about the actual world and good reasoning, are not a reliable guide to actual reference. On this view, it could turn out that we have been wrong all along about water’s being H$_2$O: after all, our judgments are not a reliable guide to reference.

At this point I think the objection loses plausibility. The fact that we are able to identify referents for typical expressions given enough empirical information is something of a datum that theories of concepts and reference need to accommodate. Indeed, the paradigm arguments for the causal theory of reference rest partly on judgments about reference in cases. Once granted, this datum automatically yields some sort of link between reference and inferential role. If certain
theories cannot accommodate this datum, then this is much more of a problem for the theories than for the datum. I think that this datum is indeed a problem for certain overly simplistic forms of the causal theory of reference, and for certain overly simplistic theories of concepts, but that more sophisticated versions of these can probably accommodate it. In any case, I do not think that there is a serious objection to a priori scrutability here.

The objection from acquaintance. It is sometimes suggested that any knowledge we have concerning a natural kind such as water is justified by our acquaintance with water, via causal links. If so, then even knowledge of scrutability conditionals of the form ‘If $PQT$, then water is $H_2O$’ must be essentially justified this way. If so, these conditionals cannot be known a priori.

In response, I think it is not out of the question that to possess the concept of water, and to use the English expression ‘water’, one must stand in some causal acquaintance relation to water. Perhaps there are counterexamples involving someone who comes to form the concept in unusual ways, perhaps through thinking about hydrogen and oxygen, but I will set those aside here. But it is a familiar point about the a priori that we must distinguish what is required to possess the concepts involved in a belief from what is required to justify that belief. I do not think it is plausible that acquaintance plays any essential role in justifying a belief in ‘If water exists, water is water’ or ‘If nothing exists, then water does not exist’, for example. The same goes for ‘If $PQT$, then water is $H_2O$’.

It is also very unclear how the justifying role of acquaintance might work in these cases. I take it that the point about acquaintance provides no objection to conditional scrutability of ‘water’-truths from $PQT$, for a subject who already has the acquaintance. And as before, it appears that one could suspend judgment in ‘water’-truths, and in any other relevant empirical truths, and still have justified conditional beliefs here. If so, then acquaintance is not playing its justifying role in conditional belief in virtue of its role in supporting belief in these empirical truths. But it is hard to see how else acquaintance could be playing a role here, unless it is a mere enabling role in possessing the concepts. And if one could not have justified conditional beliefs after suspending judgment here, the opponent owes us an account of why not.

Sometimes this point is allied with a Russelian theory of belief, where the content of beliefs about water involves singular propositions (object- or kind-involving propositions) with water as a constituent. Then it is held that belief in any singular proposition can be justified only by acquaintance with the relevant object or kind. I am inclined to think that this point also conflates what is required to believe the proposition with what is required to justify such a belief. But in any case, this view is also subject to counterarguments such as the one above.
One can also apply the diagnostic tool discussed earlier, asking whether acquaintance also justifies conditional beliefs concerning PQTI-style scenarios in which acquaintance with water is missing. For example, consider my credences \( c^r(\text{‘Water is H}_2\text{O’}|\text{PQTI}) \), \( c^r(\text{‘Water is XYZ’}|\text{TE}) \), and \( c^r(\text{‘There is no water’}|\text{DE}) \), where TE and DE are PQTI-sentences for a Twin Earth scenario (where XYZ has always been the watery stuff in the oceans and lakes around me) and a Dry Earth scenario (with no watery stuff at all) respectively. Intuitively, a high conditional credence is justified for each. If all involve singular propositions about ‘water’, the Russelian line in the previous paragraph would suggest that all are justified by my acquaintance with water. But for reasons discussed in section 4, it is implausible that acquaintance with water can justify credences conditional on hypotheses in which there is no such acquaintance and no water. So the diagnostic reasoning there strongly suggests that here, acquaintance is merely playing a causal role in enabling us to possess the concepts, and not a justifying role.

The objection from nonpropositional evidence. Some of my arguments for a priori scrutability proceed by assuming that evidence can be encapsulated in propositional form. In these arguments, evidence is represented by an evidence statement \( E \), and the epistemological force of the evidence is captured by knowledge of the statement’s truth. This fits a conception of evidence as something believed or known. But it may be held that evidence can also be nonpropositional.

Most obviously, evidence might consist in an experience. An opponent might hold the epistemological force of an experience is not captured by the epistemological force of belief in any corresponding evidence statement, whether the statement that the experience occurs, or the statement that some perceived state of affairs obtains. So the arguments for a priori scrutability do not exclude the possibility that relevant knowledge is justified by experience in this way.

In response: there is some intuitive plausibility in the claim than an experience as of a red cup can give one a sort of justification for belief in the presence of a red cup, justification that goes beyond that given by the mere knowledge that there is an experience as of a red cup. I do not think that there is the same intuitive plausibility in the claim that this can justify beliefs that cannot be justified by knowledge that there is a red cup at a certain location (or by knowledge of whatever the contents of experience might be). Someone might suggest that the content of experience cannot be captured in any set of sentences. Even if so, it is plausible that the epistemic role of experience is screened off by its role in directly justifying certain beliefs about the external world (such as the belief that there is a cup of a certain shape, size, and color in a certain location). So I think that by considering evidence statements of the latter sort, I am in effect considering evidence at least as strong as the evidence provided by experience.
Someone might suggest that all the same, experiences are not subject to the same epistemic principles as beliefs. Perhaps experiences are not subject to conditionalization: it may be that upon having an experience, one is thereby justified in having a certain credence in \( M \), but there is no corresponding evidence statement \( E \) such that one is antecedently justified in believing in having the same credence in \( M \) conditional on \( E \). And perhaps while suspension of judgment in a belief precludes any justificatory role for that belief, one cannot suspend judgment in an experience in the same way.

In response: I think it is implausible that experiences are not subject to conditionalization, and I think there is at least a form of suspension of judgment such that suspending judgment about whether one had a given experience is incompatible with a justificatory role for that experience. But in any case, the arguments for scrutability go through if we take the relevant evidence statement to be \( E' \), a sentence expressing a conjunction of any beliefs that might be directly justified by the experience. If one can suspend judgment in \( E' \), and still come to know that \( M \), then the experience does not play an essential role in justifying \( M \). And if having an experience allows one to learn \( M \), then even before having the experience, one’s conditional credence in \( M \) given \( E' \) should be high. The same sort of analysis applies to other sorts of nonpropositional evidence that someone might appeal to.

The objection from direct empirical inference. A remaining objection turns on the idea that our reasoning from \( PQT I \) to \( M \) may be grounded in past experience without being mediated by any current empirical beliefs. The case where now-forgotten past experience justified an empirical belief that supports the reasoning was discussed in sections 3 and 4. But there remains the possibility that reasoning involves direct empirical inference: inference that is grounded in past experience without the role of that experience being mediated by its justifying a current belief. If so, one might hold that the inference from \( PQT I \) to \( M \) is not a priori, but that suspension of judgment and frontloading will not pick up on the epistemological role of experience here.

Direct empirical inferences are reminiscent of the empirical recognitional capacities discussed in section XX of chapter 3. Empirical recognitional capacities, such as the capacity to recognize an astronaut from superficial features, typically operate within perception or between perception and belief. Direct empirical inferences are similar, but operate between beliefs, or suppositions or related cognitive states. I argued in the last chapter that empirical recognitional capacities are dispensable for the purposes of scrutability, so they do not pose an objection to a priori scrutability. I think the same goes for direct empirical inferences.

The paradigmatic direct empirical inferences are associative inferences: non-deductive infer-
ences from a premise to a conclusion based in some sort of experienced association. For example, one might make a justified inference from ‘He is a bachelor’ to ‘He is untidy’, based on past correlations between bachelors and untidiness in one’s environment, without ever believing that all or most bachelors are untidy. The past correlations might simply have disposed one to infer from bachelorhood to untidiness in an unmediated way. One might respond to such a case by holding that there is always at least a tacit belief that all or most bachelors are untidy, so that the inference is indirect. Depending on what one means by a tacit belief, this claim might even be trivial. Still, it is not clear that such a tacit belief could be said to mediate the inference, and it is not obvious that tacit beliefs are the kind of thing that can easily be suspended. If there is not a mediating tacit belief, on the other hand, then it is even less clear how an inferential disposition can easily be suspended.

Let us allow for the sake of argument that there are inferences (that is, acts of inferences) in this vicinity that are not mediated by current empirical beliefs. Despite the lack of mediation, one can certainly distinguish between justified and unjustified inferences here. And among those unmediated inferences that are justified, one can distinguish between those that are justified by experience and those that are not. For example, the inference above from ‘He is a bachelor’ to ‘He is untidy’ is plausibly justified by experience: one’s past experience of situations involving correlation between bachelorhood and untidiness. An unmediated inference from ‘X is a bachelor’ to ‘X is male’, on the other hand, may be justified a priori: there need be no essential role for experience here.

This requires talking of justified and unjustified acts of inferences, rather than merely justified and unjustified beliefs, and of a priori and empirical acts of inference, rather than merely of a priori and empirical beliefs. But this is a natural enough way of talking. For example, it is natural enough to say that there can be a justified act of inference from an unjustified belief $p$, yielding an unjustified belief $q$. This brings out that justified acts of inference are not just those that result in justified beliefs.

The justificatory status of any given act of inference, on a specific occasion, is plausibly inherited from the justificatory status of an inference type that it falls under. The relevant inference types here are akin to inference rules, but they need not be formally specifiable: for example, a complex gestalt-style associative inference pattern might yield a justified inference type. (We might also speak of justified inferential mechanisms here). For example, the a priori status of an inference by modus ponens is inherited from the a priori status of the modus ponens inference rule. When an inference type is epistemologically grounded in experience, any inferences of this
The objection now comes to the claim that the inference from $PQTI$ to $M$ may involve an direct empirical inference. Such inferences will not be affected by the suspension of empirical belief, but may be empirical all the same, so the argument from suspension of judgment will not get a grip here. The argument from frontloading still applies, however. When an inference from $PQTI$ to $M$ involves an direct empirical inference justified by past experience encapsulated in an evidence sentence $E$, it seems that the antecedent credence $cr(M|PQTI&E)$ should be high. Likewise, it is plausible that one should have a high posterior credence $cr(M|PQTI&E)$, with justification independent of $E$. If so, the argument still goes through.

One can also respond to the objection by arguing, much as in the case of recognitional capacities, that everything that can be known using empirical unmediated inference can be known without it. After all, whether or not the inference from bachelorhood to untidiness is mediated by a belief that most bachelors are untidy, there is certainly a closely related pattern of reasoning from the same premise to the same conclusion using an inference that is mediated by such a belief. And when the first inference is empirically justified, the second will be mediated by a justified empirical belief. We can then apply the original arguments for A Priori Scrutability to the new case, and the objection from unmediated inference will fall away.

Someone might offer a more radical view of the role of experience in direct inference, so that this role cannot be mirrored in a case involving mediating empirical beliefs, and is not reflected in conditionalization. For example, one might hold that experience plays a role in shaping an inferential disposition that is inaccessible to reflection, so that conditionalizing in advance on the experience would yield entirely different results, and so that inference from a belief corresponding to the experience would also go in a different direction. If there are such cases, they would appear to involve counterexamples to conditionalization, and (as discussed in the next chapter) I think are best seen as involving conceptual change or irrationality.

As with recognitional capacities, someone might also hold that an unmediated inference simply needs to be reliably truth-preserving to do its justifying work. For example, one might simply by luck come to be disposed to infer from bachelorhood to untidiness, in a way that is not grounded in correlations between bachelorhood and untidiness but that is reliably truth-preserving all the same. One might hold that this mechanism could yield justified belief in $M$ (given $PQTI$ as a premise) even though a corresponding case in which one just by luck forms the mediating belief that most bachelors are untidy would not yield justified belief in $M$. One might also hold that
this is a case in which a justified inference from $PQT_I$ to $M$ holds without there being a nearby justified conditional belief in $M$ given $PQT_I$, giving a sort of violation of conditionalization. If so, the inference from Inferential Scrutability to Conditional Scrutability and/or A Priori Scrutability may not go through.

I am skeptical that such an ungrounded reliable inference should count as justified. But if someone disagrees, I will once again stipulate higher standards of strong knowledge and justification that excludes ungrounded reliable inferences. As in the case of recognitional capacities, one can argue that cases of ungrounded reliable inference will be rare. And as in that case, one can argue that what can be known using these inferences can be known without them. We can then run the argument from knowability (for inferential and conditional scrutability) using the notion of strong knowability, and the premises remain equally plausible. It follows that one is in a position to have strong conditional knowledge of $M$ given $PQT_I$. The inference to A Priori Scrutability then goes through, unaffected by worries about ungrounded reliable inferences.
Seventh Excursus: Recent Challenges to the A Priori

In this book I have appealed freely to the notion of a priori justification: justification independent of experience. I have also appealed freely to derivative notions such as a priori knowledge, a priori knowability, a priori sentences, a priori inferences, and so on. While these notions have a venerable history in philosophy, they have also attracted some skepticism. The most prominent source of skepticism arises from Quine’s critique of the analytic-synthetic distinction, which is the focus of the next chapter. In this excursus, I focus on some more recent doubts about the a priori, articulated by Hawthorne (2007) and Williamson (2007).

Hawthorne raises doubts about a priori knowledge, tied in the first instance to externalist constraints on knowledge. He first stipulates a strongly internalist notion of a priori knowledge: a subject’s belief that $p$ is a case of a priori knowledge if for any possible intrinsic duplicate $y$, the counterpart in $y$ of the subject’s belief that $p$ is a case of knowledge. Here the idea is that a priori knowledge is knowledge that depends only on features intrinsic to a subject. He also assumes that knowledge requires safety: to know that $p$, it should be the case that there are no close worlds in which one makes a mistake about $p$. (Strictly: there are no close worlds in which one makes a mistake that is relevantly similar to one’s actual belief that $p$.)

Hawthorne then argues that given these two constraints, there can be no a priori knowledge. For any subject with a belief that $p$ that putatively counts as a priori knowledge, there will be an intrinsic duplicate whose belief that $p$ is not safe, and therefore is not knowledge. The key case involves “a priori gas”: a gas that if inhaled causes the subject to make all sorts of mistakes in a priori reasoning. If one is surrounded by a priori gas, then one’s beliefs are not safe: even if one has not inhaled the gas, there are nearby worlds in which one inhales the gas and makes mistakes. And for any subject, there is an intrinsic duplicate subject who is surrounded by a priori gas. So for any subject, there is an intrinsic duplicate subject whose beliefs are not safe, and who therefore (by the safety criterion) lacks a priori knowledge. So no belief by any subject satisfies the definition of a priori knowledge above.

Now, I think this definition of a priori knowledge should clearly be rejected. I think there are possible subjects who have a priori knowledge enabled by extrinsic conditions (see the discussion of Edenic subjects later in the paper), and I think there is some empirical knowledge (e.g., knowledge of one’s own consciousness) that depends just as strongly on intrinsic conditions as does a priori knowledge. So even if my intrinsic duplicate surrounded by a priori gas lacks a priori knowledge, I think it does not follow that I lack a priori knowledge. Still, the question of whether
external constraints such as safety can undermine a priori knowledge is an interesting one. If we allow that the subject surrounded by a priori gas lacks a priori knowledge, then the status of our beliefs as a priori knowledge is at least vulnerable to the state of the environment. That alone does not undermine the existence of a priori knowledge, but it may weaken its epistemic security a little.

I do not think it is obvious that the subject surrounded by a priori gas lacks a priori knowledge, but I also do not think it is obvious that they have a priori knowledge. Rather than settle the matter, I am more interested in whether there is an epistemic status that their belief has. In particular, I am inclined to think that if I have a priori justification for believing $p$, then so does my twin surrounded by a priori gas. Even if safety is absolute constraint on knowledge, it is not an absolute constraint on justification. Correspondingly, the gas may undermine my twin’s knowledge, but it does not undermine his justification. I do not say that there are no cases where intrinsic twins might differ in whether corresponding beliefs are a priori (see the discussion of Fisher’s cases in chapter 7), but I do not think these cases are among them.

If this is right, Hawthorne’s arguments do not undermine the existence of a priori knowledge, although they may suggest that the status of a belief as a priori knowledge is extrinsic. They also do not undermine either the existence or the intrinsicness of a priori justification. Hawthorne goes on to argue that the cases involving long-past experience Hawthorne goes on to argue against a conception of internal a priori justification that depends on an inner “glow”, but he does not argue against other conceptions. So I take it that the existence and even the intrinsicness of a priori justification are left standing.

Williamson (2007, pp. 165-69) argues for a deflationary view of the a priori/a posteriori distinction. He devotes much more space to the analytic/synthetic distinction, arguing that there are no metaphysically or epistemologically analytic truths. I am not committed to analytic truths, and it is clear that Williamson’s arguments against them do nothing to undermine the a priori, so I will not engage these arguments here (although see chapter 9 for some relevant remarks). He also devotes a few pages to the a priori/a posteriori distinction, however, arguing that it is not an important or natural distinction, and in particular that it does not yield a natural way to classify the role of experience in certain cases.

Williamson’s central case involves knowledge of the counterfactual ‘If two marks had been nine inches apart, they would have been at least nineteen centimeters apart’. The subject in question does not know a conversion ratio, but instead imagines two marks nine inches apart and uses visual recognitional capacities to judge that they are nineteen centimeters apart. Williamson argues
that sense experience does not play a directly evidential role: one does not recall past experiences, or deploy premises grounded in experience. But he argues that it plays a more than enabling role: one uses skills for judging lengths that are deeply grounded in past experience. So he suggests that the knowledge in question is not naturally classed as either a priori or a posteriori.

Here Williamson focuses on a certain traditional way of dividing the possible roles of experience in belief. Experience might play a merely enabling role, enabling one to possess the concepts involved in a belief, or it might play an evidential role, giving one evidence for the belief. A priori knowledge allows experience to play an enabling role but not an evidential role. I think it is obvious that this distinction is not exhaustive, however. A distinction that is closer to exhaustive is the one I made earlier between causal and justificatory roles. Experience might play all sorts of causal roles in forming a belief that are neither enabling nor evidential: for example, a pang of fear might cause one to think about mathematics and thereby acquire knowledge. It may also be that experience plays justifying roles that are not directly evidential (although perhaps they are indirectly evidential), as when past experience justifies a pattern of inference used to form a belief. On this picture, the key question for apriority is whether experience plays a justificatory role or a merely causal role (or no role at all).

From this perspective, Williamson’s observation that experience does not play a “directly evidential” role does little to settle the matter. The question is whether experience plays a justificatory role, including indirectly evidential roles. Insofar as we accept Williamson’s view that the subject does not have mediating beliefs relating inches to centimeters, then the subject will be deploying some sort of inference from two marks being nine inches apart to their looking like so (imagined scenario), and another inference from their looking like so to the two marks being more than nineteen centimeters apart. It might be natural to hold that these inferences turn on beliefs that nine inches looks like so, and so on, but Williamson will presumably deny that such mediating beliefs must be involved. If so, the two inferences will be direct in the sense discussed earlier (under the objection from direct empirical inference). The key question is then the status of these inferences: are they justified by experience, or not?

Now, I think that Williamson’s case is underspecified. There are plausibly versions of the case in which the inference is justified by experience and versions where it is not. If the subject has a deferential conception of a centimeter, roughly picking out a centimeter as what people around here call ‘a centimeter’, then the inference in question will plausibly be empirical: it will be grounded in evidence that people around here call certain lengths ‘a centimeter’. If the subject picks out a centimeter as one-hundredth of the length of the meter stick in Paris, then likewise. If
the subject is a nondeferential user of the term who has a conception of one centimeter as a certain visual length, on the other hand, then the inference may well be a priori: experience may have played an enabling role in acquiring the conception and other causal roles, but there is no need to postulate a justificatory role. So in some versions of the case the knowledge is empirical, and in other cases it is a priori, with everything coming down to the justificatory role of experience in acquiring the inferential capacity.

The matter is clearer in another case that Williamson discusses: ‘If two marks had been nine inches apart, they would have been further apart than the front and back legs of an ant’. If understood analogously, this case will involve direct inferences between premises about length and conclusions about ants, or perhaps between premises about ants and conclusions about their looking a certain way, or something in the vicinity. In this case, it is plausible that if the inferences are justified, they will be justified by experience: in particular, by one’s past experiences of ants and their sizes. So the current framework classifies these cases correctly.

One can count this sort of justificatory role for experience as an evidential role in a broad sense. Williamson suggests that if we count the role of experience as evidential in this case, then one may have to in other cases that are paradigms of the a priori: for example ‘It is necessary that whoever knows something believes it’. But even if this case turns on an analogous direct inference between premises about knowledge and conclusions about belief, there is no analogous reason to think that experience plays a justifying role in the inference in this case. At least if we stipulate nondeferential possession of the concepts involved, then in paradigm cases there is no obvious justifying role for experience analogous to the obvious role of experiencing ants. Williamson notes that our judgment depends on the skill with which we deploy concepts, which itself depends on past experience; even so, nothing here begins to suggest a justificatory role for experience. So although the status of this judgment depends on the details of the case, it is prima facie plausible that there are at least some cases in which the inference is justified a priori.

Of course one can use words such as ‘evidential’ and ‘a priori’ as one pleases. The non-verbal point is that a justificatory role for experience in inference clearly renders a resulting belief a posteriori on an extremely natural way of drawing an a priori/a posteriori distinction. Williamson does not consider this sort of justificatory role for experience in his argument. Perhaps he would deny that there is a coherent or natural distinction between cases in which inferences are justified by experience and cases in which they are not, but he has not given an argument against that distinction here.

That said, there are cases not far from Hawthorne’s and Williamson’s that pose a harder prob-
lem for the a priori/a posteriori distinction. These cases involve reliable internal belief-forming mechanisms that deliver beliefs of the sort that are typically delivered by a posteriori mechanisms but that are not grounded in the subject’s perceptual or introspective evidence. For example, we might suppose that these systems reliably deliver beliefs about scientific laws (e.g., the law of gravity) and enable reliable inferences that use those laws. One case involves a lucky mechanism: an internal mechanism that develops without any experiential justification and that through luck, delivers reliable beliefs about laws. Another case involves an evolved mechanism: an innate mechanism that has been shaped by selection in the evolutionary past so that it reliably delivers beliefs about laws. Many advocates of the a priori, including me, will not want to count the beliefs produced by these mechanisms as a priori knowledge, but it is not obvious why they do not fit the definition.

These cases will not yield conclusive a priori knowledge, as the mechanisms cannot plausibly produce justified certainty. So the notion of conclusive apriority, which I take to be the most important sort of apriority, is not thrown into question by these cases. Still, the question arises of whether these mechanisms produce nonconclusive a priori knowledge. If they do not (as many advocates of the a priori will hold), we need to know why not, given that the subject’s experience does not play a justifying role.

A proponent of the a priori might deny that the lucky mechanism produces knowledge at all; but it is harder to take this line for the evolved mechanism. One could suggest that the evolved mechanism produces posteriori knowledge because it is justified by other subjects’ past experience; but this would require a greatly elaborated treatment of cross-subject justification. Perhaps best, one might count these mechanisms as producing basic empirical evidence that is not itself experiential evidence. The residual question will then be how to characterize empirical evidence if not in terms of experience. One might try putting weight on interactions with the external world; but the lucky mechanism need not involve such interactions. A better option may be to characterize the a priori in positive rather than negative terms: for example, one might hold (with BonJour 19xx) that a priori justification involves justification by reason alone, rather than justification independent of experience. The residual question then is to pin down the notion of justification by reason at least sufficiently well to yield a principled classification of basic evidence as a priori or empirical.

Alternative, one could allow that at least some of these cases involve nonconclusive a priori knowledge; but it is harder to take this line for the evolved mechanism. One could suggest that the evolved mechanism produces posteriori knowledge because it is justified by other subjects’ past experience; but this would require a greatly elaborated treatment of cross-subject justification. Perhaps best, one might count these mechanisms as producing basic empirical evidence that is not itself experiential evidence. The residual question will then be how to characterize empirical evidence if not in terms of experience. One might try putting weight on interactions with the external world; but the lucky mechanism need not involve such interactions. A better option may be to characterize the a priori in positive rather than negative terms: for example, one might hold (with BonJour 19xx) that a priori justification involves justification by reason alone, rather than justification independent of experience. The residual question then is to pin down the notion of justification by reason at least sufficiently well to yield a principled classification of basic evidence as a priori or empirical.

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9Hawthorne briefly discusses an innate mechanism of this kind, although more to illustrate a safety-theoretic conception than to pose problems for a more traditional conception.
knowledge. Doing so would have the consequence that many more things are (nonconclusively) a priori knowable than one might have thought. It might even turn out that most truths are nonconclusively a priori knowable, so that most truths are nonconclusively a priori scrutable from any base. If so, an A Priori Scrutability thesis using the notion of nonconclusive a priori knowability will be trivialized. There might nevertheless be a nontrivial version of the thesis using a warrant-based notion of nonconclusive apriority. And certainly those versions of the thesis that invoke conclusive apriority will not be trivialized. All this tends to reinforce the view that at least for the purposes I am concerned with, conclusive apriority is the most important notion.