In this essay, I shall explore the problems that are raised by a certain traditional sceptical paradox. My conclusion, at the end of this essay, will be that the most challenging problem raised by this paradox does not primarily concern the justification of beliefs; it concerns the justification of belief-forming processes. I shall argue for this conclusion by showing that if we can solve the sceptical problem for belief-forming processes, then it will be a relatively straightforward matter to solve the problem that concerns the justification of beliefs.

In the first section of the essay, I shall set out the problem that this sceptical paradox raises for the justification of your beliefs. In the second section, I shall present some reasons for thinking that any adequate solution to this problem must imply that you have a priori justification for believing that you are not in a sceptical scenario (that is, a situation in which your sensory experiences are in some undetectable way unreliable).

In the third section, I shall try to make it plausible that you do indeed have such a priori justification, by arguing that there is at least one possible process of non-empirical reasoning—what I call the a priori bootstrapping reasoning—that can lead you to a justified belief in the proposition that you are not in such a sceptical scenario. As I shall explain in the fourth section, however, there is absolutely no prospect that this argument will be able to solve the problem that the sceptical paradox raises for the justification of belief-forming processes: that deeper problem will have to be solved in some other way. Finally, I shall close by commenting on the significance of my arguments for the idea of a priori justification, and for the attempts that other philosophers have made at solving the problems that are raised by the sceptical paradox.

1. The sceptical paradox

The sceptical paradox that I have in mind has been perhaps most clearly stated in recent years by James Pryor (2000) and Brian Weatherson (2005). In this section, I shall give a somewhat rough and slipshod statement of this argument; for our present purposes, this rough formulation of the argument will suffice.

Consider the hypothesis that, in some way that you cannot possibly detect, your sensory experiences are radically unreliable guides to the truth about your environment. (We could fill in the details of this hypothesis in various different ways. For example, perhaps you are dreaming an extraordinarily lucid dream; or perhaps you are the victim of a Cartesian evil demon; or perhaps you are in the “Matrix”; or …. For our purposes, it does not matter exactly what the details of this hypothesis are, so long as the hypothesis implies that in some undetectable way, your sensory experiences are radically unreliable guides to the truth about your environment.) Let us call this hypothesis the sceptical hypothesis, or s for short.

Now, are you justified in believing ‘¬s’, the negation of the sceptical hypothesis? Clearly, ‘¬s’ is a contingent proposition about the situation that you—a particular

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1 For other statements of closely related sceptical arguments, see Williamson (2005) and Wright (1985).
individual—are in, at a particular point in time. So, surely, the only kind of justification that you could have for believing ‘¬s’ is empirical. Ultimately, if you are justified in believing ‘¬s’ at all, you are justified in believing it at least partly on the basis of your sensory experiences.

There are, however, two reasons for thinking that your sensory experiences could not possibly justify you in believing ‘¬s’, the negation of the sceptical hypothesis. First, it may seem to be circular or question-begging to rely on any of your sensory experiences in believing that your sensory experiences are not undetectably unreliable. For example, suppose that you were serving on a jury, and during the jury’s deliberations, a question was raised about the trustworthiness of a certain witness. Surely it would be absurdly circular or question-begging to brush this question aside by pointing out that the witness himself asserted in his testimony that he was entirely trustworthy. And how can it be any more rational to rely on your sensory experiences in believing that your sensory experiences are reliable than it would be to rely on the testimony of a witness in believing that the witness is reliable?

Secondly, it may also seem that your sensory experiences would not disconfirm the sceptical hypothesis anyway (that is, they would not confirm the negation of ‘¬s’). This is because the sensory experiences that you are currently having are of precisely the kind that would be predicted by the sceptical hypothesis. For both of these two reasons, then, it seems that your sensory experiences cannot possibly justify you in believing ‘¬s’. If it is also true that you cannot be justified in believing ‘¬s’ at all unless your sensory experiences can justify you in believing it, it follows that you cannot be justified in believing ‘¬s’ at all.

Suppose that this conclusion is true. That is, suppose that you are not in any way justified in rejecting the hypothesis that your sensory experiences are undetectably unreliable. In that case, it seems that you cannot really be justified in believing anything on the basis of your sensory experiences.

This last point can be bolstered by considering some analogies. For instance, let us return to the example of the jury’s deliberations about a certain witness’s testimony. If you are not in any way justified in regarding the witness as trustworthy, surely you cannot be justified in believing something solely because the witness has asserted it. Similarly, it seems that if you are not in any way justified in believing that a certain measuring instrument is reliable, you are surely not justified in believing anything solely on the basis of trusting that measuring instrument.

If you could be justified in believing a proposition p on the basis of your sensory experiences even if you were not in any way justified in believing your sensory experiences to be reliable, then there would be a radical asymmetry between (i) the justificatory role of sensory experiences and (ii) the justificatory role of testimony and measuring instruments. But unless this radical asymmetry can be explained, it seems implausible. So it seems that if you are not justified in believing ‘¬s’, you are not justified in believing anything on the basis of your sensory experiences at all.

As I have remarked, I shall not go to the trouble of giving a more rigorous and precise statement of this argument here. The rough statement of the argument given here is enough for my purposes. This is because in this essay, I shall argue against one of the argument’s clearest premises—specifically, the premise that the only kind of justification that you could have for believing ‘¬s’ is empirical. That is, I shall argue that you have a kind of a priori justification for rejecting the sceptical hypothesis.
2. Our justification for rejecting the sceptical hypothesis must be \textit{a priori}

In fact, there is an argument, due to Roger White (2006), for the conclusion that our justification for believing the negations of at least \textit{some} sceptical hypotheses \textit{must} be \textit{a priori}.

The argument rests on two fundamental epistemological assumptions. First, the degree to which one is justified in believing the various propositions that one is capable of believing can be modelled by means of a probability function: that is, the degree to which one is justified in believing any proposition \( p \) can be represented by the probability of \( p \) according to this probability function. Secondly, the way in which the degrees to which one is justified in believing these propositions evolves over time is by responding to new evidence in accordance with classical Bayesian conditionalization. We can sum up these two assumptions by saying that they amount to a “probabilistic” and “evidentialist” view of justification.

Admittedly, this sort of probabilistic evidentialist view is highly controversial.\(^2\) Indeed, I do not accept every detail of this view myself.\(^3\) So I am not claiming here that White’s argument is obviously sound. I shall just rehearse this argument here because it is one possible reason for thinking that our justification for believing these \textit{anti-sceptical} propositions is \textit{a priori}.\(^2\) It seems plausible that even within other epistemological frameworks, a broadly analogous argument will be available for the conclusion that our justification for rejecting at least some sceptical hypotheses \textit{must} be \textit{a priori}.

White’s argument starts out with the premise that there is at least one ordinary proposition—let us call this ordinary proposition \( op \)—such that one is justified in believing \( op \), even though one’s total evidence \( e \) does not entail the truth of \( op \). (Clearly, if this premise is false, then a very radical form of scepticism follows immediately.) We can now construct a rather special sceptical hypothesis \( se \): specifically, \( se \) is an extremely \textit{specific} sceptical hypothesis—a hypothesis that actually entails that one has this evidence \( e \), but is \textit{incompatible} with the ordinary proposition \( op \). (For example, suppose that \( op \) is the proposition ‘I have hands’. Then \( se \) might be the proposition ‘I am a handless thinker who is having the evidence \( e \) fed to me by a deceiving demon’. Or more simply still, \( se \) might just be ‘\( e \) & \( \neg \)op’.)

White’s crucial point is that this evidence \( e \) cannot lower the probability of this sceptical hypothesis \( se \). Indeed, presumably if \( e \) is genuine evidence at all, it cannot have been utterly certain, before one acquired the evidence \( e \), that \( e \) would be true. Thus, the prior probability of ‘\( \neg \)e’ must have been greater than 0; and if the prior probability of the sceptical hypothesis \( se \) was also greater than 0, then \( e \) must actually \textit{raise} the probability of \( se \). We can illustrate this point by means of the following figure:

\(^2\) For example, many philosophers object to probabilism, on the grounds that if degrees of justification can always be modelled by a probability function, then one must always have the \textit{maximum} degree of justification for believing every logical truth, and for any two propositions \( p \) and \( q \), if \( p \) is logically equivalent to \( q \), one must always have exactly the same degree of justification for believing \( p \) as for believing \( q \).

\(^3\) Although I accept probabilism, I do not accept this sort of evidentialism: this is because evidentialism implies that (i) whenever a belief is justified at all, it is justified solely by one’s evidence, and (ii) whenever a proposition \( p \) counts as part of one’s evidence, one must always have the \textit{maximum} degree of justification for believing \( p \)—and I doubt that this is the correct account of what makes our beliefs justified.
In this figure, the space of possibilities is divided into three cells: the top cell, where both $e$ (the evidence) and $s_e$ (the sceptical hypothesis) are true; the middle cell where both $e$ (the evidence) and $\neg s_e$ (the negation of the sceptical hypothesis) are true; and the bottom cell where neither the evidence nor the sceptical hypothesis is true. (Since $s_e$ entails $e$, there is no cell where $s_e$ is true but $e$ is not.) When one learns that $e$ is true, the region of the space of possibilities where $\neg e$ is true can be ruled out (this is why it is represented as shaded in the figure). But then $s_e$ will occupy a larger proportion of the remaining possibility-space than it occupied of the earlier possibility-space: formerly $s_e$ occupied one cell out of three; now it occupies one cell out of two. If the relevant probability distributions evolve in response to evidence according to Bayesian conditionalization, this means that the probability of $s_e$ has gone up in response to one’s learning $e$, and the probability of its negation $\neg s_e$ has gone down. Moreover, the prior probability of $\neg s_e$, before one acquired evidence $e$, must have been at least as high as the new probability of $op$ after receiving evidence $e$.

Moreover, this argument does not rest on any special assumptions about the relevant probability function. So the same point can be made about every probability function: none of these probability functions can allow that the probability of $\neg s_e$ was raised by the evidence $e$; and on every probability function, the prior unconditional probability of $\neg s_e$ must have been at least as high as the conditional probability of $op$ given the evidence $e$.

We may assume that this evidence $e$ is one’s total evidence—the result of the accumulation of many pieces of evidence over time. So every earlier piece of evidence that one has ever received consisted of some proposition $e'$ that is entailed by $e$; and since $s_e$ entails $e$, it must also entail $e'$ as well. Thus, just as the probability of $\neg s_e$ cannot have been raised by $e$, given that $s_e$ entails $e$, so too, for exactly the same reason, the probability of $\neg s_e$ also cannot have been raised by any of those past pieces of evidence $e'$ either. At every stage as the probability of the relevant propositions evolved in response to evidence, the negation of the sceptical hypothesis $\neg s_e$ must already have had a probability that is at least as high as the conditional probability of $op$ given $e$.

Assuming a probabilistic and evidentialist conception of justification, it follows that one must have always already have had a high degree of justification for believing $\neg s_e$—indeed, this degree of justification must have been at least as high as the degree of
justification that the ordinary proposition $op$ has in the presence of $e$—in advance of receiving every piece of evidence that one has ever had. In this sense, one must have a priori justification for $\neg s_e$. Moreover, if one has a priori justification for $\neg s_e$ (the negation of this very specific sceptical hypothesis), then as I shall now argue, it seems likely that one also has a priori justification for the negation of other sceptical hypotheses as well.

As we have seen, $e$ cannot raise the probability of $op$ any higher than the prior probability of $\neg s_e$; and within the framework of a probabilistic and evidentialist view of justification, this implies that one’s possession of a priori justification for $\neg s_e$ is a necessary condition of one’s being justified in believing $op$ when one’s total evidence is $e$. In general, the same point will also apply to any other body of evidence (like $e$) and any other ordinary proposition (like $op$). So we can draw the following general conclusion: for any body of evidence and any ordinary proposition that is not logically entailed by that body of evidence, there is some corresponding sceptical hypothesis (like $s_e$) such that having a priori justification for rejecting this sceptical hypothesis is a necessary condition for one’s being justified in believing that ordinary proposition in the presence of that evidence. In that sense, having a priori justification for rejecting sceptical hypotheses is a necessary condition for having any empirical justification for ordinary propositions whatsoever.

What of the more generic sceptical hypotheses (like $s$)? It seems prima facie plausible that the epistemology of the more generic sceptical hypotheses (like $s$) is broadly similar to the epistemology of these very specific sceptical hypotheses (like $s_e$). So it seems plausible that our justification for $\neg s$ must also be a priori.

This general conclusion does not entail that every thinker who is empirically justified in believing an ordinary proposition must actually believe $\neg s$, or indeed that she must actually believe any anti-sceptical proposition (that is, any proposition that is incompatible with sceptical hypotheses like $s$) at all. It only entails that the thinker has such a priori justification for rejecting sceptical propositions available to her. In the jargon, it only entails that the thinker is propositionally justified in believing $\neg s$, not that she is doxastically justified in so doing (in other words, it does not entail that she justifiably believes $\neg s$).

In general, however, there seems to be a fundamental connection between propositional and doxastic justification. If one has propositional justification for believing a proposition $p$, then it seems that there must be a possible course of reasoning that one could engage in, which would lead to one’s having a doxastically justified belief in $p$. Moreover, if—in addition—the propositional justification that one has for believing $p$ is a priori, then there must be a possible course of reasoning that could lead to one’s having a doxastically justified belief in $p$, which does not rely on any of one’s experiences or empirically justified beliefs. Instead, this possible course of reasoning must somehow be non-empirical: it must rely on one’s rational capacities alone. This raises the question: What is the possible course of non-empirical reasoning that could lead one to have a doxastically justified belief in the negation of the sceptical hypothesis $\neg s$? This is one of the questions that I shall answer in the next section.

Even though I shall be arguing that there is indeed a non-empirical course of reasoning that can lead us to believing $\neg s$, this does not entail that there may not also be empirical courses of reasoning that can lead us to the same conclusion. It is possible for there to be both a non-empirical route and an empirical route that both count as rational ways of
coming to believe the very same proposition.\textsuperscript{4} Still, as we have seen, the existence of \textit{a priori} propositional justification for the negation of the sceptical hypothesis is a necessary condition of any ordinary empirical justification whatsoever—whereas presumably if there is an empirical route that can lead to a doxastically justified belief in the negation of the sceptical hypothesis, this route will itself have to rest in some way on empirical justification for ordinary propositions. So the non-empirical route to acquiring doxastically justified beliefs in anti-sceptical propositions is in a way more fundamental than any empirical route.\textsuperscript{5}

Finally, even though \textit{a priori} justification for anti-sceptical propositions is a \textit{necessary condition} for empirical justification for ordinary propositions, this does not entail that one’s empirical justification for those ordinary propositions itself \textit{rests on} or is in part \textit{constituted by} one’s \textit{a priori} justification for any anti-sceptical propositions. Even if it is impossible to have empirical justification for ordinary propositions without also having \textit{a priori} justification for these anti-sceptical propositions, it does not follow that this \textit{a priori} justification in any way \textit{explains} or \textit{underlies} this empirical justification.\textsuperscript{6} On the contrary, it may be that the availability of \textit{a priori} justification for anti-sceptical propositions is simply a \textit{necessary consequence} of the fact that sensory experiences justify ordinary propositions, and not any part of what constitutes our ordinary empirical justification. It is precisely this possibility that I shall exploit in my solution to the sceptical paradox.

In fact, the probabilistic argument given in this section already shows how the existence of \textit{a priori} propositional justification for \textquotesingle ¬\textit{s}_e\textquotesingle is a necessary consequence of the logical relations between one’s evidence and the sceptical hypothesis \textit{s}_e, along with the fact that one is justified in believing the ordinary proposition \textit{op} in the presence of evidence \textit{e}. In this way, this probabilistic argument can be taken to show how the existence of this \textit{a priori} propositional justification is explained by the probabilistic and evidentialist structure of justification, together with the fact that \textit{op} is justified in the presence of \textit{e}. But this still leaves at least two questions. First, this probabilistic argument is restricted to the extremely specific sceptical hypotheses, like \textit{s}_e; we need to know exactly how we are to extend the argument to the more \textit{generic} sceptical hypotheses, like \textit{s}. Secondly, we also need to know what kind of non-empirical reasoning could possibly lead us to a doxastically justified belief in \textquotesingle ¬\textit{s}\textquotesingle. I shall answer both of these two questions in the next section.

\section{The \textit{a priori} bootstrapping reasoning}

The goal of this section is make it plausible that there is a kind of non-empirical reasoning that could lead any thinker who is capable of going through this reasoning to a doxastically justified belief in \textquotesingle ¬\textit{s}\textquotesingle, the negation of the sceptical hypothesis. I shall in fact describe two such processes of non-empirical reasoning here: I shall call the first the \textit{a priori bootstrapping reasoning}, and the second the \textit{meta-justificatory reasoning}.

First, we need to remind ourselves what exactly this proposition \textquotesingle ¬\textit{s}\textquotesingle is. The sceptical

\textsuperscript{4} For some compelling arguments for this point, see Silins (2005).

\textsuperscript{5} For this reason, I believe that the approach that was pioneered by Moore (1939)—of giving an empirical justification for rejecting these sceptical hypotheses—fails to get to the heart of the matter.

\textsuperscript{6} The importance of this distinction is rightly stressed by Silins (2008).
hypothesis $s$, as I characterized it in Section 1, is the hypothesis that your sensory experiences are, in some undetectable way, unreliable guides to the truth. For short, let us say that it is the hypothesis that your experiences are undetectably unreliable. So the negation of this hypothesis is the proposition that your experiences are either reliable or else detectably unreliable. In other words, the negation of the sceptical hypothesis is the proposition that you can express by the following material conditional: ‘I cannot detect that my sensory experiences are unreliable → my sensory experiences are reliable’.

It seems clear that you cannot have a priori justification for believing this material conditional simply by having a priori justification for believing the negation of its antecedent (that is, for believing that you can detect that your sensory experiences are unreliable), nor by having a priori justification for believing the consequent (that is, for believing that your experiences are reliable). Both the negation of the antecedent and the consequent of this conditional are propositions for which the only available justification would have to be empirical, not a priori. Nonetheless, I shall argue in this section that you have a priori justification for this material conditional as a whole, by showing how there are two possible processes of non-empirical reasoning that can lead you to a doxastically justified belief in this conditional.

Before describing these kinds of reasoning, I should note that my claims that this reasoning is non-empirical, and that it can lead to a doxastically justified belief in this material conditional, will be both based on a number of assumptions. These assumptions seem plausible to me, but they are certainly not beyond question. Unfortunately, I shall not have time to offer a full defence of these assumptions here; I shall rely on these assumptions purely for the sake of argument, in order to explore what their consequences will be.

First, my claims will rely on the following assumption about what it is for a process of reasoning to count as non-empirical. Suppose that there is a set of concepts and basic reasoning capacities such that it is necessary that any thinker who possesses those concepts and has those capacities is in a position to engage in a certain process of reasoning that would rationally lead the thinker to have a certain belief. Then we can say that this process of reasoning is non-empirical, since it can rationally lead any thinker who possesses these concepts and reasoning capacities, regardless of what experiences or empirical background beliefs they have may have, to have that belief. In this case, all thinkers of this sort have a priori justification for that belief. In this section, I shall sketch a process of reasoning that can lead us to believe ‘$\neg s$’ (the negation of the sceptical hypothesis), which counts as non-empirical in this way.

Secondly, my claim that the reasoning in question can lead to a doxastically justified belief rests on a number of assumptions about which belief-forming processes are rational. Thus, one of these assumptions is that a certain belief-forming process that we might call

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7 It is important that this process must be a process of reasoning or inference. We must exclude the process of forming beliefs by introspection, since otherwise we would wrongly conclude that all thinkers who are capable of both introspection and mathematical reasoning have a priori justification for believing the proposition that they could express by saying ‘I believe that 313 is prime’.

8 Strictly speaking, to achieve the most explanatory level of generality, we should include belief-revising processes as well as belief-forming processes. (Moreover, we should understand belief “revision” broadly so that it includes merely reaffirming a belief as well as abandoning or adjusting one’s level of confidence in a belief.) But to simplify the discussion I shall just talk about belief-forming processes here.
“taking experience at face value” is necessarily rational. Very roughly, the process of taking experience at face value is the process that one engages in by responding to the fact of one’s having a conscious experience that has the proposition $p$ as part of its representational content by coming to believe $p$. For example, if my present experience has the proposition ‘I am holding my hands in front of my face’ as part of its content, then I could engage in this process if I responded to this experience by forming the belief that I am indeed holding my hands in front of my face.

Now, this specification of the process is in one way obviously too rough. I could have an experience of this kind even if it also appeared to me that a demon was talking to me out of the palm of my mind, mocking me with the taunt that all my experiences are complete illusions. In this case, it would clearly not be rational for me to form the belief that I really am holding my hands in front of my face. If this process of “taking sensory experience at face value” is to be genuinely rational, it is not sufficient for engaging in this process that one just responds to any experience that has $p$ as part of its content by forming the corresponding belief. It must also be the case that one’s experiences, background beliefs, and other mental states do not contain any special defeating reasons of this kind. So a more precise name for this process would be the “process of taking one’s experiences at face value, when such special defeating reasons are absent”.9

If the general process of taking one’s experiences at face value is indeed necessarily rational, then it is rational to form beliefs in this way whenever one’s experiences and background beliefs contain no special defeaters of the relevant sort. In other words, to adapt some terminology from Crispin Wright (1989, 251), the rationality of forming beliefs by means of the process is “positive-presumptive”: the rationality of forming beliefs in this way is the default position, which can be overturned only by the presence of special defeaters.

This is admittedly still only a very rough description of the process of taking experience at face value. In general, it will clearly be a difficult and controversial matter to give a fully precise account of this process.10 I believe, however, that this rough description will be sufficient for present purposes. At this point, it is more important to see what the process of taking experience at face value does not involve. Specifically, as I understand it, engaging in this process does not involve relying on any antecedent belief in the reliability of one’s sensory experiences (or indeed on any belief about one’s sensory experiences at all). Engaging in this process involves coming to believe $p$ in direct response to one’s having an experience that has $p$ as part of its representational content (together with the absence of defeating reasons of the relevant sort); it is not required that one should in addition have any belief about one’s experiences.

Moreover, I shall suggest here that the rationality of this process of taking one’s sensory experiences at face value (in the absence of defeaters of the relevant kind) is not itself explained, even in part, by one’s possession of justification for any higher-order beliefs about

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9 In commenting on this essay, Stephen Schiffer argued that my reference to “the absence of special defeaters ... stands in for something extremely complicated.” But on the contrary, it seems that we do have a general notion of a defeater: this is just the general notion of a set of mental states that one is in at the relevant time such that although normally a certain process of reasoning would count as rational, it does not count as a rational process of reasoning for one to engage in at that time because of the presence of these mental states. It is this general notion that I am using here.

10 For a more detailed account of this belief-forming process, see Wedgwood (2011).
the reliability of one’s experiences. Nonetheless, as we shall see, even if the rationality of this process is not explained or constituted by one’s possession of justification for such higher-order beliefs, the rationality of this process may still entail the existence of such justification: in this way, the existence of justification for such higher-order beliefs may be explained by the rationality of this process, instead of being what explains it or constitutes it.

According to this assumption, then, it is always rational for you to engage in the process of taking your experiences at face value. At least so long as no special defeaters are present, this belief-forming process is a way for you to come to have doxastically justified beliefs in the ordinary propositions that form part of the content of your sensory experiences. It presumably follows from this that the fact that you have such an experience and no special defeaters are present provides you with propositional justification for these ordinary propositions.

If the fact that you have such an experience and no special defeaters are present provides you with propositional justification in this way, then it seems that a certain corresponding inference will also be rational. This inference starts from the premise that you have an experience as of p’s being the case and no special defeaters are present, and then infers from this premise—by means of a distinctive sort of non-deductive inference—that the proposition p is true. More precisely, this form of inference involves inferring a proposition p from the first-person present-tensed premise that one might express by saying ‘I have an experience as of p’s being the case, and no special defeaters are present’. We could call this form of inference the rule of “external-world introduction”.

It is hard to see how this form of inference could be any less rational than the non-inferential process that I have called “taking experience at face value”; indeed, in a sense this type of inference could be called the “inferential analogue” of that non-inferential process. I shall assume then the rule of “external-world introduction” is also rational. Since the non-inferential process of taking sensory experience at face value is—as I have argued—necessarily rational for all thinkers who are capable of engaging in this process (regardless of the specific sensory experiences they have happened to have), I shall assume that this rule of inference is similarly necessarily rational for all thinkers who are capable of both taking experience at face value and of reasoning in accordance with this rule.

In addition to this assumption about the rule of external-world introduction, I shall also rely on a further assumption about a certain process for forming conditional beliefs. Suppose that one supposes one proposition p to be true, and then rationally infers a second proposition q from this first proposition p. Now to “infer” q from p need not involve forming an unconditional belief in q itself: if one is merely supposing that p is true, then one might not actually have an unconditional belief either in p or in q. Rather, to infer p from q is to conditionally accept q, conditionally on the supposition of p; at least this account of inference is plausible if such “conditional acceptance” is understood along the lines that have been

11 In this way, this assumption about the rationality of taking one’s sensory experiences at face value is similar in spirit—though not identical—to the position that James Pryor (2000) has called “dogmatism”.

12 Although it seems intuitively plausible that there is a rational rule of inference that corresponds to the non-inferential process in this way, it is a good question why this is so. (I have been helped to see that this is a good question, and that it is not obvious that it can be answered merely with the resources of this essay, by Magdalena Balcerak Jackson.) It may be that the “meta-justificatory” reasoning explored at the end of this section can itself help to explain why this rule of inference is rational; but unfortunately I cannot attempt to answer this question in detail here.
recommended by Dorothy Edgington (1995), not as the acceptance of an intrinsically conditional proposition, but as an intrinsically conditional attitude towards a pair of propositions \(<p, q>\), involving the conditional acceptance of the second proposition \(q\), under the supposition of the first proposition \(p\). According to the further assumption that I am relying on here, whenever one rationally infers a proposition \(q\) from a proposition \(p\) in this way, it will also be rational to form a belief in the corresponding material conditional \(p \rightarrow q\).\(^{13}\) (Sometimes, it may also be rational to respond to this inference by forming a belief in the corresponding subjunctive or counterfactual conditional as well. But for our purposes, it is enough that this process can lead to a doxastically justified belief in this material conditional.)

Finally, I shall also rely on the assumption that there are two further belief-forming processes that also count as necessarily rational. The first is the process of forming beliefs in the obvious logical consequences of propositions that one already rationally believes; and the second is the process of forming beliefs by means of “inference to the best explanation”.\(^{14}\)

I am now in a position to describe the a priori bootstrapping reasoning itself.\(^{14}\) The reasoning begins with the following two crucial steps. In the first step, the thinker first supposes that she has an experience as of \(p\)’s being the case (that is, an experience that has \(p\) as part of its representational content), and that her experiences, background beliefs, and other mental states contain no special defeaters; and then, from the supposition that she has an experience as of \(p\)’s being the case and no special defeaters are present, the thinker infers \(p\) itself, by means of the rule of external-world introduction. As I have suggested, for the thinker to “infer” \(p\) from this supposition in this way is for the thinker to conditionally accept \(p\), conditionally on the supposition that she has an experience of this sort, and no special defeaters are present. (Because the inference is based the reasoner’s merely supposing that she has an experience as of \(p\)’s being the case, she does not need actually to have any such experience, or even to believe that she has any such experience, in order to draw this inference.) In the second step, the thinker responds to her having drawn this inference by coming to believe the corresponding material conditional ‘[I have an experience as of \(p\)’s being the case & no special defeaters are present] \(\rightarrow p\)’.

Now, the reasoning consisting in these two steps seems clearly non-empirical—that is,\(^{13}\) Compare the comments about the epistemology of subjunctive conditionals that are made by Timothy Williamson (2007, chap. 5). It is important that this belief-forming process involves forming a belief in the material conditional \(p \rightarrow q\) on the basis of rationally inferring \(q\) from \(p\). Not all rational thought-processes that could lead from one’s believing \(p\) to believing \(q\) count as an “inference”: otherwise it would always be rational for one to form a belief in the material conditional \(p \rightarrow I\ believe p\)!

\(^{14}\) I first discussed this a priori bootstrapping reasoning at conferences in the summer of 2008. In 2010, I discovered that Stewart Cohen (2010, 150–5) had independently discussed a fundamentally similar process of reasoning (which he calls “the a priori suppositional reasoning”). My argument differs from Cohen’s in two main ways. First, the ultimate conclusion of Cohen’s a priori suppositional reasoning is the unconditional proposition ‘My colour vision is reliable’, whereas the conclusion of my a priori bootstrapping reasoning is the conditional ‘If my experiences do not contain any defeaters, my experiences are reliable.’ Secondly, Cohen seems to think that the availability of the a priori suppositional reasoning is what explains why we have a priori propositional justification for the conclusion of this reasoning. My own view is that our possession of this a priori propositional justification is explained by the probabilistic considerations that I rehearsed in Section 2; the availability of the a priori bootstrapping reasoning only explains how we could achieve an a priori doxastically justified belief in that conclusion.
it is available to all reasoners who have the relevant concepts and reasoning capacities, regardless of the specific experiences and empirical background beliefs that they have. Moreover, given the assumptions that I am relying on here, it is also an entirely rational process, which can lead to a doxastically justified belief in this material conditional. So this supports the conclusion that all such thinkers have *a priori* justification for believing this material conditional.

This material conditional, however, is already incompatible with the highly *specific* sceptical hypotheses (like the hypothesis that I labelled “*s*”) that I considered in Section 2. As I described them, each of these highly specific sceptical hypotheses has the following two features: (i) if one’s total evidence is *e*, then this specific sceptical hypothesis entails *e*; and (ii) this hypothesis is inconsistent with the ordinary propositions that one would normally believe on the basis of that evidence. Presumably, it is part of one’s total evidence that one has an experience that has *p* as part of its representational content (and that no defeaters of the relevant kind are present); and we may presumably also assume that *p* is an “ordinary proposition” of the relevant sort. So, this material conditional—‘[I have an experience as of *p*’s being the case & no special defeaters are present] → *p*’—is incompatible with this highly specific sceptical hypothesis *s*. Thus, there is a process of non-empirical reasoning that can lead all thinkers who possess the relevant concepts and reasoning capacities to have a doxastically justified belief in the negation of this highly specific sceptical hypothesis.

Moreover, as I shall now argue, there is a way of *extending* this non-empirical reasoning so that it leads to the rejection of the more *general* sceptical hypotheses that I considered in Section 1. The crucial point is that the thinker can perform the same manoeuvre for a whole sequence of propositions *p*₁, …, *pₙ*, as well as just for *p*. This will lead her to form beliefs in a whole sequence of material conditionals, each of which has the form ‘[I have an experience as of *p*ᵢ’s being the case & no special defeaters are present] → *p*ᵢ’. Since she is capable of coming to believe the obvious logical consequences of propositions that she believes, she can then also form a belief in the *conjunction* of these conditionals: ‘[[I have an experience as of its being the case that *p*₁ & no defeaters are present] → *p*₁] & … [I have an experience as of its being the case that *p*ₙ & no defeaters are present] → *p*ₙ].’

Now this long conjunction seems to demand explanation. It seems plausible that the best explanation of this long conjunction is that if no defeaters are present, then the thinker’s experiences are generally reliable. So it seems possible, by means of an inference to the best explanation, for the thinker to form a belief in the proposition that if no defeaters are present, then her experiences are generally reliable.

Presumably, if the thinker’s experiences contained a *defeater* of the relevant kind, then those experiences would effectively reveal their own unreliability to the thinker, in which case it would be possible for the thinker to detect the unreliability of her experiences. Thus, the proposition that if no defeaters are present, one’s experiences are generally reliable effectively entails the further proposition that if one cannot detect that one’s experiences are unreliable, they are reliable; but that further proposition is precisely ‘¬*s’*, the negation of the sceptical hypothesis. Thus, this process of reasoning—which I am here calling the *a priori* bootstrapping reasoning—can lead us to believing the negation of the sceptical hypothesis.

For reasons that we have already explored, this whole process of reasoning seems to be both non-empirical and rational. It is available to all thinkers who have the relevant concepts and reasoning capacities, regardless of the experiences and empirical beliefs that they may have; and it consists entirely of rational steps of reasoning. So the availability of this
*a priori* bootstrapping reasoning to every thinker who possesses the relevant concepts and capacities may provide the answer to the two questions that we raised at the end of Section 2.

Moreover, there is also a *second* process of non-empirical reasoning that seems capable of leading any thinker who possesses the relevant concepts and reasoning capacities to rationally rejecting the sceptical hypotheses. In the rest of this section, I shall explore this second process of reasoning, which I shall call the “meta-justificatory reasoning”.¹⁵

Imagine a Platonic soul waiting to be embodied—as it were, waiting to *beam down* from the intelligible world into the sensible world. The only information that the Platonic soul has is purely *a priori* information. Suppose that this Platonic soul knows all the principles of rational belief. (In this way, the claim that this “meta-justificatory reasoning” is a non-empirical process of reasoning that can result in our rationally rejecting the sceptical hypothesis relies on the assumption that all the relevant principles of rational belief are *a priori*.) Since the Platonic soul knows all these principles of rational belief, she can predict that as soon as she beams down into the sensible world and starts having experiences, it will be rational for her to take her experiences at face value, and also to form introspective beliefs about the contents of her experience. So she knows that, if no special defeaters are present, it will be rational for her to believe what Roger White (2006, 546) calls a “Track Record Proposition”—that is, some proposition of the form:

I have an experience as of its being the case that $p_1$, and $p_1$; ... and I have an experience as of its being the case that $p_n$, and $p_n$.

If it were rational to believe any such “Track Record Proposition”, it would surely also be rational to believe the following proposition, which White (2006, 546) calls “No Errors”:

I have a great many experiences, the contents of which are all true.

If it were rational to believe “No Errors”, it would surely also be rational to believe the following (“Reliability”) which seems the best and simplest explanation of “No Errors”:

My experiences are generally reliable guides to the truth.

So, the Platonic soul already knows—even before she has beamed down to the sensible world—that if no defeaters are present among the experiences that she has after arriving in the sensible world, it will be rational for her to believe that her experiences are generally reliable.

Now White (2006, 538) has defended a principle that he calls the “meta-justification principle”. Roughly, this is the principle that if one knows that at a certain future time $t$ it will be rational for one to believe a proposition $p$, and one also knows that one will not lose any

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¹⁵ I first discussed this meta-justificatory reasoning on the epistemology weblog *Certain Doubts* on 12 March 2006 <http://certaindoubts.com/?p=548>. This meta-justificatory reasoning rests on different assumptions from the reasoning based on the rule of “external world introduction” that I discussed above. Both processes of reasoning seem rational to me; however, the first kind of reasoning seems to me dialectically more effective than the second, while I suspect that the second kind of reasoning is explanatorily more fundamental than the first. Unfortunately I cannot explore the relationship between these two kinds of reasoning in depth here.
information between now and that future time \( t \), then it is already rational for one to believe \( p \). To be more precise, this principle has to be restricted to cases in which one has no special reason to think that one will encounter misleading evidence between now and \( t \). It will admittedly be a challenging task to give a perfectly precise formulation of this meta-justification principle. But it seems plausible that something at least roughly like this principle is correct.\(^{16}\)

If this meta-justification principle is correct, it seems plausible that another more general principle is also correct. According to this more general principle, if one knows that if a certain condition \( C \) holds (and one will also not lose any information between now and \( t \), it will be rational for one to believe \( p \) at \( t \), then it is already rational for one to believe that if condition \( C \) holds, \( p \) is true. (As with the simpler meta-justification principle, to make this precise, we must restrict it to cases where one has no special reason to think that if \( C \) holds, one will encounter any misleading evidence between now and \( t \).)

Suppose that this generalized version of the meta-justification principle is correct. Then, given that the Platonic soul knows that if her experiences contain no defeaters, it will be rational for her to believe that her experiences are generally reliable, it seems that it must already be rational for the Platonic soul to believe that if her experiences contain no defeaters, her experiences are generally reliable. (The Platonic soul certainly has no special reason, before beaming down into the sensible world, to expect that if her experiences contain no defeaters, her evidence will have been misleading in the relevant way.) Thus, it seems that it must already be rational for the Platonic soul to believe \( \neg s \), the negation of the sceptical hypothesis. Since the Platonic soul can go through this reasoning even before she beams down into the sensible world, it seems that her justification for believing \( \neg s \) must be a priori.

It seems, then, that there are two processes of non-empirical reasoning—the a priori bootstrapping reasoning and the meta-justificatory reasoning—that can lead any rational thinker who has the relevant concepts and reasoning capacities to a doxastically justified rejection of the sceptical hypothesis. This helps to make it plausible that we do indeed have a priori justification for rejecting such sceptical hypotheses.

4. The significance of a priori bootstrapping

a. In arguing that we have a priori justification for rejecting the sceptical hypothesis, I relied on the assumption that the process of taking experience at face value is necessarily rational. I have not in any way explained why this assumption is true. This point suggests that there is also a second problem that is raised by the sceptical paradox, different from the problem that I outlined in Section 1—specifically, a sceptical problem about the rationality of belief-forming processes (such as the process of taking experience at face value), rather than about the rationality or justification of beliefs. Indeed, it seems that the problem of explaining the rationality of belief-forming processes is in a way more fundamental than the problem of

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\(^{16}\) As White (2006, 539) puts it, even if we have not succeeded in ruling out all “tricky exceptions” to this principle, “it is clear enough the case that concerns us does not involve any tricky business like this.” The same qualifications must be understood to apply to the “more general principle” that I articulate in the following paragraph.
explaining why we are justified in holding particular beliefs.\textsuperscript{17}

Unfortunately, the arguments given here cannot solve the more fundamental problem of how to explain the rationality of the process of taking experience at face value. These arguments can only solve the less fundamental problem of explaining how we are justified in believing ‘\(\neg\s\)’, the negation of the sceptical hypothesis. However, these arguments clearly rely on the assumption that the process of taking experience at face value is rational. Since they rely on this assumption, they obviously cannot themselves explain why this assumption is true.\textsuperscript{18}

As I have argued above, both of the two pieces of reasoning that I discussed in the previous section—the \textit{a priori} bootstrapping reasoning and the meta-justificatory reasoning—are non-empirical. It follows that neither piece of reasoning actually involves \textit{engaging} in the process of taking experience at face value. Nonetheless, there is a sense in which both pieces of reasoning involve \textit{relying} on that process. The \textit{a priori} bootstrapping reasoning involves drawing inferences by means of the rule of “external-world introduction”, and I have suggested that this rule of inference is simply the “inferential analogue” of the process of taking experience at face value. The meta-justificatory reasoning involves drawing an inference from the explicit belief that the process of taking experience at face value is rational.

In that sense, the availability of these rational pieces of non-empirical reasoning cannot offer any “process-independent” justification of the process of taking experience at face value. To use the terms that were made famous by Michael Dummett (1975), these pieces of reasoning are “rule circular” even though they are not “premise circular”. Indeed, it seems plausible that if the process of taking one’s sensory experiences at face value is rational, it is simply \textit{a primitively} rational process—a process that is rational, but \textit{not} because of the availability of any process-independent way of coming to form a rational belief in the process’s reliability.

I have called one of the two pieces of non-empirical reasoning that can lead any rational thinker to believe the negation of the sceptical hypothesis the “\textit{a priori} bootstrapping reasoning” because of its similarity to the “bootstrapping reasoning” that has been criticized by Jonathan Vogel (2000) and Stewart Cohen (2002). However, to distinguish this reasoning from the reasoning that Vogel and Cohen have criticized, I have called it the \textit{a priori} bootstrapping reasoning; the reasoning that Vogel and Cohen have criticized could be called the \textit{empirical} bootstrapping reasoning.

In the empirical bootstrapping reasoning, the thinker reasons as follows (looking at her hand): “I have a hand; it is part of the content of my current experience that I have a hand; so in this respect my experience has got things right!” That is, the thinker first relies on her actual current sensory experience to form a belief about the world, then forms an introspective belief about the content of her current experience, and finally concludes from these two beliefs that her experience has got things right on this occasion.

Both Vogel and Cohen think that the empirical bootstrapping reasoning is obviously worthless. In fact, it is not clear that this reasoning really is entirely worthless. It could have

\textsuperscript{17} For the general idea that belief-forming processes are of fundamental importance, and not reducible to beliefs, compare Lewis Carroll (1895).

\textsuperscript{18} I have developed a proposal about why this assumption is true elsewhere (Wedgwood 2011).
happened, after all, that defeaters of some sort would have arisen. (Your current experience could have been an experience as of a demon speaking to you out of the palm of your hand, taunting you with the claim that your experiences are all hallucinations.) If in fact no such defeaters are present, then the empirical bootstrapping argument allows you to go one step beyond the conditional conclusion of the *a priori* bootstrapping reasoning—the conditional belief that if no defeaters are present, your experiences are reliable—to the consequent of that conditional, the conclusion that your experiences are indeed reliable.

Otherwise, however, there is nothing else that the empirical bootstrapping reasoning can tell you that you were not already in a position to know on the basis of the *a priori* bootstrapping reasoning. Thus, even if Vogel and Cohen were wrong to claim that the empirical bootstrapping reasoning is worthless, they were right to point out that the reasoning does little to increase your knowledge; there is little that the empirical bootstrapping reasoning adds to what was already available thanks to the *a priori* bootstrapping reasoning.

Some philosophers may still feel that the *a priori* bootstrapping reasoning is somehow lacking in force. Various attempts can be made to explain this feeling away. For example, James Pryor (2004) has argued that the bootstrapping reasoning—like other pieces of “rule circular” reasoning such as Moore’s (1939) “proof of an external world”—will be incapable of persuading interlocutors who harbour serious doubts about whether or not their experiences are undetectably unreliable. Pryor suggests that some philosophers may have mistakenly taken that the fact that the reasoning is dialectically ineffective in this way to show that the reasoning cannot produce rational belief in individuals who start out without having any attitude (whether belief or doubt) about the reliability of their experiences.

There may also be another reason why some philosophers have regarded the bootstrapping reasoning as worthless. These philosophers may have implicitly supposed that the purpose of the reasoning was not merely to arrive at an *a priori* justified belief in the proposition that one’s experiences are not undetectably unreliable, but to give some sort of justification of the process of taking one’s experiences at face value. In fact, however, as I have argued, there is no way in which the bootstrapping reasoning can do anything of the kind. But that does not show the bootstrapping reasoning cannot achieve a different and more modest goal: even if the availability of such reasoning cannot explain the rationality of the belief-forming process of taking experience at face value, it could still help to show that we are *a priori* justified in holding the belief that our experiences are not undetectably unreliable.

b. The solution to the sceptical paradox advocated in this essay occupies an intermediate position between two positions that I shall call (i) the Moorean view and (ii) the propositional foundationalist view. The general idea of this intermediate position has been clearly demarcated by Nicholas Silins (2008); this solution advocated here has been designed as a way of occupying this intermediate position.

Mooreans—that is, philosophers who are inspired by G. E. Moore (1939)—say that an experience as of *p*'s being the case would still justify you in believing *p* even if you had no antecedent justification for believing the negation of the sceptical hypothesis at all.¹⁹

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¹⁹ James Pryor (2000, 519) has been interpreted by many readers as accepting this Moorean view, when he endorses the claim that “when it perceptually seems to you as if *p* is the case, you have a kind of justification for believing *p* that does not presuppose or rest on your justification for anything else, which could be cited in an argument—even an ampliative argument—for *p*.” If saying that your justification for *p* “presupposes” your justification for another proposition *q* simply means that it is impossible to have this justification for *p* without
**Propositional foundationalists** like Crispin Wright (2002) say that the justification that you have for believing \(p\) when you have an experience as of \(p\)’s being the case is *explained*, at least in part, by your having some antecedent justification or “warrant” for accepting the negation of sceptical hypothesis, ‘\(¬s\)’—which functions on this view as a foundational “hinge proposition” underlying all empirical justification whatsoever.

By contrast, the position advocated here rejects *both* Mooreanism and propositional foundationalism. It rejects Mooreanism because according to this position, it is a *necessary consequence* of the fact that your experience justifies ordinary empirical beliefs that you have antecedent (indeed, *a priori*) justification for believing the negation of the sceptical hypothesis. So it is not possible for experiences to justify such beliefs without such anti-sceptical justification being in place. This is why the position advocated here is incompatible with Mooreanism.

However, my position also rejects Wright’s propositional foundationalism, since according to my position, the warrant that you have for rejecting the sceptical hypothesis does not in any way *explain* the fact that your experience justifies ordinary empirical beliefs. On the contrary, the warrant that you have for rejecting the sceptical hypothesis is itself *explained by* the fact that your experience justifies such ordinary beliefs. Thus, the position advocated here is incompatible with Wright’s propositional foundationalism.

Although my position is incompatible with both of these positions, it can also capture many of the intuitions behind both. It agrees with Wright that one must have some *a priori* warrant for rejecting the sceptical hypothesis, and that this *a priori* warrant is a necessary condition of its being rational to take one’s experiences at face value. On the other hand, it also agrees with the Moorean that the rationality of taking one’s experiences at face value is a basic feature of rationality, which does not need to be explained by any antecedent justification or warrant for rejecting the sceptical hypothesis. The existence of this antecedent *a priori* justification for rejecting the sceptical hypothesis is a necessary consequence, not an explanatory precondition, of the more basic truth that it is rational to take one’s experiences at face value.

c. The arguments advanced here also shed light on the nature of *a priori* justification. In particular, it supports two crucial points about the *a priori*.

First, the *a priori* is a less mysterious phenomenon than one might think. Indeed, the empirical is related to the *a priori* roughly as a natural-deduction derivation from premises is related to a natural-deduction proof in which all assumptions are “discharged”. This is why so many *a priori* justified beliefs are in *conditional* propositions. One might infer that at least one of Joseph’s parents has a sibling from one’s empirical belief that Joseph has an uncle—in which case this inference would yield a rational empirical belief in the conclusion that one of Joseph’s parents has a sibling. On the other hand, one could also perform this inference in a purely *suppositional* fashion: and in the way that was described in Section 3, one could then come to believe the conditional proposition that if Joseph has an uncle, then at least one of his parents has a sibling; and in that case one’s justification for this conditional belief would be *a priori*, because it no longer depends for its justification on any empirical belief (such as the empirical belief that Joseph has an uncle).

having antecedent justification for \(q\), then my position is incompatible with Pryor’s claim, since according to my position, it is necessary that if your sensory experience justifies you in believing an ordinary proposition \(op\), then you must have antecedent justification for ‘\(¬s\)’, the negation of the sceptical hypothesis.
Secondly, we can have \textit{a priori} justification for believing \textit{contingent} propositions.\footnote{In this way, I strongly agree with John Hawthorne (2002) that some propositions are \textit{deeply contingent a priori}, and with Brian Weatherson (2005) that if scepticism and externalism are false (as I believe they are), then anti-sceptical propositions belong to this category.} The negation of the sceptical hypothesis—the proposition that your experiences are not undetectably unreliable—is obviously contingent: there are surely possible worlds in which the sceptical hypothesis is true, and in which your experiences are in some undetectable way unreliable (for example, because you are being deceived by a demon or the like). So it seems that Kant was wrong to claim that all propositions for which we have \textit{a priori} justification are necessarily true.

Indeed, even if you really \textit{were} in a sceptical scenario, you would \textit{still} have \textit{a priori} justification for believing that you were not in such a sceptical scenario. In this case, then, you would have \textit{a priori} justification for believing a proposition that is in fact \textit{false}! False propositions, of course, cannot be known. So this also reveals that it is a mistake to think that the \textit{a priori} is primarily a matter of a certain kind of \textit{knowledge}. The \textit{a priori} is a certain kind of \textit{justification}, not a kind of knowledge. In general, justified beliefs can be false; and the same is true of \textit{a priori} justified beliefs.\footnote{An ancestor of this paper was presented at two conferences on scepticism in 2008—one at the University of Edinburgh (where my commentator was Alan Millar), and the other at New York University’s Villa La Pietra in Florence (where my commentators were Stephen Schiffer and Ram Neta). Something much closer to the present version was presented in 2009 at the University of Southern California and at the University of Bristol, and in 2010 at a conference on justification and scepticism at the University of Bologna. I am grateful to all those audiences, and also to Jeremy Goodman, Scott Sturgeon, and Timothy Williamson, for helpful comments. Some of the work on this paper was carried out in 2009-2010, during my tenure of a Research Fellowship from the Leverhulme Trust, to whom I should also record my gratitude.}
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