



Abducting the a priori

Célia Teixeira¹

Received: 19 October 2020 / Accepted: 16 January 2023 / Published online: 14 February 2023
© The Author(s), under exclusive licence to Springer Nature B.V. 2023

Abstract

Intuition-based accounts of the a priori are criticised for appealing to a “mysterious” faculty of rational intuition to explain how a priori knowledge is possible. Analyticity-based accounts are typically motivated by opposition to them, offering a purportedly “non-mysterious” account of the a priori. In this paper, I argue that analyticity-based accounts are in no better position to explain the a priori than intuition-based accounts, and that we have good reason to doubt the explanation they offer. To do this, I focus on recent analyticity-based accounts of the a priori, which appeal to understanding alone to explain the a priori. First, I argue that the appeal to understanding as the source of the a priori is no less mysterious than the appeal to rational intuition. Second, I argue that analyticity-based accounts of the a priori do not provide an alternative to intuition-based accounts as the fundamental explanation they offer of the a priori is one that could equally be endorsed by a friend of rational intuition—and that they fail for reasons that do not undermine intuition-based accounts.

Keywords A priori · Analyticity · Intuition · Rationalism · Empiricism · Understanding

1 Introduction

We seem able to know that all bachelors are unmarried or that knowledge entails truth independently of any particular experience of the world and by thought alone. However, we can only know that grass is green or that the Earth orbits the Sun through experience. The traditional Kantian distinction between a priori and a posteriori

✉ Célia Teixeira
celia.teixeira@gmail.com

¹ Department of Philosophy, Federal University of Rio de Janeiro, IFCS, Largo São Francisco de Paula 1/320B, Rio de Janeiro, RJ 20051-070, Brazil

knowledge captures this intuitive difference between two ways of coming to know: independently of experience and through experience. But whereas the existence of a posteriori knowledge seems undeniable—unless we embrace some strong form of scepticism—the same is not true of the a priori.¹ What is peculiar about the a priori is the putative fact that we can know truths about the world independently of any particular experience of the world. But how is this possible? This is the problem of the a priori, the problem that will concern us here.

In reply to this problem, there have traditionally been two main accounts: intuition-based accounts—traditionally defended by rationalists—and analyticity-based accounts—traditionally defended by moderate empiricists (cf. BonJour, 1998). Proponents of intuition-based accounts appeal to a special faculty of rational intuition to explain the a priori: a priori knowledge is possible because we have a faculty of rational intuition that, somehow, enables us to discover truths about the world without looking at it. Proponents of analyticity-based accounts appeal to the notion of analyticity to explain the a priori: a priori knowledge is possible because it is mere knowledge of analytic truths—i.e., truths made true by meanings alone or such that just by understanding them we are justified in believing them. But despite the historical dominance of intuition-based accounts of the a priori, these accounts are nowadays regarded with much suspicion, and analyticity-based accounts have become widely held. This shift, however, is mostly based not on a direct argument for analyticity-based accounts, but rather on a profound scepticism regarding the faculty of rational intuition. As BonJour (1998) writes, “The underlying motivation for empiricist doubts is a deep-seated scepticism about the supposed capacity for rational insight” (p. 17). Bengson (2015) says something similar:

Opposition to this rationalist thesis [that intuition is the source of some of our knowledge] is often motivated by the perceived obscurity of intuition, which is sometimes derided as an abstruse or esoteric phenomenon akin to crystal-ball gazing (p. 708).

We can find similar statements among proponents of analyticity-based accounts of the a priori. For example, Boghossian (1996) is explicit about the main motivation for these accounts:

The central impetus behind the analytic explanation of the a priori is a desire to explain the possibility of a priori knowledge without having to postulate such a special faculty [viz. the faculty of rational intuition], one that has never been described in satisfactory terms. (p. 363)

In this paper I argue that analyticity-based accounts are in no better position to explain the a priori than intuition-based accounts of the a priori, and that we have

¹ There has been some recent scepticism regarding the coherence and significance of the distinction. For the sake of this paper, I assume that the distinction is in order and that we have a good grasp of it. See Williamson (2013) and Casullo (2015) for important challenges to the distinction, and Teixeira (forthcoming) for a defence.

good reason to doubt the explanation of the a priori they offer. To that end, I focus on recent analyticity-based accounts of the a priori, which appeal to understanding alone to explain the a priori. First, in Sect. 3, I argue that the appeal to understanding as the source of the a priori is not clearly less mysterious than the appeal to rational intuition. Second, in Sect. 4, I argue that analyticity-based accounts of the a priori do not provide an alternative to intuition-based accounts as the fundamental explanation they offer of the a priori is one that could equally be endorsed by a friend of rational intuition—and that they fail for reasons that do not undermine intuition-based accounts. Before proceeding, allow me to start with some background.

2 The traditional analyticity-based account

What exactly is an analyticity-based account of the a priori? In what way does the appeal to analyticity help us solve the problem of the a priori? To address these questions, and following recent work on analyticity, we can focus on two readings of analyticity: metaphysical and epistemic.² A sentence *S* is *metaphysically* analytic iff *S* is true in virtue of *S*'s meaning alone; a sentence *S* is *epistemically* analytic iff mere understanding of *S*'s meaning suffices for a thinker to be justified in believing *S*'s truth (cf. Boghossian, 1996).

Metaphysical analyticity was at the heart of the logical empiricist account of the a priori. Central to the account was the claim that a priori knowledge is mere knowledge of metaphysical analyticities, which might be taken to provide a seemingly elegant solution to the problem of the a priori. Metaphysically analytic truths are understood to be made true by meanings alone, and devoid of factual content. If a priori knowledge is mere knowledge of truths devoid of factual content, we purportedly solve the mystery of the a priori as there is nothing mysterious about coming to know such truths without looking at the world of extra-linguistic facts.

However, even if a priori knowledge is only of metaphysically analytic truths, we are still left with explaining how we know truths made true by meanings alone. The truth of the claim that a priori knowledge is mere knowledge of metaphysical analyticities demystifies the a priori by removing an obstacle that makes it look impossible, by explaining why we do not need to look at the (extra-linguistic) world when we acquire a priori knowledge. But the question of how we know truths made true by meanings alone is still left answered.

To address this worry, logical empiricists appeal to epistemic analyticity—even if only implicitly. For example, Carnap (1947) characterizes “the concept of analyticity, i.e., truth based upon meaning” (p. 222) and claims that “it is sufficient to understand the statement [i.e., the meaning of an analytic statement] in order to establish its truth; knowledge of (extra-linguistic) facts is not involved” (p. 222) (cf. Ayer, 1936).

There is something rather plausible about this account of the a priori. If a priori truths were made true by meanings alone, then a thinker who understands them

² The analytic-synthetic distinction is primarily a semantic distinction between sentences or statements, but it is also common to talk about analytic truths and synthetic truths. For ease of exposition, I will not sharply distinguish between truths, sentences, and statements as that is not important for my purposes.

would be in a good position to tell that they were true. This explains the popularity of this account of the a priori, which was close to orthodoxy during the first half of the twentieth century.

Nowadays, due to Quine's (1936, 1951, 1960) influential work, and more recently due to Boghossian's (1996) and Williamson's (2007, ch. 3), many reject metaphysical analyticity, and with it this account of the a priori.

There have been some recent attempts to defend metaphysical analyticity, but they all focus on simple cases of logical truths and so-called Conceptual Truths such as "All bachelors are unmarried" and "All vixens are foxes".³ So even if such defences succeeded in making sense of the notion of truth in virtue of meaning alone when applied to logical and conceptual truths, this would only allow us to explain (at best) a small portion of what we take to be knowable a priori. A different account would be needed to explain the full range of what we take to be knowable a priori, leaving the door open for intuition-based accounts to explain the cases left unexplained.

However, the primary targets of this paper are the more recent and widely held analyticity-based accounts of the a priori, which we can refer to as Understanding-Based Accounts of the a priori. Central to these accounts is the rejection of metaphysical analyticity and the appeal to epistemic analyticity alone to explain the a priori. In the next section, I argue that their appeal to understanding as the source of the a priori is not clearly less mysterious than the appeal to rational intuition, and that they are, thus, poorly motivated. Even if poorly motivated, they could nonetheless offer a good explanation of the a priori. In Sect. 4, I argue that there is good reason to doubt that, and that even if successful, the fundamental explanation they offer of the a priori is one that could equally be endorsed by proponents of intuition-based accounts of the a priori—thus failing to oppose them.

3 (Un)motivating understanding-based accounts

According to understanding-based accounts of the a priori, a priori knowledge is mere knowledge of epistemic analyticities. This already introduces some difficulties, for the epistemic notion of analyticity is a semantic notion that primarily applies to sentences or statements.⁴ To recall, a sentence *S* is epistemically analytic iff mere understanding of *S*'s meaning suffices for a thinker to be justified in believing in *S*'s truth.⁵ However, a priori knowledge is a relation to a (true) proposition or a truth, not (true) sentences or statements.⁶ To avoid this problem, we can interpret the claim that a priori knowledge is mere knowledge of epistemic analyticities as the claim that a priori knowledge is mere knowledge of those truths that can be expressed by sen-

³ See Russell (2008), Hofmann & Horvath (2008), García-Carpintero & Pérez Otero (2009), Warren (2015), and Topey (2019).

⁴ See fn. 2.

⁵ This is a common characterization of epistemic analyticity, but see Teixeira (2022) for variations on this characterization. Luckily, they are not relevant for our current purposes.

⁶ To avoid unnecessary complexities, I do not sharply distinguish between knowledge of propositions and knowledge of truths.

tences such that just by understanding their meaning a thinker is justified in believing them. Or, alternatively, by ascending to the conceptual, we can interpret the claim as the claim that a priori knowledge is mere knowledge of those truths such that just by understanding them a thinker is justified in believing them.⁷

Now, if a priori knowledge is mere knowledge of those truths such that just by understanding them a thinker is justified in believing them, then understanding is the sole source of the a priori. But what reasons do we have to accept this claim? As we saw in Sect. 1, understanding-based accounts are analyticity-based accounts, which are motivated by opposition to intuition-based accounts that traditionally appeal to rational intuition as the source of the a priori. If the main motivation for understanding-based accounts of the a priori is the alternative they offer to intuition-based accounts, then if their appeal to understanding as the source of the a priori is not clearly less mysterious than the appeal to rational intuition, we lose the main motivation to accept them. My aim now is to show that the appeal to understanding as the source of the a priori is not clearly less mysterious than the appeal to rational intuition.

It is plausible to assume that understanding is the source by which we can know what sentences mean.⁸ Just by understanding the meaning of “Grass is green” we seem able to know that the sentence *means* that grass is green—but not that grass is green. However, claiming that in the case of sentences that express a priori truths understanding their meaning *suffices* to know their truth introduces a disanalogy between the a priori and the a posteriori that would have to be explained.

To know the truth expressed by “Grass is green” we need to know that (i) “Grass is green” *means* that grass is green, and we need to know that (ii) grass is in fact green. But if a priori knowledge is knowledge of epistemic analyticities, then to know the truth of, say, “Nothing can be red and green all over at the same time” it seems that we would only need to know that (i) “Nothing can be red and green all over at the same time” *means* that nothing can be red and green all over at the same time. But this does not seem right. To address this worry, proponents of understanding-based accounts would have to claim that by understanding alone we can also *see* that (ii) nothing can be red and green all over at the same time. The problem is that it is not clear that there is a non-question begging reason to accept this.

I can *see* that “Nothing can be red and green all over at the same time” *means* that nothing can be red and green all over at the same time, and this *seeing* might well be a *semantic* seeing as opposed to the sort of *rational* or *intellectual* seeing that friends of rational intuition appeal to. But when I *see* that nothing can be red and green all over at the same time, what I see does not seem to be a semantic fact, but rather that the world is thus-and-so—that being red all over precludes an object from being green all over.

⁷ Although this reading is a more natural reading when discussing knowledge, to avoid obscuring the semantic nature of understanding-based accounts, I will talk of sentences and understanding meanings when that is relevant to shed light on what is at stake.

⁸ See Hunter (1997) for a defence of the claim that understanding is a source of epistemic justification about what things mean.

BonJour (1998) says something similar. He claims that when he understands the sentence “Nothing can be red and green all over at the same time”, first he understands its meaning, the relation of colour exclusion conveyed, and:

...given this understanding of the ingredients of the proposition, I am able to see or grasp or apprehend in a seemingly direct and unmediated way that the claim in question cannot fail to be true—that the natures of redness and greenness are such as to preclude their being jointly realized. (p. 101)

By claiming that the seeing that allows us to see that nothing can be red and green all over at the same time is a *semantic* seeing, proponents of understanding-based accounts are able to distance themselves from this appeal to a *rational* or *intellectual* seeing that many find so mysterious. The problem is that if sentences that express a priori truths are not true in virtue of meaning alone—i.e., are not metaphysically analytic—then it does not seem clearly less mysterious to claim that by *semantic understanding* alone we can also *see* that nothing can be red and green all over at the same time.

If we were able to see that nothing can be red and green all over at the same time by semantic understanding alone, then the relation of colour exclusion would have to be somehow encoded in the meaning of “red” or “green”—or in the meaning of the whole sentence—to enable us to see that by semantic understanding alone. But we can understand the meaning of “red” without understanding the meaning of “green”, and we can understand the meaning of “green” without understanding the meaning of “red”. If one can understand the meaning of both “red” and “green” independently of each other, then there is good reason to think that our knowledge of the colour exclusion is not written into our understanding of the meaning of those words. It also seems possible for a thinker to understand the meaning of the whole sentence and still fail to see that being red excludes an object from being green. After all, a thinker might be perfectly competent in the use of “red” and “green” to classify objects—thus having a good understanding of the meaning of both “red” and “green”—but still lack the competence required to understand, or to see, the relation between those colours—thus lacking understanding of colours, but not of meanings.⁹ For example, the thinker could mistakenly think that red and green can be jointly realized just like red and blue can. If this is correct, then it is not clear that the appeal to semantic understanding is clearly less mysterious than the appeal to rational intuition as the source of the a priori. There is no clear good reason to assume that semantic understanding can do both jobs: (i) be the source by which we *know* what *sentences mean*, and (ii) be the source by which we *know* certain (*non-semantic*) truths.

⁹ I should note that although proponents of intuition-based accounts like, e.g., BonJour (1998), Sosa (2007), and Markie (2013), all claim rational intuitions to be based on understanding, the sort of understanding they have in mind is richer than the mere understanding that comes from understanding meanings. To illustrate the idea, we can use an example by Markie (2013) of two thinkers who both fully understand the meaning of “ $237/148$ is greater than $425/266$ ”, but whereas one has a deeper understanding of fractions that allows her to rationally intuit the truth expressed by that sentence, the other lacks that deeper understanding of fractions required to rationally intuit the truth expressed. The idea is that both thinkers have a similar level of semantic understanding, but a very different understanding of fractions.

If we consider less trivial examples of a priori truths, there is also strong prima-facie reason to be sceptical about the claim that semantic understanding is the source of the a priori. Consider the claim that knowledge is incompatible with epistemic luck, or that it is wrong to torture people for one's own pleasure. If such claims are knowable, there is good reason to think that they are knowable a priori, but there is equally good reason to think that more than mere knowledge of what they mean is necessary to know them. After all, it is perfectly possible for a thinker to fully understand the meaning of "Knowledge is incompatible with epistemic luck" and fail to assent to it (cf. Williamson, 2007, ch. 4). This by itself might not show that semantic understanding is not the source of the a priori, but it does show that the claim should be supported by a positive argument, and it is not clear that there is good reason to accept that semantic understanding is the source of the a priori—in particular, if a priori truths are not made true by meanings alone.

Maybe the problem is that the claim that semantic understanding is the source of the a priori is only intuitively plausible for a limited number of cases, for example, as a claim about our knowledge of logic and of conceptual truths. Boghossian (2017) nowadays agrees, and claims that "it has become increasingly clearer that not all a priori justification can be explained in this way. The domain of the normative poses an especially important challenge" (p. 617). Bengson (2015) makes a similar point:

It is also not clear how understanding, to the extent that it concerns concepts or meanings, can by itself account for the apparent scope of intuitive justification, in particular, regarding non-empirical synthetic metaphysical—not merely 'conceptual' or 'analytic'—necessities (e.g. various theses about essence, nature, ground, or structure). (p. 740)

But even if we restrict the scope of understanding-based accounts of the a priori to logical and conceptual truths, it is still not clear that there is good reason to endorse the claim that semantic understanding is the source of such knowledge—in particular, without metaphysical analyticity. When logicians disagree about whether some sentence expresses a logical truth, such disagreement seems more substantial than the type of disagreement that arises from a failure of understanding meanings. At the very least, one should not assume that when, say, a classical logician and a nonclassical logician disagree about the truth of the law of excluded middle, according to which for any proposition p , either p is true or not- p is true, such disagreement is grounded in a misunderstanding of the logical vocabulary (cf. Williamson, 2007, ch. 4).¹⁰

This last point can be made independently of the phenomenon of expert disagreement. To see how, let us consider the logical truth expressed by "Either grass is green or grass is not green". Why assume that knowing that the sentence *means* that either

¹⁰ Rattan and Wikforss (2017) argue that expert disagreements can involve partial understanding—their view will be discussed in Sect. 4.2.

grass is green or grass is not green *suffices* to know its truth? Don't we also have to know that either grass is green or grass is not green?¹¹

To this a proponent of understanding-based accounts might reply that when we know the truth expressed by "Either grass is green or grass is not green", our knowledge draws from our understanding of the logical vocabulary alone, and that understanding the meaning of "or" and "not" brings with it knowledge of the truth tables for disjunction and negation. This in turn allows us to draw a truth table for "Either grass is green or grass is not green", and on that basis infer that the sentence cannot fail to be true.¹² The problem is that this appeal to truth tables is implausible. This is for at least two reasons. First, there is good reason to doubt that all those who know that either grass is green or grass is not green are able to draw truth tables as most people have no formal training in logic—but are able to know that truth. Second, this would render this knowledge inferentially acquired, for it would be inferred from our understanding of the truth tables for disjunction and negation, together with the realization that "Either grass is green or grass is not green" comes out true under all assignments of truth values to "Grass is green", and thus true no matter what.¹³ But that either grass is green or grass is not green is a paradigmatic example of something we seem able to know directly or non-inferentially.¹⁴

One might argue that this misses the point, for the inference we draw from our understanding of the meaning of the relevant logical vocabulary when we know that either grass is green or grass is not green is not explicit but rather implicit, one that is performed at a sub-personal level without conscious awareness of it—and that our knowledge of truth tables is *implicit* in our understanding of certain logical terms.

It is not clear whether anything like that inference goes on at a sub-personal level. But even if something like the above inference does go on at a sub-personal level when we come to know that logical truth, in order for it to generate knowledge, the conclusion of the inference must bring with it some sort of conscious awareness of the truth of "Either grass is green or grass is not green" so we can consciously assent to it. But no good reason has been given to assume that this state of awareness is semantic rather than intellectual, even if based on our understanding of the logical terms. After all, this state of awareness seems just like the sort of rational awareness that friends of rational intuition describe: a mental state that consists in an attraction to assent to "Either grass is green or grass is not green" that is based on our understanding of "Either grass is green or grass is not green". For example, this is

¹¹ I am thinking here of Boghossian's (1996) point against metaphysical analyticity: "How could the mere fact that S means that p make it the case that S is true? Doesn't it also have to be the case that p?" (p. 364). We can rephrase this and use it against epistemic analyticity.

¹² Thanks to an anonymous referee for this objection.

¹³ There is also no clear good reason to assume that this realization is semantic as opposed to intellectual (more on this below).

¹⁴ I should also note that to explain the possibility of the a priori the main challenge is to explain non-inferential or direct a priori knowledge, for if there is no direct a priori knowledge there is good reason to think that no knowledge is a priori. This is so because knowledge that is inferred from at least one empirical premise depends on experience, and thus is not a priori. Hence, inferential a priori knowledge can only be inferred from a priori premisses. Therefore, to explain the a priori one must explain direct a priori knowledge.

precisely how Sosa (2007) characterizes rational intuition, as a special sort of intellectual seeming that triggers assent “simply by considering a proposition consciously with understanding” (p. 60).¹⁵

Allow me to use a slightly different example to further support this point. Suppose that someone just read about quantum physics and Schrödinger’s cat, and was then asked to consider the following sentence: “Either Schrödinger’s cat is alive or Schrödinger’s cat is not alive”. Given what she just read, she might draw a blank. Nevertheless, her semantic competence with “Either Schrödinger’s cat is alive or Schrödinger’s cat is not alive” is just as good as her semantic competence with “Either grass is green or grass is not green”. What seems to explain her hesitation to assent to “Either Schrödinger’s cat is alive or Schrödinger’s cat is not alive” is that that further state of awareness that somehow justifies her in believing that either grass is green or grass is not green was in this case blocked by her newly acquired beliefs about quantum mechanics—and not by a newly acquired understanding of the logical vocabulary. After all, she still has no trouble assenting to most sentences of that form. If this is correct, we still lack a clear good reason to assume that it is semantic understanding *alone* that allows us to see the truth of a logical truth, rather than some further state of rational awareness.

I should note that I do not take these considerations to fully support intuition-based accounts of the a priori—even if I think that rational intuition has a fundamental role to play in the explanation of the a priori. But I do take them to show that understanding-based accounts’ appeal to semantic understanding as the source of the a priori is not clearly less mysterious than intuition-based accounts’ appeal to rational intuition. Because understanding-based accounts of the a priori are typically motivated by opposition to intuition-based accounts, if their appeal to semantic understanding is not clearly more plausible than the appeal to rational intuition, we lose the main motivation to accept them.

At this point, someone might claim that as long as understanding-based accounts of the a priori are successful, it does not matter whether they are poorly motivated or not. It is to this claim that I now turn.

4 Understanding-based accounts of the a priori

To support the claim that a priori knowledge is mere knowledge of epistemic analyticities, proponents of understanding-based accounts must explain how understanding meanings *suffices* for epistemic justification. My aim now is to examine three different routes to account for that. The first of these routes appeals to constitutive meaning-understanding links, the second to non-constitutive meaning-understanding links, and the third appeals to no meaning-understanding links but rather to under-

¹⁵ Someone might object that “this makes it unclear what understanding-based accounts need to do to do better than intuition-based accounts”. But, as argued in the previous section, understanding-based accounts are motivated by the alternative they offer to intuition-based accounts, an alternative that removes the mystery of the a priori. To do better than intuition-based accounts, understanding-based accounts must offer such an alternative. My sole aim here is to show that there is good reason to doubt that they succeed in offering such an alternative. I thank an anonymous referee for pressing me to clarify this point.

standing alone to explain how understanding suffices for epistemic justification.¹⁶ There is good reason to think that these accounts explore all the plausible routes available to proponents of understanding-based accounts of the a priori, and that they are good exemplars of the type of route they explore—any plausible account of their type would have to be substantially similar. I will argue that there is good reason to reject them all, and that even if successful, they would nonetheless fail to oppose intuition-based accounts as the fundamental explanation they offer of the a priori is one that could equally be endorsed by a friend of rational intuition.

4.1 The constitutive account

The most widely held understanding-based account of the a priori is what Boghossian (2003a, b, 2017) calls the Constitutive Account.¹⁷ The main claim is that assenting to certain truths is constitutive of understanding the meaning of certain words—i.e., a thinker could not understand the meaning of a certain word without being disposed to assent to certain sentences containing that word (or to infer according to certain rules containing that word)—and that a thinker is thereby justified in believing those meaning-constitutive truths (or in inferring according to those meaning-constitutive rules of inference).

To illustrate the idea, consider the paradigmatic analytic sentence “All bachelors are unmarried”. The idea is that it is constitutive of a thinker’s understanding of the word “bachelor” to be disposed to assent to “All bachelors are unmarried”. If a thinker is not disposed to assent to “All bachelors are unmarried”, then there is reason to think that the thinker does not understand the meaning of “bachelor”. A similar line of thought is applied to logical terms. The claim here is that it is constitutive of a thinker’s understanding of, say, “if..., then...” to be disposed to infer according to inferences of the modus ponens form. If understanding meanings requires a disposition to assent to certain sentences, or a disposition to infer according to certain inference rules, then—or so the story goes—the thinker is thereby (prima-facie) justified in believing in the truth of those sentences, or in inferring according to those rules that are constitutive of the thinker’s understanding of the meaning of certain words.

This account has already been forcefully criticised.¹⁸ Williamson (2007), in particular, has provided some well-known counterexamples to the idea that there are constitutive meaning-understanding links. Williamson’s strategy is to concentrate on simple paradigmatic examples of purportedly analytic truths to show that even in those cases the link fails. One such example, which clearly illustrates this general structure, is that of Peter, who rejects the logical truth “Every vixen is a vixen” because of his deviant use of “every” according to which “Every vixen is a vixen” logically entails “There is at least one vixen”, and because of his conspiracy theory regarding the nonexistence of vixens. Williamson further supplements his examples with the actual example of the logician Vann McGee, who is well known for his rejection of modus ponens. As both a distinguished logician and a native speaker of

¹⁶ This taxonomy, though similar, should not be confused with that of Rattan & Wikforss (2017).

¹⁷ See, e.g. Peacocke (1993) and Jenkins (2012) for similar accounts.

¹⁸ See e.g. Schechter & Enoch (2006) and Williamson (2003 and 2007).

English, it seems clear that McGee fully understands the meaning of “If..., then...”, even if he is not disposed to assent to instances of modus ponens (2007, pp. 85 ff.).

The idea that there are constitutive meaning-understanding links is also at odds with the widely accepted semantic externalism of Putnam (1975), Burge (1979), and Kripke (1980), according to which the meaning of our words is causally determined by our interaction with the social and natural environment. According to this view, to understand the meaning of a word is to be a member of the community of users of that word and successfully interact with that community. To successfully interact with the community, thinkers might have to share many beliefs, but no specific belief needs to be shared for the interaction to be successful. As Williamson (2007) claims, “there is no litmus test for understanding. Whatever local test is proposed, someone could fail it and still do well enough elsewhere with the word to count as understanding it” (p. 97). And contrary to some of the original examples in Putnam (1975) and Burge (1979) which can be addressed by appealing to a difference between experts with full understanding and non-experts with partial understanding who defer to experts, one cannot address Williamson’s examples in this way as Peter is taken to be an expert, and McGee actually is an expert. This shows, as Williamson says, that “experts themselves can make deviant applications of words as a result of theoretical errors and still count as fully understanding their words” (2007, p. 98).¹⁹

I find Williamson’s case against constitutive meaning-understanding links thoroughly compelling, and I take it to provide strong reason to reject this account. But my aim here is different. I will assume, for argument’s sake, that there *are* constitutive meaning-understanding links. What I want to argue is that even *if* we accept the existence of constitutive meaning-understanding links the account still fails, and that even if successful it does not constitute an alternative to intuition-based accounts as the fundamental explanation it offers of the a priori is one that could equally be endorsed by a proponent of those accounts—thus failing to oppose them.

So let us assume, for argument’s sake, that there are constitutive meaning-understanding links. Even if some sentences (or rules of inference) are such that a thinker must be disposed to assent to them if she is to understand the meaning of certain terms, one still needs to explain how a disposition to assent yields epistemic justification.²⁰

Boghossian (2003a, b) tackles this problem, and bridges understanding with epistemic justification by appealing to the idea of blameless justification. The claim is simple: if a thinker cannot understand the meaning of a certain word, say, “bachelor”, without being disposed to believe that all bachelors are unmarried, then the thinker would not be committing any epistemic sin by holding that belief, and she would thereby be prima-facie justified in believing that all bachelors are unmarried (or so it is claimed). This proposal relies on a general epistemic principle according to which if a thinker is epistemically blameless in holding a certain belief or in using a certain rule of inference, then the thinker is thereby prima-facie justified in holding that belief or in using that rule of inference.

¹⁹ Rattan and Wikforss (2017) disagree, and appeal to a “distinction between incomplete and full understanding in expert deviance” (p. 278) to explain expert disagreements. More on their proposal below.

²⁰ I discuss the details of Boghossian’s account in Teixeira (2019).

There is an immediate problem with this account for, as Boghossian (2003a, b) rightly claims, many truths and rules of inference are such that a thinker is not blindly justified in holding them just because of their putative roles in constituting meanings—a thinker is blameworthy even if disposed to accept certain truths, or to infer according to certain rules of inference. One of the examples discussed by Boghossian (2003a, b), which clearly illustrates this general concern, is that of the term “aqua”, that could have been introduced into our language via the following inference rules: if x is aqua then x is H_2O , and if x is water then x is aqua. These rules are truth-preserving, but no thinker like us could be blindly justified in reasoning with them just because of their putative roles in constituting meanings. No thinker like us could be justified in believing that water is H_2O just in virtue of understanding the meaning of “aqua”. Here’s Boghossian:

You want the possessor of the concept to be able coherently to ask whether there is anything that falls under it, and you want people to disagree whether there is. If in a certain range of cases, however, it is logically impossible to hold the governing theory at arm’s length then, in those cases, obviously, it can hardly be a requirement that one do so. But in those cases where it is possible, it ought to be done. (2003a, pp. 246–247)

The main idea being suggested here is that even if it is constitutive of our understanding of certain words to be disposed to assent to certain truths, if such truths are coherently questionable—even if true—then we are not justified in blindly holding them. Since a thinker can coherently question whether water is H_2O , then she is not justified in believing that truth just in virtue of understanding the meaning of “aqua”—or in virtue of possessing the concept AQUA. Boghossian goes on to argue that the only truths (and rules of inference) we can blindly hold just by understanding them are those that are constitutive of our understanding of the meaning of basic logical terms as they are so basic that we could not question them without using them. He then claims: “It thus couldn’t be epistemically irresponsible for you to just go ahead and infer according to Modus Ponens without ... [questioning] the existence of an appropriate truth function for it—that is simply not a coherent option in this case” (2003a, pp. 247–248). And that, he adds, “is enough to get me the result that inference in accord with their constitutive rules can be entitling even though blind” (p. 248).

Let us concentrate on the sort of explanation being offered here of our knowledge of basic logical truths and rules of inference. Since the constitutive account is regarded as being particularly suitable to explain our knowledge of logic, if it fails to explain the most favourable case, we can safely conclude that it also fails to explain other cases of a priori knowledge.

So, according to the constitutive account, we can blindly follow certain basic rules of inferences or accept certain logical truths that are constitutive of our understanding of logical terms because they are so basic that we cannot coherently question them without using them. The main problem with this idea is that even if we assume that we cannot coherently question basic logical truths and rules of inference, the fundamental explanation offered is independent of any considerations regarding meanings or constitutive meaning-understanding links. On this account, it is not because basic

logical truths and rules of inference are constitutive of our understanding of logical terms that we are entitled to blindly hold them, but rather because they are such that we cannot coherently doubt them.

What makes basic logical truths and rules of inference unintelligibly doubtful—on this account—is *not* that they are constitutive of our understanding of certain terms. The truth that water is H₂O is also taken to be constitutive of our understanding of the term “aqua”, but one that we can clearly coherently doubt. What makes basic logical truths and rules of inference such that we cannot coherently doubt them—on this account—is that they are so central to our thinking that to doubt them we would have to presuppose them (Boghossian, 2003a, p. 248). Hence, the claim that certain truths and rules of inference are not intelligibly doubtful is one that, if it is true at all, it is most plausibly true of logic (Boghossian, 2003a, b).²¹

This is not to say that all logical truths and rules of inference are central to our thinking, and thus such that just by understanding their meaning we are justified in holding them—i.e. such that we can “*blind[ly] but blameless[ly]*” (Boghossian, 2003a, p. 248) hold them. Knowing which logical truths and rules of inference we cannot coherently question will depend on “the minimal resources that are needed” (Boghossian, 2003a, p. 248) to be able to coherently raise a question. Therefore, on this account, the only truths and rules of inference a thinker is justified in holding just by understanding their meaning are those very basic logical truths and rules of inference that guide and minimally inform all our rational and reflective activities. This, however, even if correct, is independent of considerations regarding which truths and rules of inference are constitutive of our understanding of certain terms, but rather depends on considerations regarding which truths and rules of inference are central to our thinking, and thus not coherently doubtful.

Schechter & Enoch (2006) raise a similar objection and claim that “Considerations of meaning would not do any real explanatory work” (p. 705). They further argue that,

Boghossian seems to suggest that the principle [that does the explanatory work] will depend heavily on it being impossible to even “intelligibly raise a question” about the justification of the relevant methods without relying on those very same methods. But even apart from the unclarity about what exact principle is intended, there seems little reason to accept any principle of this sort. (pp. 705–706)

I agree. But what is particularly striking for my purposes here is that even if this account were successful, by not relying on constitutive meaning-understanding links to explain what justifies a thinker in believing in basic logical truths, the explanation is one that could equally be endorsed by a proponent of intuition-based accounts. The fundamental explanatory work is not done by considerations about constitutive

²¹ Williamson’s (2007) counterexamples also provide good reason to reject this claim. To see why, it suffices to consider Vann McGee’s case—someone who clearly intelligibly doubts modus ponens, a basic rule of inference that is taken by proponents of the constitutive account as constitutive of our understanding of the basic logical term “if...then...”. However, for argument’s sake, I am conceding this point to proponents of the constitutive account.

meaning-understanding links, but by an epistemic principle connecting epistemic blamelessness with prima-facie justification, and a principle connecting the inability to coherently question the truth of a proposition (or the truth-preservation of a rule of inference) with epistemic blamelessness (cf. Schechter & Enoch, 2006). Given this, there is no good reason why proponents of intuition-based accounts could not appeal to similar principles and claim that a thinker is justified in believing that which she intuits to be true provided she cannot coherently question it. And then argue that if she cannot coherently question what she intuits to be true, then she is epistemically blameless and hence prima-facie justified in believing it. If such principles are correct, they could equally be used in support of intuition-based accounts of the a priori.

To this a proponent of the constitutive account could object that even if we could appeal to these principles to explain how rational intuition can provide epistemic justification, an explanation of how we know basic logical truths that avoids an appeal to rational intuition and just appeals to these principles would, in any case, be less mysterious—and hence it would be preferable.²² The problem is that without a thinker being, somehow, consciously aware that a truth is not coherently questionable, it is not clear how that could explain *how* she knows it.

Consider the logical truth that either grass is green or grass is not green. Let us assume, for argument's sake, that we cannot coherently question it.²³ How does the fact that either grass is green or grass is not green is not coherently questionable (assuming that it is not) explain *how* we know that either grass is green or grass is not green? Because we are blindly justified in believing those truths that we cannot coherently question? But without being, somehow, consciously aware of that fact, how can that explain *how* we know that either grass is green or grass is not green? Imagine that after a strange dream I come to blindly believe a logical theorem, one that I could not come to know given my limited logical abilities. Let us assume, for argument's sake, that the theorem is not coherently questionable—and that I am not aware of that. Would I be blindly justified in believing it? Clearly not. By appealing to rational intuition we can explain this. When I consider the logical theorem I came to blindly believe after a dream, I cannot *see* or rationally intuit that it cannot fail to be true, and thus, even if the theorem is not coherently questionable, I am not justified in believing it. But by considering that either grass is green or grass is not green I can rationally *see* that the claim in question cannot fail to be true, and that I am unable to coherently question it—and on this account, beliefs formed in this way are justified if they are not coherently questionable. If this is correct, then the appeal to rational intuition introduces an explanatory advantage rendering the account that appeals to rational intuition less mysterious than the account that relies on the above epistemic principles alone—and, hence, preferable.²⁴

²² Thanks to an anonymous referee for this objection.

²³ As mentioned in footnote 21, there is also good reason to doubt this.

²⁴ I should note that my aim here is not to defend intuition-based accounts. As mentioned, my aim in this section is twofold: to show that there are good reasons to reject understanding-based accounts, and to show that even if those accounts were correct they do not offer an alternative to intuition-based accounts as the fundamental explanation they offer of the a priori is one that could equally be endorsed by a friend of rational intuition.

Boghossian (2017) is nowadays sceptical about the tenability of the constitutive account, and I agree that there is ample reason to reject it. However, the main problems he claims this account has are that it cannot explain all cases of a priori knowledge as there is reason to think that it is “plausible only for a limited range of concepts” (2017, p. 616), and because it “looks to deliver only an externalist justification for the disposition to assent, one that would be opaque to the subject” (p. 616). I think the problems run deeper. The fact that it relies on a form of epistemic externalism is not that problematic as—even if contentious—there are many epistemologists who lean towards it.²⁵ The main problem is the sort of externalist explanation it offers, one that boils down to the claim that a thinker is justified in believing that which she cannot coherently question.²⁶ But the idea that we cannot coherently question basic logical truths and rules of inference given the central role they play in our thinking is just the old idea that basic logical truths and inferences are so basic that we cannot do without them, an idea that does little to explain *how* we know them.

This problem is similar to the problem previously raised by Quine (1960) against the logical empiricist account of the a priori, “For, that theory now seems to imply nothing that is not already implied by the fact that elementary logic is obvious or can be resolved into obvious steps” (p. 355). And then Quine adds:

My suggestion is merely that the linguistic doctrine of elementary logical truth [i.e. the positivist account of the a priori] likewise leaves explanation unbegun. I do not suggest that the linguistic doctrine is false and some doctrine of ultimate and inexplicable insight into the obvious traits of reality is true, but only that there is no real difference between these two pseudo-doctrines. (1960, p. 356)

Let me conclude this section. There is ample reason to reject the constitutive account. But even if it were successful, it would fail to provide the alternative to intuition-based accounts that it was intended to provide as the fundamental explanation it offers of the a priori is one that could equally be endorsed by a proponent of those accounts.

4.2 Non-constitutive accounts

The rejection of the constitutive account does not yet entail a rejection of understanding-based accounts of the a priori. Other proposals have been made in their support. In particular, Rattan & Wikforss (2017) offer two interesting alternatives to the constitutive account without rejecting the idea of meaning-understanding links. I take their accounts as our exemplars of this route to explain the a priori, and I will consider them separately.

²⁵ Thanks to an anonymous referee for calling my attention to the recent PhilPapers Survey according to which the percentage of epistemologists who lean towards epistemic internalism is slightly higher than the percentage of epistemologists who lean towards epistemic externalism.

²⁶ As we saw, this account also relies on a form of semantic internalism, which is far more contentious than epistemic externalism.

The core of Rattan and Wikforss' (2017) first account can be found here:²⁷

...one may hold that the failure of understanding-assent links is explained not by rejecting a constitutive link between understanding and assent to analytic truths, but by rejecting the idea that this link between understanding and assent is a *strict* constitutive link. The *link* holds only for *full* and not *incomplete* understanding. This allows the failure of understanding-assent links to be absorbed into the distinction between full and incomplete understanding. (p. 277)

This account relies on elements of the constitutive account to explain how a thinker with *full* understanding of, say, a logical truth is justified in believing it just by understanding it, for Rattan and Wikforss claim that a constitutive "*link* holds only for *full* ...understanding"—and thus also face the problems raised in the previous section against the constitutive account. Their insight is that we can reject the existence of constitutive meaning-understanding links without rejecting all the elements of the constitutive account.

Because this account relies on elements of the constitutive account, Rattan & Wikforss (2017) are mostly concerned with tackling Williamson's counterexamples to it. To do that, they appeal "to a distinction between full and incomplete understanding that is applicable to the kind of expert deviance and disagreement that is under discussion in Williamson's thought experiments" (pp. 280–281). To recall, Williamson's Peter does not assent to "Every vixen is a vixen" because of his further beliefs regarding the existential import of the universal quantifier and the non-existence of vixens. But Peter is a competent logician, and has spent many months reflecting on how best to understand the universal quantifier. Rattan & Wikforss (2017) claim that in the case of expert disagreement "logical rigor and semantic sophistication'... produces the sharpness of clarity of *understanding*, in the form (ideally) of explicit semantic knowledge, used in reflective justification of first-order beliefs" (p. 282). So, in the case of Peter, by reflecting on the meaning of "every", he comes to believe that the universal quantifier has existential import, and on this basis—together with his beliefs about the non-existence of vixens—he does not assent to "Every vixen is a vixen".

But how does this work against Williamson's considerations? If Peter can still be regarded as understanding "Every vixen is a vixen", doesn't this show that Williamson is right to reject the existence of constitutive meaning-understanding links? According to Rattan & Wikforss (2017): yes and no. Yes, because it is true that it is not the case that *whoever* understands "Every vixen is a vixen" *must* assent to it—Peter understands it but does not assent to it. No, because by adopting the distinction between "full and incomplete understanding" they can purportedly explain how it is possible for Peter to understand the sentence while failing to assent to it. As an expert, Peter has arrived at his deviant use of "every" by critically reflecting on the meaning of "every" through a process of "semantic ascent to the metaconceptual" (2017, pp. 280–281). Peter's understanding of "Every vixen is a vixen" is semantically sophisticated, and leads him to believe in the existential import of the universal quantifier.

²⁷ Thanks to an anonymous referee for pressing me to consider this account.

But according to Rattan & Wikforss (2017) his understanding of “Every vixen is a vixen” is nonetheless incomplete, even if sophisticated.

Although ingenious, Rattan and Wikforss’ (2017) account is committed to the implausible consequence that logicians who do not assent to certain logical truths, in spite of their “semantic sophistication” and “sharpness of clarity of *understanding*”, only have incomplete understanding, while non-experts who promptly assent to them may have full understanding. They are aware of this problem, and explicitly say that “the applicability of the distinction between full and incomplete understanding in Williamson’s thought experiments may not be wholly intuitive” (p. 278), and claim that:

The distinction [between full and partial understanding] does not arise from deference to experts, and in fact not at all from a relation to the social environment. It arises instead from the *epistemology* of critical reflection and deep disagreement, which contains an *intellectual* rather than social basis for the distinction between full and incomplete understanding. (p. 278)

But how does this work to explain how thinkers with incomplete understanding can have knowledge or justified beliefs? To explain the knowledge of those with full understanding Rattan & Wikforss (2017) use the resources of the constitutive account—and thus face the problems raised in the previous section against the constitutive account. Rattan & Wikforss (2017) only deal with Williamson’s objection against the constitutive account, but if the considerations from the previous section are correct, even if Williamson is wrong, the account still fails—and so does Rattan and Wikforss’ (2017) first account insofar as it appeals to the constitutive account to explain the knowledge of those with full understanding.

Regarding incomplete understanding, Rattan & Wikforss (2017) say:

...The puzzle is: how can the metaconceptual give or improve knowledge not just about concepts but also about the world? Responding to the puzzle will lead to a distinction between full and incomplete understanding that is applicable to the kind of expert deviation and disagreement that is under discussion in Williamson’s thought experiments.

... [S]emantic ascent to the metaconceptual is required for justification of one’s first order beliefs [...] and in particular for having ‘discursive’ justification for first-order deductions [...] that we use to justify first-order belief.

Note that the ascent to the metaconceptual does not arise in an epistemological vacuum. It occurs in the context of discursive justification. It is part of a larger project, namely that of maintaining a critical reflective perspective *on the world*. (pp. 280–281)

If experts ascend to the metaconceptual to justify their first-order beliefs, and if that justification is “discursive”, then it is inferential. Does this mean that in expert cases all their first-order beliefs are justified inferentially? If so, then in expert cases either their beliefs are justified in a holistic manner, or some of the beliefs from which the metaconceptual justification is inferred are basic and non-inferentially or “discur-

sively” justified. If it is the former, then it is not clear how this holistic model can be used to explain experts’ a priori knowledge as it is not clear how holistic justification can be made compatible with the a priori (I say more on this below when discussing Rattan and Wikforss’ 2017 s proposal). If it is the latter, we still lack an explanation of how a thinker with incomplete understanding can be justified in holding those basic beliefs that serve as premisses in “discursive” justification since those basic beliefs would also be held with incomplete understanding. If, as many accept, basic logical terms are so basic that we cannot do without them in any form of enquiry—be it to question a logical truth or to justify it—, then there is reason to think that deviant logicians would need to use the very same logical vocabulary for which they only have incomplete understanding in producing the “discursive justification” for their first-order beliefs—and that discursive justification would involve premises for which they cannot produce discursive justification on pain of regress. If this is correct, there is good reason to think that the account also fails to explain how those with incomplete understanding can acquire a priori knowledge (or justified belief) by semantic understanding alone, how incomplete semantic understanding *suffices* for epistemic justification.

Interestingly, even if Rattan and Wikforss’ (2017) first account was successful, they do not seem to be opposing intuition-based accounts, for they explicitly claim that “We do not need to argue that sharpness of philosophical vision [produced by critical reflective thinking] does not also include some kind of intellectual clarity of rational intuition, only that it also does and should include clarity of understanding” (p. 283). This is something that most friends of rational intuition would accept, for one cannot rationally intuit what we do not clearly understand. If this is right, then Rattan and Wikforss’ account, even if correct, still fails to oppose intuition-based accounts of the a priori.

Let us now turn to Rattan and Wikforss’ (2017) second account, which opposes the constitutive account without rejecting the idea of meaning-understanding links. The proposal here is to appeal to holistic meaning-understanding links to explain how understanding suffices for justification.²⁸ Here is their central claim:

The idea could simply be that assent to certain statements is more central to our competence than others, and assent to some is so central that an individual who fails to assent to them is semantically incompetent—unless, indeed, she provides a justification for dissent that rationalizes it and that (if true) would override the *prima facie* justification. (2017, p. 289)

By adopting this holistic picture, they claim to be able to explain why the subjects in Williamson’s counterexamples reject a sentence that seems central to understanding

²⁸ They agree with Williamson that a holistic account is incompatible with epistemic analyticity, but claim that by adopting holism “It is possible to hold that linguistic competence provides a *prima facie*, defeasible justification, without accepting the analytic-synthetic distinction” (Rattan & Wikforss, 2017, pp. 288–289). I also agree that a holistic account of understanding is incompatible with analyticity, but if their account succeeds in showing how understanding suffices for epistemic justification (even if only defeasible *prima-facie* justification), it also succeeds in accounting for epistemic analyticity. The problem, as I will argue, is that this account fails to explain how understanding suffices for epistemic justification.

without failing to understand it. Peter does not assent to “Every vixen is a vixen” because of his further beliefs regarding the existential import of the universal quantifier and the non-existence of vixens—and such beliefs override (even if in a non-factive manner) his *prima-facie* justification to believe that “Every vixen is a vixen”.²⁹

Baz (2016) makes a similar claim:

In order to generate his counterexamples to epistemological conceptions of analyticity, Williamson typically offers a complex story of what might lead an otherwise competent employer of ‘x’ to apply it ‘deviantly’ in some case or range of cases. That we must imagine some such story in order for the deviance not to undermine the competence suggests that there is truth, however holistic, in epistemological conceptions of analyticity. (pp. 113–114)

There is something very appealing about the general idea being suggested here. After all, it seems that in most cases failure to assent to “Every vixen is a vixen” is indicative—even if not constitutive—of failure of understanding, and only when a thinker holds unusual background beliefs, as Peter does, would such a failure be compatible with full understanding. To what extent this holistic conception of meaning can be used to explain how understanding suffices for epistemic justification, however, is far less clear.

First, for this account to explain how understanding suffices for justification it cannot be a requirement that the thinker knows the position of a sentence in her semantic web in order to be justified in believing its truth. If that were required, it would be that further belief that would be doing the justificatory work, not understanding alone. The idea must then be that a thinker is disposed to accept those sentences that are at the centre of her semantic web and that, somehow, justifies her in assenting to them. But for this to work, the proponent of the holistic account must explain how a disposition to assent to sentences at the centre of our semantic web yields epistemic justification. As we saw in the previous section, the constitutive account faces a similar problem as it also needs to explain how a disposition to assent yields epistemic justification, and without a constitutive link between understanding and assent the problem becomes even more pressing.

Now, if a thinker is justified in assenting to those sentences she is disposed to accept just in virtue of the central place they occupy in her semantic web, then such justification must be blind—it must be blind because it is based on a disposition to assent, and thus cognitively opaque to the thinker. For the justification to be blind, as Boghossian (2003a, b) rightly argued, it must be blameless. To be blameless in such a blind manner, there is at least one condition such a disposition must satisfy: it must be a disposition to assent to truths. But why must sentences at the centre of one’s semantic web be true?

This holistic model is reminiscent of Quine’s (1951) famous Web of Belief model, and as Quine claimed, and Rattan and Wikforss (2017, p. 289) agree, centrality does not entail unrevisability. There are several ways of understanding the notion of revis-

²⁹ See Teixeira (2018) for the distinction between factive and non-factive overriding defeaters.

ability.³⁰ If we take revision to be factive in the sense that if one revises a belief that *p*, then not-*p*, and if the sentences in the centre of a semantic web are indeed revisable in this sense (even if only some of them), then there is no guarantee that they are true. If this is correct, the justification is not blameless and thus it cannot be blind. In other words, if centrality does not guarantee truth then the thinker is not justified in blindly holding whatever sentence happens to be in the centre of her semantic web just in virtue of being disposed to accept it—and hence the explanation fails.

Second, even if centrality somehow guarantees truth, it is not clear that only a priori sentences can be in the centre of one's semantic web. Even if we accept that a sentence such as "Vixens are female foxes" is in the centre of one's web, it is not clear that a sentence such as, say, "Snow is white" could not be. Most competent speakers would assent to "Snow is white", and failure to assent seems indicative—even if not constitutive—of lack of understanding of the meaning of the sentence or of one of its constituent terms—most likely the word "snow". After all, someone who does not know that snow is white does not seem to be fully competent with the use of "snow"—e.g. she would probably not be able to identify objects in the extension of "snow". If this is correct, then on this holistic account a thinker would be justified in believing in the truth of "Snow is white" by understanding alone. But even if assenting to "Snow is white" is more central to our competence than assenting to, say, "Snow is made of tiny ice crystals", we are not a priori justified in believing its truth—thinkers like us cannot know that snow is white without some perceptual contact with the world.

Last, it is not clear that this holistic model is compatible with the a priori. For example, on a recent defence of a holistic epistemology for logic, Russell (2014) rightly notes that whether logic comes out a priori or not in such a picture "depends on what kinds of consideration one uses to assess a theory" (p. 174). In a Quinean holistic picture of justification, no belief is justified in isolation but only as part of a group of beliefs (though not necessarily the whole web), and that justification trades on considerations of simplicity, elegance, and usefulness. Maybe this is compatible with the a priori. But if justification is holistic, one which "adopts this picture of centre and periphery" as Rattan & Wikforss (2017, p. 289) suggest, then it is not the case that what justifies a thinker in holding a certain sentence is understanding alone but rather other considerations having to do with the epistemic virtues of a group of beliefs.

If the above considerations are correct, then we must reject this account of the a priori. There is also good reason to think that even if this account were compatible with the a priori and could be made to work, it would fail to oppose intuition-based accounts.

Just as with the constitutive account, so too on this account it is not just because a thinker is disposed to assent to some sentences whose meaning she understands that she is justified in holding them true. Unlike the constitutive account, the explanation is done by appealing to holistic considerations. The main claim is that a thinker is justified in blindly holding those truths that are at the centre of her semantic web given

³⁰ In Teixeira (2018) I argue that "revision" is ambiguous between three substantially different readings, and that one of those readings is a factive overriding reading.

the central place they occupy: “if such a statement enjoys such a privileged status it is *a priori* in the sense that it does not need support from more peripheral statements” (Rattan & Wikforss, 2017, p. 289). However, if centrality is an indicator of such an epistemically privileged status, then it must be a feature of noetic webs—not just of semantic webs. But then a friend of rational intuition could similarly claim that a thinker is *prima-facie* justified in believing those truths she rationally intuits to be true given the central place they occupy in the thinker’s noetic web. The truths at the centre of a thinker’s noetic web must be those the thinker finds intuitively compelling—if they weren’t cognitively central, then they would require support from other beliefs, and thus they would not be intuitively compelling. Because the fundamental explanatory work is done by holistic considerations and is independent of any meaning-understanding links, then proponents of intuition-based accounts could appeal to similar holistic considerations to explain why a thinker is justified in believing those truths she rationally intuits to be true. If this is correct, then just as with the constitutive account, so too here the fundamental explanation offered of the *a priori* is one that could equally be endorsed by a proponent of intuition-based accounts.

Let me conclude this section. Even if proponents of these accounts can avoid Williamson’s criticisms by appealing to non-constitutive meaning-understanding links, there is ample reason to doubt that these accounts can be used to explain the *a priori*. And even if they could be used to explain the *a priori*, the fundamental explanatory work is done by considerations that a proponent of intuition-based accounts could equally endorse—thus failing to oppose intuition-based accounts of the *a priori*.

4.3 The understanding-only account

Let us take stock. Proponents of understanding-based accounts of the *a priori* must explain how just by understanding a sentence’s meaning a thinker is justified in holding it true. To explain that through a relation between meaning and understanding, two possibilities are available: either by appealing to constitutive meaning-understanding links or to non-constitutive meaning-understanding links. The constitutive account appeals to the former and Rattan and Wikforss’ (2017) accounts to the latter. We saw that there are good reasons to reject these accounts, but there might be another route from understanding to justification that does not rely on any type of meaning-understanding link but rather on understanding alone. Balcerak Jackson & Balcerak Jackson (2012) think as much, and claim that we can generate knowledge “purely on the basis of understanding” (p. 185) without appealing to any meaning-understanding links. I take their account as our exemplar of this type of account.

Here is their main idea:

It is quite plausible that the understanding of expressions and concepts is (or involves) a cognitive capacity, and the reflective exercise of this capacity can provide the basis for coming to know philosophical truths quite independently of whether or not there are any beliefs that are necessary for understanding. (2012, p. 187)

Balcerak Jackson & Balcerak Jackson (2012) appeal to an analogy between chess and mathematical competence, and understanding, to explain the idea. They argue that just as a chess player can be perfectly competent in the use of her abilities without holding any particular chess-belief, one can be perfectly competent in understanding the meaning of a word without holding any particular beliefs.³¹ Balcerak Jackson and Balcerak Jackson claim that “[t]hese analogies suggest a picture of understanding as being (or involving) a set of cognitive capacities, just as chess and mathematical competence are” (2012, p. 196). But what type of capacities are these? According to them, these capacities are capacities such as the capacity to identify the actual and possible extension of a concept, the reflective capacity to think about a concept, and even “the ability to make a certain logical inference, and perhaps also the ability to engage in various kinds of inductive and abductive reasoning” (2012, p. 196). Here is how Balcerak Jackson & Balcerak Jackson (2012) illustrate their proposal:

Consider again the ability to classify cases that come with understanding of the concept expressed by “knowledge” and other concepts. One might systematically apply this ability to various actual and hypothetical subjects and begin to notice patterns. For example, one might notice that among all the subjects one has considered, all of them who know *that p* have also had a true belief *that p*. This provides some justification for the hypothesis that knowledge requires true belief, and one can strengthen this justification by considering further cases of different sorts, seeking out the cases that seem most likely to provide counter-examples if there are any, trying to rule out alternative hypotheses, and so on. (p. 197)

Balcerak Jackson and Balcerak Jackson are right to claim that we need to understand or grasp the concept *knowledge* to be able to reflect on whether actual or hypothetical subjects have knowledge. However, there is good reason to think that grasp of concepts (or understanding meanings) only plays an enabling role in the justification of our belief that knowledge requires true belief. No doubt that understanding of the concept expressed by “knowledge” enables us to reflect upon the claim that knowledge requires true belief, and it also enables us to exercise our imaginative and reflective abilities by considering actual and hypothetical subjects. Understanding of concepts, however, grounds all propositional knowledge, be it a priori or empirical. We could not come to know, say, that grass is green without understanding of the concepts expressed by “grass” and “green” and their modes of combination. Understanding of those concepts (and their modes of combination) enables us to entertain the thought that grass is green, but is it our perceptual abilities that, somehow, justify us in believing that grass is green. Likewise, understanding of the concept expressed by “knowledge” enables us to entertain the thought that knowledge requires true belief, but it is our imaginative and reflective abilities that, somehow, justify us in believing that. Understanding of concepts, and concept possession, might be required

³¹ There is reason to doubt that competent chess players don’t hold any particular chess-belief, like those beliefs associated with the rules of chess, but I will set this worry aside. For more on this see Balcerak Jackson & Balcerak Jackson (2012, p. 198).

in any (propositional) cognitive enterprise, but the claim behind understanding-based accounts of the a priori is one of sufficiency, not of necessity.

To illustrate this point, imagine that we are considering whether all bachelors have hearts. We need to have a good understanding of the concepts expressed by “bachelor” and “hearts”. We can then “systematically apply this ability” which comes with the understanding of those concepts “to various actual and hypothetical subjects and begin to notice patterns. For example, one might notice that among all the subjects one has considered, all of them who” are bachelors, also have hearts. “This provides some justification for the hypothesis that” all bachelors have hearts, “and one can strengthen this justification by considering further cases of different sorts, seeking out the cases that seem most likely to provide counterexamples if there are any, trying to rule out alternative hypotheses, and so on.” For example, we can consider hypothetical cases of bachelors without hearts, consider whether an AI robot without a heart can be classified as a bachelor, and so on. “Such a process of inquiry can lead one to have good epistemic grounds for the belief that” (2012, p. 197) all bachelors have hearts. However, it is clear that we cannot come to know that all bachelors have hearts a priori. If it is clear that *mere* understanding does *not suffice* for justified belief in this case, it should be equally clear in the knowledge example above as I followed the very same method of inquiry as Balcerak Jackson & Balcerak Jackson (2012) did when elaborating on that example to illustrate how their account is supposed to work.

This is not to say that understanding does not play an important role in coming to know that knowledge requires true belief, only that the role it plays can be the same role that understanding plays when one comes to know that all bachelors have hearts—viz. an enabling role.³² If it is clear that there is a gap to be filled between understanding and assent to “All bachelors have hearts”, it should be equally clear that there is a gap to be filled between understanding and assent to “Knowledge requires true belief”. If this is correct, then it is false that “There need not be anything additional, such as a faculty of a priori insight or rational intuition, to fill the gap between understanding and assent” (Balcerak Jackson & Balcerak Jackson, 2012, p. 197).³³

Balcerak Jackson & Balcerak Jackson (2012) claim that “One can make the cognitive capacities that are constitutive of understanding the epistemic basis for philosophical armchair knowledge” (p. 197). Proponents of intuition-based accounts of the a priori need not disagree. They could claim that imagining a certain scenario allows us to *see* that p is the case, that imagining counterexamples allows us to *see* that Gettier thinkers have no knowledge, that by reasoning one can *see* that q is the case if both p and if p then q are the case, that understanding the meaning of “Either it will rain or not” allows us to *see* that it means that either it will rain or not, and so on—and that this faculty that allows us to *see* those truths is the faculty of rational intuition. Even if such a faculty is grounded in understanding in the sense that we could not *see* that p without first grasping or understanding p, what confers the justification is not the grasping of the thought that p but the fact that one can *rationally see* that p.

³² See Teixeira (forthcoming) for more on the enabling role of experience and how to distinguish it from its justificatory role.

³³ Thanks to an anonymous referee for pressing me on this point.

Boghossian (2000) objected that the problem with intuition-based accounts of the a priori is that their appeal to “‘Intuition’ seems like a name for the mystery we are addressing, rather than a solution to it” (p. 231). Appealing to the faculty of understanding achieves little more. As Bengson (2015) nicely puts it, “an appeal to understanding does little more than pass the buck... while raising further questions of its own” (p. 740).

At this point, a proponent of the understanding-only account could appeal to some form of phenomenal conservatism according to which we can ground our beliefs in the way truths appear to us when we understand them (cf. Huemer, 2007). When applied to perception, such a theory holds that the fact that something perceptually appears to us to be true entitles us to believe that it is true even in the absence of any account of how perception works. A proponent of the understanding-only account of the a priori could claim something similar of understanding. For example, she could argue that just by understanding the meaning of “Knowledge requires true belief” one can *see* that it is true that knowledge requires true belief, and that that justifies us in believing its truth even in the absence of any account of how understanding works. The problem, however, is that we have no non-question-begging reason to assume that it is semantic understanding that is doing *all* the work when one *sees* that knowledge requires true belief—and if the considerations from Sect. 3 are correct, there is good reason *not* to assume that.

Furthermore, some proponents of intuition-based accounts have also appealed to phenomenal conservatism to explain the epistemic work done by rational intuition (e.g. Bengson 2015, Chudnoff, 2011), an appeal that does nothing to distinguish the type of rational understanding appealed to by proponents of intuition-based accounts of the a priori from the type of understanding appealed to by proponents of the understanding-only account. Maybe this is because they are in fact appealing to the very same faculty of understanding. But this amounts to a rejection of understanding-based accounts of the a priori as these accounts were introduced as an alternative to intuition-based accounts.

It seems to me that once proponents of understanding-based accounts of the a priori dissociate the explanation of the a priori from considerations of meaning, and meaning-understanding links, those accounts lose their distinctive features and become indistinguishable from those they aim to oppose—viz., intuition-based accounts of the a priori.

5 Conclusion

To avoid the appeal to rational intuition, proponents of the traditional analyticity-based account of the a priori moved the focus from the cognitive abilities of the thinkers to the properties of what is knowable a priori. The notion of metaphysical analyticity was used for such a purpose. If what is knowable a priori is made true by meanings alone, then the mystery of how we can know truths about the world without looking at it would be, to a certain extent, solved.³⁴ However, even without a mystery we would still need to explain how we know truths made true by meanings alone. The

³⁴ “To a certain extent” because the reply we get does not say how we can know truths about the non-semantic world a priori but rather that no a priori truth is about the non-semantic world.

epistemic notion of analyticity was needed for that. If a priori truths are made true by meanings alone, then it seems rather plausible to think that just by understanding their meaning we can be justified in believing their truth. This is not to say that the explanation is complete, for a sentence could be true in virtue of meaning alone and a thinker could still fail to see that when she understood it. Nevertheless, the traditional account seems well motivated and introduces an advantage over intuition-based accounts of the a priori by dissolving the mystery of the a priori. Of course, if the notion of metaphysical analyticity is incoherent as many believe it to be, then this account offers no advantage over intuition-based accounts.

By appealing to epistemic analyticity alone to explain the a priori, proponents of understanding-based accounts of the a priori moved the focus back to the cognitive abilities of the thinkers. Instead of appealing to rational intuition, the appeal is now made to understanding alone. However, if the considerations from Sect. 3 are correct, without metaphysical analyticity this move is poorly motivated as this appeal to understanding is not clearly less mysterious than the appeal to rational intuition.

To maintain the explanation of the a priori at the semantic level, and by appealing to epistemic analyticity alone, two options are available to link understanding with meaning: either link understanding with meaning through constitutive meaning-understanding links, or through non-constitutive meaning-understanding links. However, if the considerations from Sect. 4.1 and 4.2 are correct, there is ample reason to reject these accounts, and even if correct, the fundamental explanation offered of the a priori is one that is independent of any such links, and such that proponents of intuition-based accounts could equally endorse—thus failing to oppose them.

A third option taken by some proponents of understanding-based accounts of the a priori is to appeal to understanding alone to do all the explanatory work. This, however, brings us even closer to intuition-based accounts of the a priori as we are now back in the realm of faculty-based accounts of the a priori—exactly the sort of move proponents of analyticity-based accounts of the a priori aimed to avoid.

Acknowledgements The main ideas of this paper were presented in 2021 at the LEME Seminar (PPGLM, Federal University of Rio de Janeiro), and at *Encontro de Pesquisadoras na Filosofia* (GEMF, Brazil); and in 2022 at the ArgLab Research Colloquium (New University of Lisbon), and at the CLE Permanent Seminar on Metaphysics (University of Campinas). I thank all the attendees for very stimulating comments and discussions. Thanks also to three anonymous referees for this journal for very helpful comments and feedback (one of the referees provided me with three rounds of comments for which I am particularly grateful). This study was financed in part by the *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* – Brazil (CAPES) – Finance Code 001.

References

- Ayer, A. J. (1936). *Language, truth and logic*. Gollancz.
- Balcerak Jackson, M., & Balcerak Jackson, B. (2012). Understanding and philosophical methodology. *Philosophical Studies*, 161(2), 185–205.
- Baz, A. (2016). Recent attempts to defend the philosophical method of cases and the linguistic (re)turn. *Philosophy and Phenomenological Research*, 92(1), 105–130.
- Bengson, J. (2015). The intellectual given. *Mind*, 124(495), 707–760.
- Boghossian, P. (1996). Analyticity reconsidered. *Noûs*, 30(3), 360–391.

- Boghossian, P. (2000). Knowledge of logic. In P. Boghossian, & C. Peacocke (Eds.), *New essays on the a priori* (pp. 229–254). Oxford University Press.
- Boghossian, P. (2003a). Blind reasoning. *Proceedings of the Aristotelian Society. Supplementary Volume 77* (1), 225–248.
- Boghossian, P. (2003b). Epistemic analyticity: a defense. In H-J Glock, K. Glüer & G. Keil (Eds.) *Grazer Philosophische Studien 66: fifty years of Quine's Two Dogmas of Empiricism*, 15–35.
- Boghossian, P. (2017). Postscript: further thoughts about analyticity, 20 years later. In H. Wright, & Miller (Eds.), *A companion to the philosophy of language* (2nd ed., pp. 121–128). Blackwell Publishing.
- BonJour, L. (1998). *In defense of pure reason*. Cambridge University Press.
- Burge, T. (1979). Individualism and the Mental. *Midwest Studies in Philosophy*, 4, 73–122.
- Carnap, R. (1947). *Meaning and necessity*. The University Chicago Press.
- Casullo, A. (2015). Four challenges to the a priori–a posteriori distinction. *Synthese*, 192, 2701–2724.
- Chudnoff, E. (2011). The nature of intuitive justification. *Philosophical Studies*, 153, 313–333.
- García-Carpintero, M., & Pérez Otero, M. (2009). The conventional and the analytic. *Philosophy and Phenomenological Research*, 2, 239–274.
- Hofmann, F., & Horvath, J. (2008). Defence of metaphysical analyticity. *Ratio*, 21, 300–313.
- Huemer, M. (2007). Compassionate phenomenal conservatism. *Philosophy and Phenomenological Research*, 74, 30–55.
- Hunter, D. (1997). Understanding, justification and the a priori. *Philosophical Studies*, 87, 119–141.
- Jenkins, C. (2012). A priori knowledge: the conceptual approach. In A. Cullison (Ed.), *The continuum companion to epistemology*. Continuum Press.
- Kripke, S. (1980). *Naming and necessity*. Basil Blackwell.
- Markie, P. J. (2013). Rational intuition and understanding. *Philosophical Studies*, 163, 271–290.
- Peacocke, C. (1993). How are a priori truths possible? *European Journal of Philosophy*, 1, 175–199.
- Putnam, H. (1975). The meaning of “meaning”. *Philosophical papers (vol. 2): mind, language, and reality*. Cambridge University Press.
- Quine, W. V. (1936). Truth by convention. Reprinted in *The ways of paradox* (2nd ed.). Cambridge: Harvard University Press, 1976, 77–106.
- Quine, W. V. (1951). Two dogmas of empiricism. *The Philosophical Review*, 60, 20–43.
- Quine, W. V. O. (1960). Carnap and logical truth. *Synthese*, 12(4), 350–374.
- Rattan, G., & Wikforss, A. (2017). Is understanding epistemic in nature. *Pacific Philosophical Quarterly*, 98(2), 271–294.
- Russell, G. (2008). *Truth in virtue of meaning*. Oxford University Press.
- Russell, G. (2014). Metaphysical analyticity and the epistemology of logic. *Philosophical Studies*, 171(1), 161–175.
- Schechter, J., & Enoch, D. (2006). Meaning and justification: the case of modus ponens. *Noûs*, 40(4), 687–715.
- Sosa, E. (2007). *A virtue epistemology: apt belief and reflective knowledge* (I vol.). Oxford University Press.
- Teixeira, C. (2018). Understanding the revisability thesis. *Grazer Philosophische Studien*, 95(2), 180–195.
- Teixeira, C. (2019). Meaning, understanding, and a priori knowledge. *Philosophia*, 47, 901–916.
- Teixeira, C. (2022). Epistemic analyticity reconsidered. *Pacific Philosophical Quarterly*, 103, 280–292.
- Teixeira, C. (forthcoming), Dodd, D., & Zardini, E. (Eds.). *The a priori: Its significance, grounds, and extent*. Oxford University Press.
- Topley, B. (2019). Linguistic convention and worldly fact. *Philosophical Studies*, 176(7), 1725–1752.
- Warren, J. (2015). The possibility of truth by convention. *Philosophical Quarterly*, 65(258), 84–93.
- Williamson, T. (2003). Blind reasoning. *Aristotelian Society Supplementary Volume*, 77, 249–293.
- Williamson, T. (2007). *The philosophy of philosophy*. Blackwell Publishing.
- Williamson, T. (2013). How deep is the distinction between a priori and a posteriori knowledge? In A. Casullo, & J. Thurow (Eds.), *The a priori in philosophy*. Oxford University Press.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.