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How does God know that $2 + 2 = 4$?

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Abstract: Sometimes theists wonder how God's beliefs track particular portions of reality, e.g. contingent states of affairs, or facts regarding future free actions. In this article I sketch a general model for how God's beliefs track reality. God's beliefs track reality in much the same way that propositions track reality, namely via grounding. Just as the truth values of true propositions are generally or always grounded in their truthmakers, so too God's true beliefs are grounded in the subject matters of those beliefs (i.e. God believes that p in virtue of the fact that p). This is not idle speculation, since my proposal allows the theist to account for God's true beliefs regarding causally inert portions of reality.

Introduction

Theists generally think that God is omniscient. It is difficult to spell out exactly what omniscience amounts to.¹ For my purposes it is enough to note that, given God's omniscience, God has many true beliefs about the world, and no false beliefs. How do God's beliefs track or line up with reality so successfully, so that all of God's beliefs are true, and none of God's beliefs are false? This is the topic of the present article.

Sometimes theists wonder how God knows *particular sorts* of things – e.g. contingent states of affairs, future free actions, counterfactuals of free action. Theists have proposed various mechanisms meant to account for God's true beliefs in each of these domains. For example, some theists maintain that God knows contingent states of affairs by God's act of creation (Mann (1985) defends something like this view). Molinists maintain that God knows future free actions by knowing counterfactuals of free action (i.e. by knowing what actions anyone would freely perform under some specified conditions) (Flint (1998)).

In this article I sketch a *general* model for how God's beliefs track reality, building on related recent work on grounding and metaphysical explanation. One benefit of the proposed account is this generality, insofar as most other proposed accounts of how God's beliefs track reality are limited in scope (e.g. the molinist may describe how God knows future free actions, but she does not describe how God knows that $2 + 2 = 4$).² The basic proposal I have in mind is that God's beliefs track reality because facts regarding God's beliefs are grounded in those things or facts which form the subject matter of God's beliefs. So, for example, the fact that God has the belief that my dog is black is grounded in the fact that my dog is black. This is not idle speculation, since the proposed account allows the theist to account for God's true beliefs regarding causally inert portions of reality.³

Here's my plan for the remainder of this article. In the following section ('God and grounding') I introduce the notion of grounding, and suggest that God's beliefs track reality by way of grounding. In the next section ('The reliability challenge to theistic Platonism') I argue that the grounding account of how God's beliefs track reality gives the theist an account of how God's beliefs successfully track causally inert portions of reality. That the theist might have a hard time accounting for the reliability of God's beliefs regarding causally inert portions of reality has recently been emphasized by Dan Baras (2017b). In the section after that ('Objections and responses') I respond to three objections. The final section ('Conclusion') concludes the article.

God and grounding

Grounding has recently received a great deal of attention in metaphysics (see, e.g. Schaffer (2009), Audi (2012), Fine (2012)). Grounding occurs whenever some fact obtains in virtue of some other fact(s).⁴ Here are some examples: The fact that some disjunction is true is grounded in the fact that one or more of the disjuncts is true. The fact that I weigh 150 pounds is grounded in the fact that the weight of my (non-overlapping) parts sums to 150 pounds. The fact that the paint is red is grounded in the fact that the paint is crimson. The fact that such-and-such mental state is instantiated is grounded in the fact that so-and-so physical brain state is instantiated. The fact that killing someone is normally morally wrong is grounded in the fact that in killing someone you deprive them of their future, and it is normally morally wrong to deprive someone of their future.

Most grounding theorists think that grounding is a non-causal explanatory relation – non-causal because grounding is not causation⁵ and explanatory because in general if some fact grounds some other fact, then the former fact's obtaining explains why the latter fact obtains. Both of these features of grounding are of crucial importance for points I make in the section 'The reliability challenge to theistic Platonism'.

Some philosophers think that ‘grounding’ denotes a range of relations (e.g. composition, truthmaking, realization), rather than any unified non-causal explanatory relation (see Wilson (2014), Koslicki (2015)). Such philosophers will think that my claim that facts regarding God’s beliefs are ‘grounded’ in facts regarding the subject matters of those beliefs is uninformative. They will ask exactly *which* grounding relation is operative here.⁶ I have two responses to this concern. First, I think we have good reasons to think that there is a general grounding relation, above and beyond other more fine-grained dependence relations such as composition and truthmaking, and that we have a decent grasp on what it means to say that such a general grounding relation obtains (see Cameron (2016)). For example, we need such a general grounding relation when we wonder whether some whole is grounded in its parts, or whether the parts are grounded in the whole – the parthood relation involved here does not tell us all we would like to know about the direction of the metaphysical dependence at work (see *ibid.*, 386).

But even supposing there isn’t any general grounding relation, I think we can get a grip on the sort of grounding involved in facts regarding God’s beliefs being grounded in facts regarding the subject matters of those beliefs. We can get a grip on the sort of grounding involved here by way of analogy with other grounding relations with which we are antecedently familiar. One particularly salient example of grounding is the grounding involved in truthmaking: facts regarding the truth values of propositions are generally grounded in facts regarding the subject matters of those propositions. So, for example, the fact that the proposition ‘Doug the pug is grey’ is true is grounded in the fact that Doug the pug is grey. We can think of God’s beliefs in a similar manner. The basic proposal is that God’s beliefs track reality in much the same way that the truth values of propositions track reality – i.e. facts regarding God’s beliefs are grounded in facts regarding the subject matters of those beliefs, just as facts regarding the truth values of propositions are grounded in facts regarding the subject matters of those proposition. There is nothing particularly mysterious about the fact that propositions ‘know’ about their subject matters, as long as the truth values of those propositions are grounded in the subject matters of those propositions. There is nothing mysterious, for example, in the fact that the truth value of the proposition ‘Doug the pug is grey’ reliably tracks whether or not Doug the pug is grey, as long as the truth value in question is grounded in the fact that Doug the pug is grey.⁷ Similarly, there need be nothing mysterious about the fact that God’s belief that Doug the pug is grey reliably tracks whether or not Doug the pug is grey, if the fact that God has that belief is grounded in the fact that Doug the pug is grey. (Of course, we might go on to ask *why* facts regarding God’s beliefs are grounded in this manner. I discuss this topic below.)

To be sure, there is an important difference between propositions and God’s beliefs, namely that while facts regarding the truth values of true propositions are often or always grounded in facts regarding their truthmakers, it is facts

regarding which beliefs God *has* which, I claim, are grounded in facts regarding the subject matters of those beliefs. I am not simply making the less interesting claim that facts regarding the *truth values* of God's beliefs are grounded in facts regarding the subject matters of those beliefs, although of course this less interesting claim is true.

I also don't mean to suggest that God's beliefs track reality *only* by way of grounding relations. I take my proposal to supplement, rather than compete with, most other accounts of how God knows about particular portions of reality. So, for example, some of God's beliefs may very well track reality by way of multiple relations (e.g. grounding relations *plus* causal relations), just as my belief that my table is made of wood is formed on the basis of multiple sense modalities (e.g. by way of visual impressions as well as tactile sensations). To give another example, God might know that there are dogs (in part) because God deliberately created dogs. In this case God might know that there are dogs in (at least) two ways: (1) God knows that there are dogs because God knows that God decreed 'let there be dogs', and God knows that all of God's decrees are efficacious; (2) God knows that there are dogs because the fact that God believes that there are dogs is grounded in the fact that there are dogs.

One interesting question we might ask at this point is this: *why* are facts regarding God's beliefs grounded in facts regarding the subject matters of those beliefs? I do not mean to ask why God is omniscient. I also do not mean to ask why we should *think* that facts regarding God's beliefs are grounded in this manner. Rather, why are facts regarding God's beliefs grounded in this manner in the first place? (What we say in response to this question will have important ramifications for the discussion in the section 'Objections and responses'.)

Many grounding theorists think that grounding is necessary rather than contingent, in the sense that if A fully grounds B, then necessarily if A obtains then B obtains.⁸ One interesting consequence of grounding necessitation in this context may be that God exists necessarily. If, for example, the fact that Doug the pug is grey necessarily grounds the fact that God believes that Doug the pug is grey, then Doug the pug's being grey necessitates God's existence (since God can only have beliefs if God exists). The point is true for any facts, not just the fact that Doug the pug is grey. For example, if the fact that $2 + 2 = 4$ grounds the fact that God believes that $2 + 2 = 4$, then the fact that $2 + 2 = 4$ necessitates God's belief, and so necessitates God's existence. But since the fact that $2 + 2 = 4$ is necessary, and necessitates God's existence, God exists necessarily. Many theists will regard this as a feature of the grounding account of how God's beliefs track reality, rather than a bug, since many theists think both that God exists of necessity, and that God is necessarily omniscient (and so necessarily has the belief that, say, $2 + 2 = 4$). But if we're uncomfortable either with the thought that God exists necessarily or with the thought that God is necessarily omniscient, we might think that the fact that Doug the pug is grey does not fully ground the fact that God believes

that Doug the pug is grey (and so does not necessitate the latter fact). I'll discuss this point shortly.

For now, assume that facts regarding God's beliefs are fully grounded in facts regarding the subject matters of those beliefs. If that's right, and if grounding necessitation is correct, then perhaps we need no explanation for why facts regarding God's beliefs are grounded in the manner in which they are grounded, if necessary facts require no explanation.

Nevertheless, there very well might be an explanation for why facts regarding God's beliefs are grounded in facts regarding the subject matters of those beliefs, even if grounding necessitation is correct. For example, if God's being omniscient involves facts regarding God's beliefs being grounded in facts regarding the subject matters of those beliefs, and if there is some explanation for why God is omniscient (e.g. an explanation in terms of God's being the greatest conceivable being), then there would *ipso facto* be an explanation for why facts regarding God's beliefs are grounded in facts regarding the subject matters of those beliefs.

Another potential explanation for why facts regarding God's beliefs are grounded in facts regarding the subject matters of those beliefs involves God's having voluntaristic control over the fact that facts regarding God's beliefs are grounded in the subject matters of those beliefs. Here's what I have in mind. The thesis that grounding is necessary rather than contingent only concerns *full* grounding: if A *fully* grounds B, then A necessitates B. A fact may partially ground some other fact without necessitating the latter fact. Think, for example, of the conjunctive proposition '*p* and *q*'. The fact that that conjunction is true may be partially grounded in the fact that *p* is true, even if the fact that *p* is true does not necessitate the fact that the conjunction is true.

Given that background, here is the sense in which God may retain voluntaristic control over the fact that God's beliefs are grounded in the subject matters of those beliefs, even if grounding is necessary rather than contingent. Even if full grounding is necessary, God's beliefs about, say, mathematical facts may only be *partially* grounded in mathematical facts, while they are fully grounded in those mathematical facts in conjunction with some facts about God - e.g. that God wills or desires that God have true beliefs regarding those mathematical facts, and that God is omnipotent (so that whatever God wills to occur does occur). God may have voluntaristic control over the *contingent* fact that the mathematical facts partially ground God's beliefs, while God lacks voluntaristic control over the *necessary* fact that, if the full grounds of God's beliefs obtain (those grounds being the mathematical facts, plus the fact that it is God's will that God knows the mathematical facts, etc.), then God's beliefs regarding those facts obtain as well.⁹

So far I have assumed, with most grounding theorists, that grounding is necessary rather than contingent. But if grounding is contingent (as in Skiles (2015)), then the fact that God's beliefs are grounded in facts regarding the subject matters of those beliefs may have a straightforward explanation, namely an

explanation in terms of God ensuring, by divine *fiat*, that the contingent grounding relations in question obtain. Just as an omnipotent God would presumably have the ability to set the contingent causal laws (i.e. the laws of nature), so too an omnipotent God would presumably have the ability to set contingent *metaphysical* laws, where metaphysical laws are those laws which govern grounding relations (see Wilsch (2015), Glazier (2016), Rosen (2017), Schaffer (2017)).¹⁰

I now turn to one important motivation for the grounding account of the reliability of God's beliefs, namely that it allows the theist to account for God's true beliefs regarding causally inert portions of reality.

The reliability challenge to theistic Platonism

Mathematical Platonism is, for our purposes, the thesis that there are mathematical facts which are (1) causally impotent and (2) such that they are neither caused by nor grounded in our (or any other) mental states or cognitive practices (e.g. our beliefs or desires regarding the mathematical facts).¹¹ Building on the work of Paul Benacerraf (1973), Hartry Field (1989, 25–30) has pressed the following epistemological worry for mathematical Platonism: if mathematical facts are both causally impotent and independent of human mental states and cognitive practices, how do we have reliable beliefs regarding those facts? To suppose that we could have very many true beliefs regarding such mathematical facts we would have to suppose that there are widespread and inexplicable correlations between the mathematical facts and our beliefs regarding those facts, but it is implausible that such widespread unexplained correlations would obtain. Given that at least some of us clearly do have many true beliefs regarding the mathematical facts, this gives us some reason to reject mathematical Platonism. Call this worry 'the reliability challenge to mathematical Platonism'. Similar worries arise for other views as well, including certain sorts of normative realism (Enoch (2011), ch. 7), and views according to which we have many reliable beliefs regarding other possible worlds (Lewis (1986), 108), as well as logical truths (Schechter (2010)). If, for example, normative facts are neither caused by nor grounded in our mental states or cognitive practices, and if they do not cause any of our beliefs (since they are causally impotent), then it seems implausible that we would have many, if any, correct beliefs regarding the normative facts. To think otherwise, the thought goes, we would have to suppose that there are inexplicable correlations between the normative facts and our beliefs regarding those facts, and it is implausible that such inexplicable correlations would obtain.

It is sometimes thought that theism provides an easy way out of these sorts of problems. We have more or less reliable beliefs regarding mathematical, normative, and similar facts because God ensures that the cognitive faculties governing our beliefs regarding those facts are more or less reliable.¹² Baras (2017b) has recently argued that theists are in no better a position to solve the reliability challenge than non-theists are. According to Baras, the theistic response to the

reliability challenge simply pushes the bump under the carpet. If it is puzzling that we might have reliable beliefs regarding mathematical facts, normative facts, etc., then we should be equally puzzled that God would have reliable beliefs regarding such facts. After all, the problem for our beliefs regarding such facts stems from the fact that mathematical facts, normative facts, etc., are neither causally responsible for our beliefs, nor caused by or grounded in any of our mental states or cognitive practices. But these concerns would seem to count just as much against God's beliefs regarding mathematical facts, normative facts, etc., because the latter facts are not causally responsible for God's beliefs, since they are not causally responsible for anything. What's more, mathematical, normative, and similar facts are neither caused by nor grounded in God's mental states or cognitive practices. Of course, we might reject one or more of these assumptions. We might think, for example, that God's beliefs (or desires, commands, whatever) cause or ground normative facts, as they do according to traditional divine command theories. But Baras's challenge is primarily directed towards those theists who do not reject the assumptions in question, and in any case he thinks we should not reject those assumptions.

Put in the form of an argument, Baras's challenge for the theistic response to the reliability challenge is this:

- (1) Theistic Platonism implies that there is a massive correlation between God's mathematical, normative, etc. beliefs and mind-independent non-causal facts.
- (2) If a theory implies that there is a massive correlation that we have principled reason to believe to be unexplainable, that is a reason for us to reject the theory.
- (3) We have principled reasons to believe that this correlation is unexplainable.
- (4) Therefore, we have a reason to reject theistic Platonism. (Baras (2017b), 482)

Baras's challenge to the theistic response to the reliability challenge is important independently of the debate over the reliability challenge. If Baras's argument is sound, then not only do we have some reason to think the theistic response to the reliability challenge fails, but the theist may face a bigger problem as well. After all, if there are facts (e.g. mathematical facts) regarding which God does not have reliable beliefs, then God is not omniscient. So, insofar as the theist is committed to the sorts of mathematical, normative, or other facts appealed to in the reliability challenge, the theist should either reject theism, or reject the thesis that God is omniscient.¹³

We might also note that considerations similar to those presented in Baras's argument would undermine God's true beliefs regarding things other than mathematical, normative, or similar facts. For example, we might plausibly suppose that

God's true beliefs regarding counterfactuals of human libertarian free action could not be given a causal explanation. What could cause God to have true beliefs regarding such counterfactuals? Not the free actions described by the counterfactuals, since those free actions haven't happened. Similarly, if future events do not exist (as on e.g. presentism), then future events cannot cause God's beliefs regarding those facts, and God neither causes nor grounds those future events (since, being future, they haven't happened yet), in which case God's true beliefs regarding the future may be put in jeopardy. In one stroke, then, lines of reasoning similar to those defended by Baras would undermine God's beliefs regarding mathematical, normative, and similar 'platonic' facts, and in addition would undermine Molinism and (perhaps) God's beliefs regarding the future.

Given the preceding sections of this article, I can provide a response to these concerns. We can see how God's beliefs regarding mathematical, normative, and similar facts can be responsive to those facts, while continuing to believe that those facts neither causally influence God's beliefs, nor are caused by or grounded in God's mental states or cognitive activities.

What the theist wants is some explanatory connection between mathematical, normative, and similar facts and God's beliefs regarding those facts. Baras thinks that if platonic facts do not cause God's beliefs regarding those facts then they cannot explain God's having those beliefs. But, as Baras is aware, there are types of explanation other than causal explanation. In this case it seems plausible to me that we can give a non-causal explanation of God's correct beliefs regarding mathematical, normative, and similar facts, underwritten by grounding relations between those facts and God's beliefs about those facts. Grounding relations are generally thought of as non-causal determination or explanatory relations, which in this case are just the sorts of relations we're looking for if we want to find some relation between mathematical, normative, and similar facts and God's beliefs about those facts which would ensure that God's beliefs regarding those facts are truth-apt. So, for example, the fact that some apple is crimson plausibly grounds the fact that it is red, but it seems inaccurate to say that it causes the apple to be red. The fact that my (non-overlapping) proper parts collectively weigh 150 pounds might ground the fact that I weigh 150 pounds, but it does not cause me to weigh 150 pounds. P grounds the disjunction of p and q , but it does not cause that disjunction. Similar examples are widely cited in the literature regarding grounding. Oddly, while Baras considers the possibility that God's beliefs regarding mathematical, normative, and similar facts might be caused by mathematical, normative, and similar facts (Baras (2017b), 485–486), Baras fails to consider the possibility that the latter facts might merely *ground* God's beliefs regarding those facts.

While (I'll assume, as Baras (*ibid.*, 486) does) we have reason to believe that mathematical, normative, and similar facts are causally impotent, we do not have similar reason to believe that they never enter into grounding relations, or explanatory relations more generally. In fact, such facts plausibly do enter into

grounding relations. This is most clearly the case with normative facts. Normative facts often ground other normative facts. We cite such grounding relations when we attempt to explain why one sort of action is morally permissible or impermissible in terms of some wider action of which it is a species being morally permissible or impermissible. So, for example, you might think that the fact that killing someone is normally morally wrong is grounded in the fact that in killing someone you deprive them of their future, and it is normally morally wrong to deprive someone of their future. Normative facts regarding particular concrete actions or states of affairs are similarly grounded in other normative facts: murdering Bob is morally impermissible because murder is morally impermissible.

Mathematical facts can similarly enter into grounding relations with other mathematical facts. For example, the fact that 4 is a member of the set of even numbers is grounded in the fact that 4 is even. What's more, mathematical facts can enter into grounding relations with concrete non-mathematical facts. Here is one widely cited example of non-causal mathematical explanation: 'The fact that twenty-three cannot be divided evenly by three explains why it is that Mother fails every time she tries to distribute exactly twenty-three strawberries evenly among her three children without cutting any (strawberries!)' (Lange (2013), 488). The mother's inability to divide the strawberries evenly among her children is plausibly grounded in the fact that twenty-three is not divisible by three. We can also note that, uncontroversially, mathematical facts can enter into some grounding relations with concrete non-mathematical facts *regarding God's beliefs*. For example, God cannot simultaneously have both an even and an odd number of beliefs, in virtue of the fact that no number is both even and odd.

We've seen, then, that normative and mathematical facts (and, I would add, other 'Platonic' facts as well) are not explanatorily impotent, even if (we can assume) they are causally impotent. It is also plausible that some normative and mathematical explanations are backed by associated grounding relations. Given that there seems to be no general prohibition on normative and mathematical facts entering into grounding relations, there seems to me to be no obvious obstacle to those facts entering into grounding relations with facts regarding the contents of God's beliefs. Similarly, since there seems to me to be no general prohibition on normative and mathematical facts figuring as components in non-causal explanations, there seems to me to be no obvious obstacle to those facts serving to explain why God has the beliefs that God has.

Objections and responses

I'll now consider three objections.

Objection: If facts regarding God's beliefs are grounded in facts regarding the subject matters of those beliefs, then God is not a metaphysically fundamental being.¹⁴ The problem is compounded if we think, as some theists do, that there is some sense in which God grounds the existence of everything other than God

(see Pearce (2017), Böhn (2018)). In that case the irreflexivity of grounding might be compromised: God grounds some fact F (e.g. the fact that Doug the pug exists), and F ground's God's belief regarding F (e.g. God's belief that Doug the pug exists).

Response: Both problems are resolved if we attend carefully to which facts are involved in the relevant grounding relations. To say that God is fundamental is to say that nothing grounds the fact that God exists. But if some fact F grounds the fact that God has a certain belief, F does not thereby ground the fact that God exists. So, the concern regarding God's status as a fundamental being is misplaced. Similarly, while some fact regarding God's creative activity might ground some fact F, F does not in turn ground any fact about God's creative activity. Rather, F grounds the fact that God has the *belief* that F obtains. So, the irreflexivity concern is also misplaced.

Objection: My response to Baras was that the reliability challenge with respect to God's beliefs can be overcome. But that response does not address the second component of Baras's reliability challenge to theistic Platonism, that the theist does not have an easier time than the non-theist in accounting for the reliability of our beliefs regarding mathematical, normative, and similar facts. If God's beliefs can be grounded in mathematical, normative, or similar facts, presumably our beliefs can be grounded in that manner as well. But then the theist has no advantage over the non-theist with respect to the original reliability challenge to our beliefs regarding mathematical, normative, and similar facts.

Response: I have two responses to this objection. First, this objection, even if cogent, would not bother me very much. In 'The reliability challenge to theistic Platonism' I was primarily concerned to respond to Baras's challenge to the reliability of God's beliefs regarding mathematical, normative, and similar facts. If my response carries over to support the reliability of *our* beliefs regarding those facts, so much the better - I will have resolved Baras's reliability challenge for God's beliefs, and in the process will have resolved a similar reliability challenge for our own beliefs.

But I'd also like to make some tentative remarks on behalf of the idea that the theist is in a better position than the non-theist in accounting for the reliability of our beliefs regarding 'platonic' facts. Again, a discussion of this subject is not strictly required for my purposes in this article. Nevertheless, a brief discussion of this subject may prove worthwhile, since it provides further insight into the manner in which, I claim, facts regarding God's beliefs are grounded in facts regarding the subject matters of God's beliefs, as well as some insight into the potential obstacles to our thinking that facts regarding *human* beliefs are similarly grounded in the subject matters of those beliefs.

My second (somewhat tentative) response to the objection, then, is to concede that it seems plausible that our beliefs regarding mathematical, normative, and similar facts are grounded in those facts, but to note that it does not follow from that fact that the theist does not retain an advantage over the non-theist with

respect to the reliability of our beliefs regarding mathematical, normative, and similar facts. We may have less reason to think that our beliefs would be grounded in the relevant facts (without God's intervention) than we have to think God's beliefs would be grounded in those facts.

I take it that Baras's challenge is primarily that there simply isn't any candidate explanatory relation of the requisite sort to bridge the gap between mathematical, normative, and similar facts and God's/our beliefs regarding those facts. I've now identified a relation of the required sort, namely the grounding relation.

An extension of Baras's challenge is this. While we may have found a non-causal relation between the mathematical, normative, etc., facts and ourselves which can *in principle* account for the reliability of our beliefs regarding those facts, it is another matter entirely to show that it would be at all probable that that non-causal relation would *in fact* obtain. Similarly, I can point out that there is a non-causal relation, the grounding relation, which could conceivably obtain between facts regarding what I had for breakfast and facts regarding events happening on the other side of the galaxy, but it is another matter entirely to show that the grounding relation in fact obtains.¹⁵ How do we *reach out*, so to speak, to grab those mathematical, normative, and other facts in order to ensure that they ground our beliefs? A similar worry, I claim, does not affect God's beliefs regarding mathematical, normative, and similar facts. As I discussed in 'God and grounding', the question 'why do the grounding relations between facts regarding God's beliefs and facts regarding the subject matters of those beliefs obtain?' may not require an answer (i.e. there need be no explanation for why the grounding relations obtain), or can be given an answer in terms of whatever explains why God is omniscient, or in terms of God's voluntaristic control over the grounding relations in question.

To some extent the points I made in 'God and grounding' might also be relevant to the question of why grounding relations obtain between facts regarding *our* beliefs and facts regarding the subject matters of our beliefs. If, for example, grounding is necessary, and if necessary facts require no explanation, then facts regarding what, if anything, grounds our beliefs may require no explanation. But as I noted in 'God and grounding', if necessary facts such as the fact that $2 + 2 = 4$ fully ground the fact that God believes that $2 + 2 = 4$, this might force us to conclude that God exists necessarily. It is doubtful, however, that *we* exist necessarily, in which case we should be hesitant to think that the fact that $2 + 2 = 4$ fully grounds the fact that we believe that $2 + 2 = 4$. Similarly, while in 'God and grounding' I suggested that God may have some voluntaristic control over which facts ground facts regarding God's beliefs, it is less likely that we would have that sort of voluntaristic control over grounding relations regarding our beliefs. God is omnipotent. By contrast, the range of actions which we are capable of performing is very limited, and we have no reason to think they include the ability to establish grounding relations between mathematical, normative, and similar facts and our beliefs regarding those facts, just as we

have no reason to think that we can ensure that facts regarding what I had for breakfast can ground facts regarding events on the other side of the galaxy.

All of these problems are resolved if we bring God into the picture. For example, the theist can maintain that facts regarding human beliefs regarding platonic facts are *partially* grounded in platonic facts, but *fully* grounded in platonic facts plus the fact that God wills that we have the beliefs in question. The theist, then, has distinctive resources to account for the reliability of our beliefs regarding platonic facts which are not available to the non-theist.

Objection: What reason do we have to suppose that facts regarding God's beliefs really *are* grounded in facts regarding the subject matters of those beliefs? Aside from the fact that one can sketch a model of this sort, according to which facts regarding God's beliefs are grounded in the subject matters of those beliefs, what reason do we have to think that the model actually obtains? Without some reason to think that the model *does* obtain, my proposal in this article is not very interesting.¹⁶

Response: Even if we have little positive reason to think that facts regarding God's beliefs are grounded in facts regarding the subject matters of those beliefs, it may nevertheless be worthwhile to note that facts regarding God's beliefs *could* be grounded in this manner. The availability of the model helps us to see how God's beliefs might be able to track causally inert portions of reality. This last point is especially important since, as we've seen, Baras has argued that it is difficult to see how God could know about causally inert portions of reality. That Baras fails to consider the sort of grounding proposal outlined in this article is a serious lacuna in his argument.

But I think that we do have some positive reasons to think that facts regarding God's beliefs really are grounded in facts regarding the subject matters of God's beliefs. It is interesting to note that among grounding theorists the Euthyphro dilemma – i.e. 'is something pious because it is loved by the gods, or do the gods love it because it is pious?' – is commonly taken to serve as a paradigm illustration of grounding (see, e.g. Schaffer (2009), 375; *Idem* (2016), 50). It isn't always clear if grounding is supposed to be operative in both horns of the dilemma, or just one of them. Sometimes, however, it is explicitly assumed that the second horn of the dilemma involves grounding – that is, that if the second horn of the dilemma obtains, then the gods' (or God's) loving pious things is grounded in those things' being pious (see, e.g. Correia & Schnieder (2012), 3; Raven (2012), 693). It isn't such a stretch to think that, if the gods' (or God's) loving something is grounded in its being pious, this is because the gods' (or God's) *believing* the thing to be pious is grounded in its being pious. Of course, none of this proves that the fact that God has the belief that something is pious *is* grounded in the fact that it is pious. But it shows that this grounding claim coheres well with the existing literature on grounding. At the very least, it provides some support for the idea that those who have thought most about grounding would not think it is odd to suppose that facts regarding God's beliefs might be grounded in facts regarding the subject matters of those beliefs.

Furthermore, if God is omniscient, then presumably God knows about causally inert portions of reality – or, at any rate, God’s being omniscient is often assumed to involve God’s having true beliefs regarding many causally inert portions of reality (e.g. moral facts, mathematical facts, maybe counterfactuals of free action). Since those portions of reality are causally inert, we’ll need some account of how God comes to form true beliefs regarding those portions of reality which doesn’t involve those portions of reality causing God to form the beliefs in question. My proposal, according to which God knows about these portions of reality by way of grounding, seems to me to be a natural way to go. So, whatever grounds we have for thinking that God is omniscient will *ipso facto* provide some support for thinking that God knows about these portions of reality by way of grounding.

I’ve also argued that God might ensure that the relevant grounding relations obtain by way of divine *fiat*. If it really is within God’s power to ensure that the relevant grounding relations obtain, and if God has some reason to ensure that the grounding relations do obtain (e.g. in order to ensure that God forms various true beliefs), then God might very well ensure that those grounding relations obtain. Since, again, God cannot learn about causally inert portions of reality by way of their causal influence, God might very well choose to learn about those portions of reality by way of grounding.

Conclusion

In this article I’ve sketched an account of how God’s beliefs track reality. God’s beliefs track reality in much the same way that the truth values of propositions track reality, namely by way of grounding. I do not mean to suggest that God’s beliefs track reality *only* by way of grounding relations, but that seems to me to be at least part of the story regarding how God’s beliefs track reality. I’ve suggested that there may be no need for an explanation for why facts regarding God’s beliefs are grounded in facts regarding the subject matters of those beliefs. I’ve also suggested, however, that there may in fact be such an explanation, for example in terms of God’s voluntaristic control over the grounding relations in question. One application of the grounding account of how God’s beliefs track reality is that it allows us to account for God’s beliefs regarding causally inert portions of reality, and so allows the theist to respond to Baras’s recent ‘reliability challenge to theistic Platonism’. Baras challenges the theist to account for God’s true beliefs regarding ‘platonic’ causally inert facts (e.g. facts regarding mathematics). Baras overlooks what seems to me to be the correct response to this concern, namely that facts regarding God’s beliefs regarding platonic facts are grounded in those platonic facts. I’ve also briefly discussed a related reliability challenge with respect to our beliefs regarding platonic facts. I’ve argued that the theist has distinctive resources which help them respond to this challenge, resources which are not available to the non-theist.¹⁷

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Notes

1. For some recent discussion see Swinburne (2016), ch. 10, Wierenga (2018).
2. Another general account of the manner in which God's beliefs track reality is given in Mavrodes (1988).
3. This article can also be seen as a contribution to the growing literature on non-causal explanation.
4. This point is somewhat controversial. Some grounding theorists maintain, for example, that grounding can occur between things of any sort (not just facts) (Schaffer (2009)), or that grounding is most perspicuously represented using a sentential operator, rather than a relation (Fine (2001)). In this article I aim to remain neutral on these subjects. It will be convenient generally, however, to write of facts grounding other facts, although sometimes such talk becomes too cumbersome, and I write of, say, God's beliefs being grounded in the subject matters of those beliefs.
5. Wilson (2018) argues that grounding is a type of causation, but he is in the minority on this point. Bernstein (2016) by contrast explicitly argues that grounding is not causation.
6. Thanks to an anonymous referee for suggesting I address this concern.
7. *Sometimes* it might be mysterious that some proposition tracks the subject matter of that proposition, if, for example, the proposition lacks a truthmaker. But just those cases which seem to be mysterious in this respect are also cases in which it is controversial whether God knows the states of affairs in question. For example, some philosophers maintain that propositions regarding counterfactuals of indeterministic processes (including human free actions) lack truth values, as the propositions in question plausibly lack truthmakers (see Sider (2001), 36). But for just the same reason, it is also controversial whether God knows the truth values those propositions (see Adams (1977); Hasker (1989), 23–24). In this article I confine my attention to less controversial propositions, and less controversial claims regarding God's knowledge. It is uncontroversial, for example, that the proposition ' $2 + 2 = 4$ ' is true, even if it is controversial what (if anything) serves as a truthmaker for that proposition. Similarly, it is mostly uncontroversial that God could know that $2 + 2 = 4$ (modulo a concern raised by Baras, discussed in the section 'The reliability challenge to theistic Platonism').
8. Cf. Bliss & Trogdon (2014): 'We take it that the default view among proponents of grounding is that full grounding carries metaphysical necessity.'
9. You might worry that if God can will that God knows about, say, mathematical facts, then God has some prior grasp on what the mathematical facts are. The concern is, of course, that if God has this prior grasp on the mathematical facts, God will not need to bring about any new grounding relations to ensure that God knows about those facts. (Thanks to an anonymous referee for suggesting that I address this concern.) My response to this concern is that God need not have any prior grasp on, say, which mathematical facts obtain, in order to ensure that facts regarding God's beliefs are grounded in the mathematical facts. It isn't as if God knows that $2 + 2 = 4$, and as a result ensures that the fact that God believes that $2 + 2 = 4$ is grounded in the fact that $2 + 2 = 4$. Instead, God might simply have the desire that facts regarding God's beliefs are grounded in whatever mathematical facts there are, or, more generally, whatever causally impotent facts there are. This desire could in turn lead to God's ensuring that facts regarding God's beliefs are grounded in whatever mathematical facts there are, or, more generally, whatever causally impotent facts there are.
10. John Bengson (2015) defends an account of the relationship between abstract facts (e.g. mathematical facts, normative facts) and intuitions regarding those facts which is similar to the account I've advocated in

this section. Bengson appeals to a non-causal constitution relation to account for the connection between abstract facts and our intuitions regarding those facts. The idea is that our non-accidentally correct intuitions regarding those facts are partially constituted by those facts. For example, my non-accidentally correct intuition that murder is morally impermissible is constituted by the fact that murder is morally impermissible. Constitution brings with it grounding (see *ibid.*, 18, especially n. 30) For example, if my intuition that murder is morally impermissible is constituted by the fact that murder is morally impermissible, then it is grounded in the fact that murder is morally impermissible. Presumably if Bengson is correct that some of our intuitions are constituted by mathematical, normative, and similar facts, we could similarly maintain that some of God's intuitions or beliefs are constituted by mathematical, normative, and similar facts. I don't intend to endorse this idea, but I would just like to note the similarity between Bengson's thesis regarding our intuitions and my proposal regarding God's beliefs.

11. As I understand the thesis, then, mathematical Platonism is neutral with respect to the existence of abstract mathematical objects (e.g. numbers or sets).
12. This sort of claim has been made by a number of theists, including Adams (1983), 751; *Idem* (1999), 363–366; Swinburne (2004), 215–218; Rogers (2008); Linville (2009), 393–417; Evans (2013), 121, 179–81; Thurow (2013), 1601; Brenner (2018), 456–457.
13. For what it's worth, I should mention that Baras does not endorse the reliability challenge with respect to either God's beliefs or our own beliefs (see especially Baras (2017a)). Baras is chiefly concerned, not with defending the claim that God's beliefs face a reliability challenge, but rather with defending the claim that the theist is no better off than the atheist with respect to responding to the reliability challenge. In any case, whether or not Baras himself ultimately endorses the reliability challenge for theism, it is a serious problem for the theist which requires a response.
14. Thanks to an anonymous referee for suggesting that I address this concern.
15. There may actually be grounding relations between facts regarding what I had for breakfast and facts regarding events happening on the other side of the galaxy, for example grounding relations related to quantum entanglement relations between my breakfast and the other side of the galaxy (see Penrose (2004), 591–592). My point is simply that, merely given the conceivability of such a grounding relation's obtaining, we are given no reason to think such a grounding relation actually obtains.
16. Thanks to an anonymous referee for suggesting that I address this concern.
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