Grim Variations

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Patrick Grim advances arguments meant to show that the doctrine of divine omniscience—the classical doctrine according to which God knows all truths—is false. We here focus on two such arguments: the *set theoretic argument* and the *semantic argument*. These arguments due to Grim run parallel to, respectively, familiar paradoxes in set theory and naive truth theory. It is beyond the purview of this article to adjudicate whether or not these are successful arguments against the classical doctrine of omniscience. What we are here interested in is a way in which these arguments can be generalized. In particular, we show how generalizations of these arguments can target, explicitly, alternatives to the classical doctrine of omniscience, including what we here call *restricted omniscience* and *open future open theism*. As a corollary, considerations of Grim-style arguments do not support these alternatives to the classical doctrine of omniscience over the classical doctrine. We conclude that what is paradoxical is not the classical doctrine of omniscience just as such; rather, what is paradoxical is a core commitment shared by the classical doctrine and its more modest alternatives, namely, the thesis that God is a perfectly logical reasoner.

1. Introduction

Patrick Grim advances arguments meant to show that the doctrine of divine omniscience—the classical doctrine according to which God knows all truths—is false. In particular, we here have in mind to focus on two such arguments: the *set theoretic argument* and the *semantic argument*. These arguments run parallel to, respectively, familiar paradoxes in set theory and naive truth theory. It is beyond the purview of this article to adjudicate whether or not these are successful arguments against the classical doctrine of omniscience. What we are here interested in is a way in which these arguments can be generalized.[1]

In this article, first, we are mainly concerned to show that Grim-style paradoxes arise given assumptions about God's knowledge not nearly as

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[1]Grim's arguments can be found in his articles "Some Neglected Problems of Omniscience," "There is No Set of All Truths," "Truth, Omniscience, and the Knower," and "Logic and the Limits of Knowledge and Truth," as well as in his book *The Incomplete Universe*. Some responses to Grim's arguments can be found in Bringsjord, "Grim on Logic and Omniscience"; Mar, "Why 'Cantorian' Arguments Against the Existence of God Do Not Work"; Simmons, "On an Argument Against Omniscience"; Plantinga and Grim, "Truth, Omniscience, and Cantorian Arguments"; Beall, "A Neglected Response to the Grim Result"; and Cotnoir, "Theism and Dialetheism."

strong as those imposed upon us by the classical doctrine of omniscience. As a result, we show that the paradoxes arise explicitly for weaker alternatives to the classical doctrine. In particular, the paradoxes arise for alternatives to the classical doctrine that fall under the broad rubrics of *restricted omniscience* and *open theism*. Several implications of this are briefly drawn out. Finally, we conclude by giving the main philosophical upshot, which will emerge over the course of this article: the paradoxes of omniscience need not primarily owe to strong assumptions about the *extent* of God's knowledge, but can just as well be attributed to the *logical perfection* of God's knowledge. What is paradoxical is not just the idea of a God-like knower, but also the constituent idea of a God-like logical reasoner, a being of perfect rationality from a logical point of view.

2. Grim's Paradoxes of Omniscience

The classical doctrine of divine omniscience requires that God knows all truths.[2] Alternatively, this entailment of the classical doctrine can be formulated as the thesis that God believes all truths and believes no falsehoods. It is this latter formulation that we assume in what follows. So, we will say that the classical doctrine entails two theses:

> NO FALSE: God believes no false propositions
> ALL TRUE: God believes all true propositions

Given this characterization of omniscience, God, as classically conceived, comprehensively believes all truths and completely disbelieves all falsehoods. We will focus on two arguments due to Grim aimed at showing that the classical doctrine gives rise to paradoxes, and is therefore false.

The first argument we call the *set theoretic argument*. If God believes all truths and disbelieves all falsehoods, then the set of all propositions God believes is just the set comprising all and only true propositions. But it can be shown that, on pain of contradiction, no such set exists. The argument is as follows:

> Suppose (i) there is a set S of all and only true propositions, (ii) for every set of true propositions $P \subseteq S$ there corresponds a true proposition p_P—say, the proposition that all elements of P are true—and (iii) for every $P, Q \subseteq S$, if $P \neq Q$, then $p_P \neq p_Q$. Now, by the Axiom of Separation, there is a set R collecting all and only the true propositions of this sort that are not also members of their corresponding set, that is:
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> $$R = \{x \in S \mid \exists P \subseteq S (x = p_P \text{ and } x \notin P)\}$$

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[2]We assume, as stated, that this is an entailment of the classical doctrine. We by no means assume that this entailment *just is* the classical doctrine. There is an interesting question, which we here leave to the side, about the relationship between this entailment of the classical doctrine and scholastic characterizations of omniscience according to which the objects of God's knowledge are existing particulars or God Himself rather than, for example, truth bearers.

Because $R \subseteq S$ there is also a corresponding true proposition p_R. Assume $p_R \notin R$. Then p_R is not an element of its corresponding set R. Since this is what it means for something to be an element of R, it follows that $p_R \in R$. So, discharging the assumption, we have shown $p_R \notin R$ *only if* $p_R \in R$, which implies $p_R \in R$. So, we know $p_R \in R$. Now, it follows by definition of R that for some $P \subseteq S$, $p_R = p_P$ and $p_R \notin P$. But then $R \neq P$, and hence $p_R \neq p_P$. Contradiction. Therefore, there is no set S of all and only true propositions. That is, (i) is false.[3]

Since there cannot be a set of propositions large enough to be the set of all propositions that God, according to the classical doctrine, believes, the classical doctrine is therefore false.[4]

The second argument is what we call the *semantic argument*.[5] If God believes all truths and disbelieves all falsehoods, then any substitution instance of the following schema comes out true, where φ is a sentential variable and the biconditional is material:

God believes that $\ulcorner \varphi \urcorner$ is true $\leftrightarrow \varphi$

But then we immediately run into paradoxes concerning sentences such as

1. God does not believe that (1) is true

To see this, let us assume that we are working in a language with sufficient expressive richness to effect self-reference.[6] Given a sentence φ of the language, we will use the quotation $\ulcorner \varphi \urcorner$ as a singular term for φ. (If you like, take $\ulcorner \varphi \urcorner$ to be a Gödel number of φ.) We also assume that among the predicates of the language is a predicate *God believes* (___), as our regimentation of the open sentence "God believes that (. . .) is true" of ordinary English.

Suppose the doctrine of divine omniscience is true. Then, any substitution of a sentence of our language for φ in the following schema comes out true:

(O) God believes ($\ulcorner \varphi \urcorner$) $\leftrightarrow \varphi$

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[3]We here follow the formulation in Menzel, "Sets and Worlds Again," of the Russellian *Paradox of Propositions*. This formulation does not appeal to Cantor's theorem, in contrast to the formulation in Grim, "There is No Set of All Truths." Menzel points out the close connection between Grim's argument and Russell's argument in Appendix B of *The Principles of Mathematics*.

[4]At least, that is, insofar as the classical doctrine entails that there is a set of all truths that God knows.

[5]What we call the semantic argument is Grim's variant of the *Liar Paradox*, which appears in Grim, "Some Neglected Problems of Omniscience."

[6]This is a realistic assumption, from a consideration of natural language. There plainly are unproblematic sentences of natural language that effect self-reference: this very sentence does, for example. For our purposes, we can in the usual way simply say that the language in which the above argument is formulated can arithmeticize its own syntax.

Because we have the resources for self-reference, our language will contain a sentence α of which the following holds:

$$(\alpha)\,\alpha \leftrightarrow \neg\,God\ believes\,(\ulcorner \alpha \urcorner)$$

This much facilitates the following argument:

1) $\alpha \vee \neg\,\alpha$ [Excluded middle]

2) α [Assume for CP]

    2.1) $\neg\,God\ believes\,(\ulcorner \alpha \urcorner)$ [2; (α), MP]

    2.2) $\alpha \to God\ believes\,(\ulcorner \alpha \urcorner)$ [Sub. (O), ($\to$)]

    2.3) $\neg\,\alpha$ [2.1, 2.2; MT]

    2.4) $\alpha \wedge \neg\,\alpha$ [2, 2.3; $\wedge$-I]

3) $\alpha \to (\alpha \wedge \neg\,\alpha)$ [2–2.4; CP]

4) $\neg\,\alpha$ [Assume for CP]

    4.1) $\neg\neg\,God\ believes\,(\ulcorner \alpha \urcorner)$ [4; (α), MP]

    4.2) $God\ believes\,(\ulcorner \alpha \urcorner)$ [4.1; DN]

    4.3) $God\ believes\,(\ulcorner \alpha \urcorner) \to \alpha$ [Sub. (O), ($\to$)]

    4.4) $\neg\,God\ believes\,(\ulcorner \alpha \urcorner)$ [4, 4.3; MT]

    4.5) α [4.4; (α), MP]

    4.6) $\alpha \wedge \neg\,\alpha$ [4, 4.5; $\wedge$-I]

5) $\neg\,\alpha \to (\alpha \wedge \neg\,\alpha)$ [4–4.6; CP]

6) $\alpha \wedge \neg\,\alpha$ [1, 3, 5; $\vee$-E]

So, we see that accepting unrestricted substitution into the schema (O) above leads to a contradiction. But unrestricted substitution into the schema (O) is just a regimentation of the classical doctrine of divine omniscience: God believes something if and only if it is true. The classical doctrine, according to Grim, is the culprit, and so the classical doctrine is false.[7]

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[7]The first argument assumed that the classical doctrine entails that God believes all true *propositions* and believes no false ones. The second assumed only that God believes that all true *sentences* are true and believes of no false ones that they are true. But, one might protest, these arguments do not actually target the same formulation of the doctrine of omniscience.

3. Alternatives to the Classical Doctrine

The above arguments targeted the classical doctrine of divine omniscience. It is instructive, in considering Grim's arguments, to see how they fare against alternatives to the classical view. The first such alternative is what we call *open future open theism* (henceforth, *open theism*, for short), which has been variously defended by John Lucas, Dale Tuggy, Dean Zimmerman, and others.[8]

We are for present purposes taking open theism to be an alternative to the classical doctrine because open theism adds to it the following metaphysical thesis:

> OPEN: Some propositions are neither true nor false

Typically, OPEN is filled out by adding the further elaboration, which we will here simply treat as characteristic of open theism:

> F-OPEN: Some propositions about the future are neither true nor false

The niceties of open theism's exact relation to either of OPEN or F-OPEN are not terribly important. What matters is that open theism adds some alethically purgative thesis to the classical doctrine.

Differing from open theism is a family of alternative views we call *restricted omniscience*. Recall that the classical doctrine has two components, to wit, NO FALSE and ALL TRUE. For our purposes, it will suffice to

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This objection is beside the point. What we are concerned with is the first formulation, and the second one can plausibly enough be taken to be an approximation of the former in the sentential rather than the propositional idiom. Even if this latter is denied, it is obvious that the first formulation entails the second. That is,

(⋆) God believes all and only true propositions only if God believes, of every true sentence, that it is true.

What would a counterexample to (⋆) be? In order for (⋆) to be false, there would have to be a true sentence *S* that God did not believe to be true. But there cannot be such a sentence, if the antecedent of (⋆) is satisfied. For *S* is true only if (a) *S* expresses some true proposition *p* and (b) *S* is true iff *p* is. But, then, since *S* is true, *p* likewise is true (by (b)), and so God believes that *p* is true. God also believes, though, that *S* is true, since God believes that *p* is true and that *S* is true iff *p* is. So God *does* believe that *S* is true, which contradicts our supposition that *S* is a true sentence that God does not believe to be true. Thus, the first formulation entails the second. For these reasons, any argument against the second we take to be an argument against the first.

[8] See Lucas, *The Future*; Tuggy, "Three Roads to Open Theism"; and the two articles by Zimmerman, "The A-Theory of Time" and "Open Theism and the Metaphysics of the Space-Time Manifold." For the sake of brevity, we are here being free with attaching an idiosyncratically narrow extension to "open theism." As is plain from the above discussion, we are here assuming that open theism constitutively involves denying the principle of bivalence. This excludes open theists who accept bivalence (see Tuggy, "Three Roads to Open Theism," for a critical discussion), and it in particular excludes those open theists who adopt a metaphysics of time according to which future contingents are all false (see Todd, "Future Contingents are all False!"). This is harmless in what follows. Since bivalent open theism does not differ from the classical doctrine as regards the two issues of importance here—viz., bivalence and ALL TRUE—we can for present purposes regard bivalent open theism as a version of the classical doctrine. Of course, by this we do not mean to venture an evaluation of the orthodoxy or theological pedigree of bivalent open theism.

characterize a restricted omniscience view as any view that includes NO FALSE but rejects ALL TRUE in favor of some restriction thereof.

There are diverse views that may be accordingly classified as restricted omniscience views, by the lights of this characterization. These are generated by adding some qualification to ALL TRUE[9] which can be achieved by filling out the following schema for some suitable open sentence ψ:

AT-SCHEMA: God believes all true propositions p such that $\psi(...p...)$

Given this, consider the following three instances of AT-SCHEMA:[10]

AT-KNOWABLE: God believes all true propositions p such that p is knowable to God

AT-INDEXICAL: God believes all true propositions p such that p contains no first-person indexical information (about some being other than God Himself)

AT-TEMPORAL: God believes all true propositions p such that p contains no temporally indexical information

If we for example add AT-KNOWABLE to NO FALSE we get something in the vicinity of the view advanced at various points by William Hasker, Richard Swinburne, and endorsed also by Peter van Inwagen, according to which God knows all truths that are knowable to him.[11] A standard version of this view has it that God does not know some contingent truths about what free agents will freely do in the future. Call this view *K-Restricted Omniscience.*

Likewise, if we add to NO FALSE the thesis AT-INDEXICAL we arrive at a view motivated by arguments from Norman Kretzmann and Patrick Grim.[12] According to this view, truths like those expressed by sentences containing pronominal indexicals as, for example, "I am Norman Kretzmann," are not a part of God's knowledge, as they can only be known or believed by the individual herself who is designated by the indexical in question. Call this view, *I-Restricted Omniscience.*

Finally, what we will in the obvious way call *T-Restricted Omniscience* is the result of adding AT-TEMPORAL to NO-FALSE, resulting in a view motivated by arguments due to Arthur Prior, Norman Kretzmann, Anthony Kenny, Patrick Grim, and others.[13] According to *T-Restricted Omniscience*, God does not know some truths involving temporally indexical

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[9]And, of course, by rejecting the unqualified version of ALL TRUE.

[10]As formulated, these instances of AT-SCHEMA might be stronger than what is required by some relevant theorists. However, clearly the generalizations of Grim's arguments below apply just as well to views less restrictive than those broadly described here.

[11]See Hasker, *God, Time, and Knowledge*, "A Philosophical Perspective," and *Providence, Evil and the Openness of God*; Swinburne, *The Coherence of Theism*, and van Inwagen, "What Does an Omniscient Being Know About the Future?"

[12]See Kretzmann, "Omniscience and Immutability," and Grim, "Against Omniscience."

[13]See Prior, "The Formalities of Omniscience"; Kretzmann, "Omniscience and Immutability"; Kenny, *The God of the Philosophers*; and Grim, "Against Omniscience."

information. An example of the latter might be propositions at different times expressed by the sentence "It is *now* cold in the sunroom."

How do these views, including possible combinations thereof, fare against Grim's arguments? The set theoretic argument applies to any doctrine that entails unrestricted ALL TRUE, and so it applies to open theism—open theism entails the conjunction of NO FALSE and ALL TRUE, with its distinctive implications arising from the particular metaphysical theses it *adds* to the classical doctrine. Open theism, though, *does not* bend under the weight of the semantic argument; at least, not if it is consistent. To see this, consider that any consistent view that entails OPEN requires a denial of the principle of bivalence, according to which every proposition is either true or false. Correspondingly, the *logic* accompanying such a doctrine cannot be classical—it must be a logic that does not validate the law of excluded middle. But the law of excluded middle prominently figures in the above formulation of the semantic argument. Given this, the consistent open theist will justly dismiss the semantic argument as presupposing a logic that she does not—indeed, cannot, on pain of inconsistency—accept.[14]

What, now, of the three restricted omniscience views we have sketched, including their combinations? As can easily be seen, both the set theoretic argument and the semantic argument presuppose the truth of unrestricted ALL TRUE. If God can fail to believe some truth, then the thesis that there is no set of *all* truths does not so much as suggest that there is no set of truths that God believes, and so the set theoretic argument is impotent against restricted omniscience views and their combinations alike. Likewise, if God fails to believe some truth then some substitution for φ in the left-to-right direction of (O) is untrue, in which case the inference at stage 2.2 of the semantic argument is unjustified.

As we see, then, though Grim's arguments apply to the classical doctrine they do not uniformly apply to alternatives to the classical doctrine. We will now show that strengthened versions of those arguments can be mobilized not only against the classical doctrine of divine omniscience but also against the substantially weaker alternatives just mentioned.

4. Paradoxes for the Alternative Doctrines

In this section we state *generalizations* of Grim's arguments. We then discuss how the generalized arguments apply to alternative doctrines of divine omniscience canvassed above.

4.1 The Generalized Set Theoretic Argument

The set theoretic argument targeted the claim that God believes all and only the truths by establishing that there is no set of all such

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[14]We do not claim that a rejection of the law of excluded middle suffices to block the simple Liar paradox. We simply note that our version of the semantic argument assumes the law of excluded middle, which we assume the open theist will reject. We are thankful to a referee for encouraging us to emphasize this point.

truths—the supposition that there is a set of all truths results in a contradiction. This motivates a recipe for generating similar arguments against weaker alternatives to the classical doctrine: find a feature of propositions such that God, according to a given weak alternative to the classical doctrine, is supposed to know all truths with that feature, and show that there is no set of all truths having that feature. If such a feature can be found, and if the corresponding Grim-style argument can be given, then the parallel conclusion follows: these weaker alternatives to the classical doctrine are false. What follows is one such argument.

For clarification, we note that in what immediately follows we use "truths" to mean true propositions, and by "self-identity," used as a count noun, we mean a trivial identity proposition of the same sort as the proposition that $2=2$, the proposition that Hesperus is Hesperus, etc. For obvious reasons, we also operationally take these truths to be indexical-free, tense-free, etc.

> Suppose (i) there is a set S of all and only true self-identities, (ii) for every set of true self-identities $P \subseteq S$ there corresponds a true self-identity p_P—say, the proposition that P is self-identical—and (iii) for every $P, Q \subseteq S$, if $P \neq Q$, then $p_P \neq p_Q$. Now, by the Axiom of Separation, there is a set R collecting all and only the true propositions of the latter sort knowable to God that are not also members of their corresponding set, that is:
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> $$R = \{x \in S \mid \exists P \subseteq S\, (x = p_P \text{ and } x \notin P)\}$$
>
> Because $R \subseteq S$ there is also a corresponding true proposition p_R knowable to God. Assume $p_R \notin R$. Then p_R is not an element of its corresponding set R. Since this is what it means for something to be an element of R, it follows that $p_R \in R$. So, discharging the assumption, we have shown $p_R \notin R$ *only if $p_R \in R$*, which implies $p_R \in R$. So, we know $p_R \in R$. Now it follows by definition of R that for some $P \subseteq S$, $p_R = p_P$ and $p_R \notin P$. But then $R \neq P$, and hence $p_R \neq p_P$. Contradiction. Therefore, there is no set S of all and only true self-identities. That is, (i) is false.

Since the original set theoretic argument applied to open theism besides also applying to the classical doctrine of omniscience, this argument, which just generalizes the former one, obviously applies to open theism just the same. This generalization of Grim's set theoretic argument is more noteworthy for its application to restricted omniscience views.

All self-identities are in principle knowable to God, since self-identities are simply trivial logical truths and God knows all of those, no matter what. By our operational characterization of self-identities, moreover, all self-identities are devoid of the relevant indexical information. Given this, the following are equivalent:

(a) There is no set of all and only true self-identities

(b) There is no set of all and only true self-identities that are knowable to God

(c) There is no set of all and only true self-identities containing no information essentially due to first-person indexicals

(d) There is no set of all and only true self-identities containing no information essentially due to temporal indexicals

(a)-(d) can be extended, by trifling subset arguments, to target more familiar putative sets of propositions whose importance to restricted omniscience views is more obvious. First, there is no set of all true propositions that are knowable to God. For if there were, some subset of that set would be the mythical set of all and only true self-identities knowable to God. But there is no such set, and so neither is there any such set as its proper superset, the set of all truths knowable to God. So, *K-Restricted Omniscience*, insofar as it entails that there is a set of all truths God knows, is false.

By the same sorts of considerations, given the conclusion that there is no set of all and only true self-identities containing no information essentially due to first-person indexicals, we conclude that there is no set of all truths containing such information. For if there were, then some subset of that set would be the mythical set of all and only true *self-identities* containing no information essentially due to first-person indexicals. There is no such set, and so neither is there any such set as one of its would-be proper supersets, the set of all truths containing no information essentially due to first-person indexicals. So, *I-Restricted Omniscience*, insofar as it entails that there is a set of all truths God knows, is false.

Likewise for *T-Restricted Omniscience*: insofar as it entails that there is a set of all truths God knows, *T-Restricted Omniscience* is false. This much follows from the strengthened Grim-style argument above.

Therefore Grim-style set theoretic paradoxes afflict not only the classical doctrine of divine omniscience: just the same, open theism and restricted omniscience views give rise to Grim-style set theoretic paradoxes.

4.2 The Generalized Semantic Argument

Where before our semantic argument turned on the assumption that God believes all truths and believes no falsehoods, this much is not available to us in the case of restricted omniscience. Neither can we assume the principle of bivalence—nor its proof-theoretic correlate, the law of excluded middle.

All the same, given the resources for self-reference, we can run a more modest semantic argument against any view which, as open theism and restricted omniscience views all do, entails NO FALSE—the thesis, recall, that God believes no false propositions. This latter we will characterize by accepting as true any substitution instance of the following schema:

(RO) God believes ($\ulcorner \varphi \urcorner$) $\rightarrow \varphi$

This is simply the left-to-right direction of (O) above. We also assume that God knows all logical truths, which we take to be a component of open theism as well as the restricted omniscience views. This much we for present purposes codify as the following rule of proof:

NEC: if φ is provable without any undischarged assumptions, infer *God believes* ($\ulcorner \varphi \urcorner$)

Given (RO) and the acceptability of NEC, we can likewise derive a contradiction. Given the resources for self-reference, we can have a *Curryesque* sentence β in our language such that the following holds:

$$(\beta) \quad \beta \leftrightarrow (God\ believes\ (\ulcorner \beta \urcorner) \to \bot)$$

(Where $\bot$ is an arbitrary contradiction of our language.) This much facilitates the following argument:

1) *God believes* ($\ulcorner \beta \urcorner$)$\to \beta$ [Sub. (RO)]

2) *God believes* ($\ulcorner \beta \urcorner$)$\to$ (*God believes* ($\ulcorner \beta \urcorner$)$\to \bot$)   [1; ($\beta$)]

3) *God believes* ($\ulcorner \beta \urcorner$)$\to \bot$ [2; Contr.]

4) β [3; (β), MP]

5) *God believes* ($\ulcorner \beta \urcorner$)   [4; NEC]

6) $\bot$ [3, 5; MP]

Grim's semantic argument aimed to show that the classical doctrine, according to which any substitution instance of (O) is true, resulted in a sort of Liar-type paradox. This more modest argument shows that any view that vindicates all substitution instances of (RO) and validates NEC results in a Curry-like paradox.[15]

Since the restricted omniscience views come with a commitment to NO FALSE, and the acceptability of all substitution instances of (RO) is simply our regimentation of NO FALSE, the restricted omniscience views on offer

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[15]The argument is informally presented in natural deduction given the legitimacy of the rule of *contraction* used at line 3: the rule, that is, stating that $\varphi \to \varphi'$ can be inferred from $\varphi \to (\varphi \to \varphi')$. Yet, a similar argument in Hilbert-style could be presented by simply adding the logical theorem (i.e., relative to the underlying theory)

2.1) (*God believes* ($\ulcorner \beta \urcorner$) $\to$ (*God believes* ($\ulcorner \beta \urcorner$) $\to \bot$)) $\to$ (*God believes* ($\ulcorner \beta \urcorner$) $\to \bot$)

and then inferring line 3 from 2 and 2.1 by modus ponens. The argument here in fact establishes a version of *Montague's Paradox*, i.e., the claim that any theory T in the first-order language of arithmetic enriched with a unary predicate satisfying (RO) and NEC, such that $T \supseteq Q$, where Q is Robinson's arithmetic, is inconsistent. However, the present argument, in

are just as well committed to the acceptability of all substitution instances of (RO). Similarly, we take it that on the restricted omniscience views canvassed above God believes all logical truths, and so we accordingly take these restricted omniscience views to entail the validity of NEC. So, the above argument targets restricted omniscience just as much as the original semantic argument targeted the classical doctrine.

As mentioned above, moreover, where the open theist will reject the original semantic argument is with its dependence on the law of excluded middle. The above argument, though, makes no use of the law of excluded middle. Just so, then, the generalized semantic argument targets open theist views just as much as the original semantic argument targeted the classical doctrine.

5. *Implications of the Preceding*

As we indicated in §1, we decline to evaluate here whether or not Grim's arguments are successful against the classical doctrine of divine omniscience. This is the subject of much debate, and a position on this issue is beyond the scope of this short article.[16] What has so far *not* been widely discussed is the way in which arguments very much like Grim's apply just as well to alternative doctrines of omniscience—doctrines that are much less demanding than the classical doctrine. This much we have argued

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contradistinction with Montague's, does not make use of a Liar-like sentence. Kaplan and Montague, "A Paradox Regained," first mentioned that a similar result could be obtained when the predicate in question is taken (intuitively) to represent knowledge (that is, the Knower Paradox). Analogous inconsistency proofs but under different axioms have been shown in Thomason, "A Note on Syntactical Treatments of Modality," and McGee, "How Truthlike Can a Predicate Be?" It is worth mentioning that, as has just been hinted at, some of the authors referenced above have drawn connections between arguments like that given above and the notion of knowledge, to which omniscience is obviously related. Thomason, for example, draws morals from Montague's paradox against Hintikka's account of idealized knowledge as well as theories of content suggested by Fodor and others. The considerations we raise here differ from those otherwise gestured at in the literature insofar as we make clear how theological alternatives to the classical doctrine of omniscience exhibit the logical problems that Grim claims for the classical doctrine. Grim himself connects paradoxes similar to Montague's (i.e., the Knower) with the classical doctrine, though not with weaker extant alternatives to the classical doctrine (see Grim, "Truth, Omniscience, and the Knower," and also Grim, *The Incomplete Universe*). The main purpose of the present generalization of the semantic argument is precisely that of making such connections explicit, and an advantage of the present argument to that end consists in its being essentially independent of issues concerning negation and the law of excluded middle.

[16]In Lampert and Waldrop, "Propositional Omniscience," we offer our preferred solution to the paradoxical problems posed by the semantic argument, which converges with a solution to the set theoretic argument suggested in Beall, "A Neglected Response to the Grim Result." A recent proposal regarding God's relationship to the set theoretic universe which suggests a response to the set theoretic argument is Christopher Menzel's theological activism, as developed in Menzel, "The Argument from Collections."

for in the foregoing sections. In particular, we have so far seen that Grim-style arguments can be advanced given strictly weaker assumptions than those imposed upon us by the classical doctrine, and these more modest arguments apply not only to the classical doctrine but also and explicitly to open theism and various restricted omniscience views.

It might have been thought, antecedently, that Grim-style considerations could serve as reasons to adopt some alternative doctrine of omniscience. That is, for the theist, there might have been a temptation to argue as follows:

P_1 God is omniscient, at least in some sense.

P_2 If God is omniscient, at least in some sense, then open theism, some restricted omniscience view, or the classical doctrine is true.

P_3 Grim-style arguments show that the classical doctrine of omniscience is not true.

C Therefore, open theism or some restricted omniscience view is true.

This is a fine argument. But an implication of what we have so far said is that this argument is unavailable to partisans of alternative doctrines of omniscience, since the parallel argument

P_1 God is omniscient, at least in some sense.

P_2 If God is omniscient, at least in some sense, then open theism, some restricted omniscience view, or the classical doctrine is true.

P_{3*} Grim-style arguments show that neither open theism nor some restricted omniscience view is true.

C Therefore, the classical doctrine is true.

is available to the advocate of the classical doctrine just the same, and what we have said in the preceding entails that the only premises differing between the two arguments—premises P_3 and P_{3*}—are on a par. So Grim-style considerations cannot serve as a reason to prefer an alternative doctrine of divine omniscience to the classical doctrine.

Another obvious implication of the preceding is related: since Grim-style arguments afflict weaker views than the traditional doctrine, what leads to paradoxes cannot be the classical doctrine just as such. Rather, what results in paradox must be some subterranean feature of the classical doctrine that the classical doctrine and its alternatives have in common.

Finally, we take it that this subterranean feature of the classical doctrine that results in paradox is not its extraordinary entailments concerning how much God knows or concerning God's knowledge of diverse and recherché subject matters. This may have been suggested by Grim's arguments, as both assumed that God knows *everything*. As we have seen,

though, similar paradoxes arise given more modest assumptions about what God knows.

In both of our generalized Grim-style arguments above, we need no such special assumption about the extent of God's knowledge or about what sorts of truths God can know. That is, except for one: both arguments assume that God, no matter what, knows all *logical truths*. In fact, the set theoretic argument assumes—at least explicitly—only that God knows all of a certain privileged class of logical truths. In more impressionistic terms, both generalized Grim-style arguments build in assumptions that reflect the common view that God is in some sense a *perfect logical reasoner*. Given this, it is not at all surprising that more modest alternatives to the classical doctrine of omniscience do not avoid the paradoxes, since none of the alternatives to the classical doctrine qualify the *logical* perfection of God's knowledge.

In conclusion, then, we say that the paradoxicality of divine omniscience, by the lights of Grim-style considerations, resides in a heretofore undertheorized feature of God's knowledge: God's status as a being of perfect rationality from a logical point of view.[17]

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