

## *The Lord of Noncontradiction* An Argument for God from Logic

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What is the relationship between the laws of logic and the existence of God? Perhaps the most obvious thing to say is that there is an *epistemological* relationship between the two, such that the existence of God—more precisely, *rational belief* in the existence of God—depends on the laws of logic. In the first place, any argument one might offer for the existence of God must conform to the laws of logic: the law of noncontradiction, the rules of deductive inference, and so forth. Furthermore, many would maintain that the concept of God must conform to the laws of logic as a *precondition* of rational belief in the existence of God. (This seems implicit even in a “Reformed epistemology” view, which says that rational belief in God does not have to depend on arguments.) In this paper we do not propose to explore or contest those epistemological relationships. Instead we will argue for a substantive *metaphysical* relationship between the laws of logic and the existence of God, with the arrow of dependence running in the opposite direction. In other words, we will argue that there are laws of logic *because* God exists; indeed, there are laws of logic *only* because God exists. If we are correct about this metaphysical relationship, it is but a short step to a fascinating and powerful but neglected argument for the existence of God.

Our approach will be as follows. The bulk of the paper will be concerned with establishing *what kind of things the laws of logic must be* for our most natural intuitions about them to be correct and for them to play the

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ABSTRACT: In this paper we offer a new argument for the existence of God. We contend that the laws of logic are metaphysically dependent on the existence of God, understood as a necessarily existent, personal, spiritual being; thus anyone who grants that there are laws of logic should also accept that there is a God. We argue that if our most natural intuitions about them are correct, and if they are to play the role in our intellectual activities that we take them to play, then the laws of logic are best construed as necessarily existent thoughts—more specifically, as divine thoughts about divine thoughts. We conclude by highlighting some implications for both theistic arguments and antitheistic arguments.

role in our intellectual activities that we take them to play. Once we have a clear idea of what the laws of logic are—and *must* be—it will be readily observed that the laws of logic are metaphysically dependent on the existence of God, understood as a necessarily existent, personal, spiritual being. For this metaphysical dependency relationship, we will show, is essentially the relationship between God and God’s thoughts.

We should clarify at the outset what is meant by “the laws of logic.” We are referring to those axiomatic principles of rational thought that govern how truth-valued statements or ideas can be related in truth-preserving ways. Prime examples of such laws would be the three classical principles whose earliest formulations are attributed to Aristotle:

- (1) *Law of Identity*: that every true statement is true and every false statement is false
- (2) *Law of Noncontradiction*: that no statement can be both true and false
- (3) *Law of Excluded Middle*: that every statement must be either true or false

It must be granted that even these three time-honored principles are not beyond controversy, for the truth of each one has been challenged by philosophers both ancient and modern.<sup>1</sup> However, our argument does not require acceptance of these particular logical principles or any specific system of logic (whether classical or nonclassical). While there may be debates over *which* laws of logic hold, there is no serious debate over whether there *are* laws of logic. (How could one rationally debate the point without assuming that there are *rules* of rational debate?) For the purposes of this paper, however, we will treat the three principles above as paradigms of logical laws. Readers who favor other examples should substitute them at the appropriate points. (Readers who believe that there are no genuine examples of laws of logic should stop reading now; this paper is not for you.)

## I. The Laws of Logic Are Truths

What then *are* the laws of logic? What *kind* of things are they? Perhaps the least objectionable observation we can make is that the laws of logic are *truths*. That is to say, they are things that are *true*; among the qualities they exhibit is the quality of *being true*. When we state that the law of noncontradiction is *true*—in other words, when we say it is *true* that no statement can be both true and false—we are affirming that the law of noncontradiction is

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1. Modern philosophers tend to be more tolerant of those who question such apparently self-evident and undeniable truths. In contrast, the medieval philosopher Avicenna recommended that “anyone who denies the law of noncontradiction should be beaten and burned until he admits that to be beaten is not the same as not to be beaten, and to be burned is not the same as not to be burned.” A little harsh, perhaps, but pedagogically effective nonetheless.

true in just the same sense that the statements “Paris is in France” and “ $2 + 2 = 4$ ” are true. We are simply affirming that whatever the law of noncontradiction *states* to be the case, is *in fact* the case.<sup>2</sup> So whatever else we might want to say about the law of noncontradiction (and by extension all other laws of logic) we will surely want to say that it is *true*. It is a *true* thing: a *truth*. (Precisely what this truth is *about* is another matter, to which we will turn shortly.)

But what *is* a truth? Philosophers typically use the term “propositions” to refer to the *primary bearers of truth-value*.<sup>3</sup> So propositions are *by definition* those things that can be true or false, and by virtue of which other things can be true or false. Admittedly this does not shed much light on what truths or propositions *are*, metaphysically speaking, but at least it provides us with a useful term of art. So then: given that the laws of logic are *truths*, we can say that they are *propositions*, in the technical philosophical sense.

It is important to recognize that propositions, as the *primary* bearers of truth-value, must be *language-independent*. A proposition is not a linguistic token like a sentence or statement, although a proposition can be *expressed* by way of a linguistic token. This point can be seen by observing that one and the same truth (or falsehood) can be expressed in different languages. “Le ciel est bleu” and “El cielo es azul” are different sentences, yet they express one and the same proposition: the proposition *that the sky is blue*.<sup>4</sup> We can thus see that a proposition *as such* can be distinguished from concrete linguistic expressions of that proposition. So one further feature of propositions that we must acknowledge in addition to their role as truth-bearers is their language-independence. Sentences are language-relative in a way that propositions are not; propositions are only language-dependent in the weak sense that language is required in order to articulate and communicate propositions. Furthermore, propositions are regarded as *primary* truth-bearers because while sentences (that is, linguistic tokens) can have truth-values by virtue of expressing propositions, propositions do not have truth-values by virtue of anything else. Propositions bear truth-values because it is their nature to do so, just as particles bear mass-values because it is their nature to do so. None of this commits us to a particular theory of the metaphysics of propositions, except to rule out those theories that reduce propositions to linguistic tokens.

Since the laws of logic are propositions, they cannot be *merely* linguistic tokens (although they can be *expressed* by linguistic tokens, as the preceding

2. Here we take alethic realism for granted. William P. Alston, *A Realist Conception of Truth* (Ithaca, NY: Cornell University Press, 1996), 5–26.

3. *Ibid.*, 15–17; Michael J. Loux, *Metaphysics: A Contemporary Introduction*, 2nd ed. (London: Routledge, 2002), 144–6; Matthew McGrath, “Propositions,” in *Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, <http://plato.stanford.edu/entries/propositions/>.

4. In this paper, sentences and other linguistic tokens are denoted with enclosing double quotation marks, while propositions are denoted with italics.

discussion illustrates). After all, while the law of noncontradiction can be expressed in any number of different languages, there is still only one law of noncontradiction, not many laws of noncontradiction. (It is for good reason that we speak of *the* law of noncontradiction rather than *a* law of noncontradiction.) If the law of noncontradiction were merely a linguistic token (or a set of linguistic tokens) such as a sequence of inscriptions on a page, it would be possible in principle to *eradicate* the law of noncontradiction.<sup>5</sup> No doubt there are some people who would see this as advantageous; but mercifully for the rest of us, it cannot be done.

One possible objection must be set aside before moving on. It might be objected that the laws of logic should be construed as *relations* (for example, relations between propositions or propositional structures) rather than as *propositions*. If the reader wishes to construe the laws of logic as relations, we will not protest. But if there are such logical relations there must also be *truths* about those relations. (If there are not any such truths then we have no business trying to talk intelligibly about the relations.) It is precisely those truths to which we refer when we speak of “the laws of logic”; thus the disagreement is merely semantic and those who conceive of the laws of logic as relations need only substitute “the truths about the laws of logic” for “the laws of logic” in what follows.<sup>6</sup>

## II. The Laws of Logic Are Truths about Truths

So the laws of logic are *truths*. But what are they truths *about*? The truth *that Paris is in France* is about Paris—obviously enough. The truth *that two plus two equals four* is about certain numbers and the mathematical relations between them, at least on the face of it. But what exactly is the law of noncontradiction about? What is its subject matter?

The simple answer here is that the law of noncontradiction is a truth about *truths*. Specifically, it is the truth that no truth whatsoever can also be a falsehood. (Strictly speaking, the law of noncontradiction is also a truth about falsehoods, namely, that no falsehood whatsoever can also be a truth. But this is a trivial point, since any truth about a truth can be recast as an equivalent truth about a falsehood by use of the logical operator “not.”)

In other words, the law of noncontradiction is a truth about *propositions*: those primary bearers of truth-value. It is a truth about which truth-values a proposition can and cannot bear: if a proposition bears the value *true*, it

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5. Likewise for the idea that the law of noncontradiction can be identified with one or more *brain* inscriptions. Alvin Plantinga, *Warrant and Proper Function* (Oxford: Oxford University Press, 1993), 115–20.

6. The same applies to those who wish to construe the laws of logic as *statements* (or any other type of nonprimary truth-bearer): in that case, simply substitute “the truths expressed or represented by the laws of logic” for “the laws of logic.”

cannot also bear the value *false*, and vice versa. So the law of noncontradiction is *about* propositions. And the same may be said of the laws of logic in general. They are truths about *propositions* and the truth-value relationships between them. It is for this very reason that our knowledge of the laws of logic enables us to infer from the truth-values of some propositions, the truth-values of *other* propositions.

We should also note that the laws of logic are truths about propositions *in general*, without regard to the subject matter of those propositions. The three classical principles of logic (to take our paradigms) apply to *all* propositions, not merely to some. Anyone who insists that the law of noncontradiction applies to truths about *cars* but not to truths about *cats* would rightly be considered confused. The laws of logic are concerned only with the truth-values of propositions and their logical structures (for example, whether they contain elementary logical operators such as “and,” “or,” and “not”).

We have established, then, that the laws of logic are propositions *about* propositions. They are truths *about* truths (and falsehoods too).<sup>7</sup>

### III. The Laws of Logic Are Necessary Truths

Not only are the laws of logic *truths*, they are *necessary* truths. This is just to say that they are true propositions that could not have been false. The proposition *that the Allies won the Second World War* is a contingent truth; it could have been false, since it was at least *possible* for the Allies to lose the war. But the laws of logic are not contingent truths. While we can easily imagine the possibility of the Allies losing the war, and thus of the proposition *that the Allies won the Second World War* being false, we cannot imagine the possibility of the law of noncontradiction being false. That is to say, we cannot imagine any possible circumstances in which a truth could also be a falsehood.<sup>8</sup>

In the standard terminology of possible worlds, we are observing here that the law of noncontradiction is true not only in the actual world but also in every possible world.<sup>9</sup> There is no possible world in which that logical law

7. Still more precisely, they are truths about truths *qua* truths.

8. Here we rely on the widely-shared intuition that conceivability is a reliable guide to possibility. For a stimulating examination of this principle, and discussion of alternatives to it, see Stephen Yablo, “Is Conceivability a Guide to Possibility?” *Philosophy and Phenomenological Research* 53 (1993): 1–42. In addition, we are convinced—as the conclusion of this section makes clear—that one can immediately *see* that the law of noncontradiction is necessarily true. There is a difference between being able to see that a claim is necessary, and not being able to conceive that a claim is (or could be) false, and the argument of this section appeals to the former notion as well as the latter.

9. Here we take “possible world” in the conventional sense: *a way the world could have been* or *a possible state of affairs*. See Alvin Plantinga, *The Nature of Necessity* (Oxford: Clarendon, 1974), 44.

is false (or fails to be true in any other way). However this world *might* have turned out, regardless of the course of the Second World War or any other series of events, the law of noncontradiction would still be true. We cannot imagine a possible world in which the law of noncontradiction is false.

Now you may insist that you *can* imagine a possible world—albeit a very chaotic and confusing world—in which the law of noncontradiction is false. If so, we would simply invite you to reflect on whether you really can conceive of a *possible* world in which contradictions abound. What would that look like? Can you imagine an alternate reality in which, for example, trees both exist and do not exist? In any case, the very idea of a *possible* world in which the law of noncontradiction is false is arguably incoherent, because our notions of possibility and noncontradiction are bound up with one another. The criterion of *logical consistency*—conformity to the law of noncontradiction—is surely the first criterion we apply when determining whether a world is possible or impossible. A world in which some proposition is both true and false, in which some fact both obtains and does not obtain, is *by definition* an impossible world. The notion of noncontradiction lies at the core of our understanding of possibility.

The above discussion is merely intended to bring out the fact that the necessity of the law of noncontradiction is self-evident. Simply by reflecting on the nature of the law of noncontradiction and the role it plays in our thinking, we can see not only that it is true but also that it could not have been false. And the same goes for any other logical law: if true, it is *necessarily* true.<sup>10</sup>

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10. We concede that a minority of philosophers have challenged the law of noncontradiction, either subjecting it to significant qualification or denying it altogether. Dialetheism—the view that there are true contradictions—turns out to be surprisingly difficult to refute. See Graham Priest, Richard Routley, and Jean Norman, eds., *Paraconsistent Logic: Essays on the Inconsistent* (Munich: Philosophia Verlag, 1989); and Graham Priest and Francesco Berto, “Dialetheism,” in *Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, <http://plato.stanford.edu/entries/dialetheism/>. Nevertheless, dialetheism remains highly counterintuitive. Furthermore, even though dialetheists reject classical logic, whatever logical laws they advocate *in place* of the classical laws are typically held to be necessary rather than contingent truths. Even a qualified law of noncontradiction, or an alternative to it, would be taken to hold in every possible world as a law about truths *qua* truths. As stated earlier, our argument only assumes that there *are* logical laws; it does not assume any *particular specification* of those laws, except to insist that some of those laws must be viewed as necessary truths. Beyond dialetheism (the view that there are true contradictions), there is also Cartesian “universal possibilism” (the view that there are no necessary truths, or at least no necessarily necessary truths, given God’s omnipotence and aseity). The latter is sympathetically discussed, but ultimately rejected as strongly counterintuitive, in section 4 of Alvin Plantinga, *Does God Have a Nature?* (Milwaukee, WI: Marquette University Press, 1980). To give one example: this view asks us to accept the bizarre possibility that God could know that he does not exist. We regard Plantinga’s arguments as decisive, whether or not “universal possibilism” was really the view Descartes endorsed in those selections from his correspondence which are typically seen as the source of the view.

#### IV. *The Laws of Logic Really Exist*

The conclusion reached thus far—that the laws of logic are necessary truths about truths—is relatively uncontroversial. It is at this point that the argument becomes more controversial. We will now offer four arguments for the claim that the laws of logic *really exist*; that is, they are real entities in the same sense that the pyramids of Egypt are real entities. (This is not to say, of course, that the laws of logic are *physical* entities; the mere claim that *X exists* carries no implications about what *kind* of thing *X* is.)

The first argument is simply an argument from ordinary language. Whenever we speak about the laws of logic, we speak about them *as though they really exist*. All else being equal, when we use the locution “There are *Xs*” we take it to mean that *Xs exist*: that there exist instances of “*X*.” So when we say “There are laws of logic” the most natural interpretation is that laws of logic *exist*.<sup>11</sup> To put the point in reverse: if someone were to say “There are no laws of logic” we would insist that he has spoken *falsely*; but if the laws of logic do not really exist—in the most literal sense of the word “exist”—we would have to concede that he has spoken *truthfully*. After all, what else would he have *meant* by his statement?

This certainly is not a *compelling* argument, for it is not hard to conjure up examples of the locution “There are *Xs*” that obviously do not imply the real existence of *Xs*.<sup>12</sup> But what it does establish is a *presumption* in favor of the real existence of *Xs* whenever the statement “There are *Xs*” is taken to be true in a nonfiction context (that is, without any discernible reference to a fictional or hypothetical scenario). In other words, if the statement “There are laws of logic” is ordinarily taken to be true, we should presume, in the absence of good reasons to think otherwise, that the laws of logic really exist—and the burden of proof lies with the one who denies it.

The second argument appeals to our basic ontological intuitions. We take it as intuitively true that only *existent* things can make a difference to our lives. How could something that does not exist, has never existed, and will never exist, have any influence on us? Yet clearly the laws of logic *do* make a difference to our lives, in the sense that our thinking is subject to them. If our intuitions are correct, it follows that the laws of logic exist. At a minimum, there must be a strong presumption that they are real entities and not fictional constructs. This argument does not rule out an ontological *reductionism* (for example, that the laws of logic can be reduced to human

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11. Admittedly we do not *often* say “There are laws of logic”—for the same reason that we do not often say “There are other minds than mine”—but there is nothing obviously suspect about the statement. Consider the following exchange. Teacher: “The argument you used in your paper is a bad one.” Student: “What do you mean?” Teacher: “There are laws of logic that arguments must observe in order to be good arguments.”

12. Teacher: “What else can you see in the painting?” Student: “There are unicorns and other mythological creatures.”

neural structures or some other physical entities), but it does seem to rule out an ontological *eliminativism*.<sup>13</sup>

The third argument is based on the existential presuppositions of verbs that take propositions (such as the laws of logic) as their objects. As a general rule, a statement with a *subject-verb-object* structure presupposes the existence of both its subject and its object. For example, the statement “Peter kicks the ball” presupposes that both Peter and the ball exist; if one or other were nonexistent, the statement would not be true.<sup>14</sup> But there are numerous verbs which take *propositions* as their objects: “believe,” “know,” “desire,” “hope,” “fear,” “doubt,” and so on. Such verbs take a sentient subject and a propositional object that is usually introduced (in English) with the word “that”:

- (1) I know *that Timbuktu is in Mali*.
- (2) You hope *that Susan’s plane has landed safely*.
- (3) Raymond doubts *that there is enough sauce in the bottle*.<sup>15</sup>

The grammatical form of such statements implies that if the statement is true then its propositional object exists. Just as Peter cannot kick a nonexistent ball, neither can Raymond doubt a nonexistent proposition. And what applies to propositions in general must apply to the laws of logic, on the understanding that the laws of logic are propositions. The statement “Smith knows *that no statement can be both true and false*” presupposes not merely the *truth* of the law of noncontradiction but also the *existence* of the law of noncontradiction.<sup>16</sup>

The final argument appeals to the ontological preconditions of property attribution. It is surely as intuitive a principle as any that an object can bear a property only if that object *exists*. If the ball is round—if it has the property of *roundness*—then it follows that the ball exists. A nonexistent ball cannot be round or any other shape, because a nonexistent ball has no properties

13. One might object that Santa Claus also makes a difference to our lives, yet it does not follow that Santa Claus exists. But this objection is based on a confusion. It is not Santa Claus *per se* that makes the difference, but rather the *concept* of Santa Claus; and that mainly by way of various physical expressions of the concept in popular culture. If the objector wants to claim that the laws of logic are *conceptual*, we will gladly concede the point (see below, section 7). But to say that *X* is a concept is not to say that *X* does not really exist (unless one is a question-begging eliminative materialist). Furthermore, the question of whether a concept itself exists is distinct from the question of whether there exists anything falling under that concept. Umbrellas exist and unicorns do not; it does not follow that the concept of an umbrella exists and the concept of a unicorn does not.

14. We are assuming, of course, that the statement is intended as a literal statement about the real world.

15. It should be clear that the “that-clauses” in these examples denote propositions, because it is grammatically correct to attribute a truth-value to each one, e.g., “That there is enough sauce in the bottle *is true*.”

16. For a more rigorous presentation of this grammatical argument, with replies to objections, see Greg Welty, “Theistic Conceptual Realism: The Case for Interpreting Abstract Objects as Divine Ideas” (DPhil diss., University of Oxford, 2006), 28–41.

whatsoever.<sup>17</sup> Given this principle about property attribution, it is straightforward enough to show that the laws of logic must also exist. For the laws of logic are true propositions; that is, they are propositions bearing the property of *truth*. Consequently, the laws of logic *exist*.

But perhaps this is too hasty. For is it really correct to say that truth is a *property* like roundness or softness? Advocates of deflationary theories of truth would demur; they insist that there is no need to posit a truth-property in order to make sense of our ascription of truth to propositions. According to this view, the first sentence below says nothing above and beyond what the second says:

- (1) The proposition *that grass is green* is true.
- (2) Grass is green.

It is thus argued that all statements with the form of (1) can be reduced without loss to statements with the form of (2)—in which case there is no need to treat *truth* as a property. If the deflationary theorists are correct, our fourth argument for the existence of propositions fails. If there is no such property as *truth* then there can be no entities that *bear* that property.

There are good reasons, however, for thinking that the deflationists are mistaken. Here is one: on reflection it should be evident that the two statements above are *not* semantically equivalent. After all, the subject of the first statement is a *proposition* while the subject of the second is *grass*.<sup>18</sup> Therefore (1) is saying something different than (2)—namely, that there is a certain proposition that has the property of *truth* (and not that there is a certain plant that has the property of *greenness*). (1) and (2) are mutually entailing but not semantically equivalent. So statements involving truth-attribution cannot be

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17. But does not even a nonexistent ball have the property of *roundness*, given that balls are round *by definition*? The objection is based on a semantic confusion. What we really want to say here is that the *concept* of a ball includes the *concept* of roundness (from which it follows that all existent balls must be round). What we do *not* want to say is that there is a ball that is round but does not actually exist. Similar considerations would apply to any attempt to resuscitate the Santa Claus objection (see footnote 13). Another way to put this point is to express the property-attribution principle more precisely: an object can bear a property *in a possible world* only if the object exists *in that possible world*. Accordingly, any balls that exist in one or more *possible worlds*, but not in the *actual world*, will bear the property of roundness *in those possible worlds* (but not in the actual world). Likewise, Santa Claus has the property of jolliness in those possible worlds in which he exists. But strictly speaking he does not have the property of jolliness in the *actual world*, because there is no Santa Claus in the actual world to which the property could attach. It is only in terms of possible worlds (or some equivalent modal apparatus) that we can make sense of statements about fictional entities (such as “Santa Claus is jolly”). For further arguments against property-bearing nonexistent objects, see Plantinga, *The Nature of Necessity*, 121–63; Michael Bergmann, “A New Argument from Actualism to Serious Actualism,” *Noûs* 30 (1996): 356–9; Michael Bergmann, “(Serious) Actualism and (Serious) Presentism,” *Noûs* 33 (1999): 118–32; William F. Vallicella, *A Paradigm Theory of Existence: Onto-Theology Vindicated* (Dordrecht: Kluwer Academic, 2002), 38–42.

18. Note that this observation about the *meaning* of the two statements holds regardless of whether propositions are real entities, so no questions are being begged in defense of the argument.

eliminated from our language without loss of meaning. The *prima facie* implication of such statements remains: there really is such a property as truth. And thus it is eminently reasonable to conclude that there really are *entities that bear the property of truth*, namely, propositions.<sup>19</sup>

These four arguments indicate that there is excellent reason to hold that the laws of logic really exist, given what we say and believe about them, and thus the burden of proof rests on those who *deny* their real existence. In practice those who object to a realist construal of logical laws are invariably motivated by broader metaphysical precommitments, such as the conviction that physicalism (or something close) must be the case. In the present context, however, such metaphysical precommitments cannot be taken for granted, since they bear directly upon the very point in question. If physicalism is true, there is no God; if God exists, physicalism is false. So objections to the arguments offered here cannot merely *presuppose* physicalism. Of course, one could choose to *argue* for physicalism as a defeater for the claim that the laws of logic exist. But then one must squarely face the challenge of explaining (or explaining away) all the claims we are naturally inclined to make about the laws of logic.

Before moving on, we should address one other potential objection to the claim that the laws of logic really exist. Some may be tempted to say that “the fallacy of reification” has been committed. This fallacy has been defined in various ways, most commonly as the error of treating an abstraction or hypothetical construct as though it were a concrete entity. For example, if Smith were to tell Jones that the average family has 2.4 children, and Jones replied that he would like to meet that family, Jones would have committed the fallacy of reification. The blunder would be obvious: “the average family” does not denote a real, flesh-and-blood family; it is merely an abstraction derived from the set of all real families (while denoting none in particular).

If this is how the fallacy of reification is to be understood, it is hard to see how any of the four arguments above commit it. After all, none of the arguments assume or imply that the laws of logic are *concrete* entities—if by “concrete” we mean anything like *physical* or *material* or *spatially located*.<sup>20</sup>

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19. For further criticisms of deflationary theories, see Alston, *A Realist Conception of Truth*, 41–51; Loux, *Metaphysics*, 154–60; Welty, “Theistic Conceptual Realism,” 51–4; Daniel Stoljar and Nic Damnjanovic, “The Deflationary Theory of Truth,” in *Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, <http://plato.stanford.edu/entries/truth-deflationary/>.

20. There is ongoing debate among philosophers about how to draw the distinction between the abstract and the concrete. One of the most common views is that to be concrete is just to be *located in space*. Another view is that to be concrete is just to *possess causal powers*. We have not claimed or implied that the laws of logic are concrete in either of these two senses. Yet another view—more popular among nonphilosophers—is that to be concrete is just to be *real*, i.e., to actually exist. But this last view transparently begs the question against those who hold that there exist abstract objects, such as universals or sets. The ancient debate over the ontological status of abstract objects cannot be settled by mere definitional fiat. Bob Hale, “Abstract Objects,” in *Routledge Encyclopedia of Philosophy*, ed. Edward Craig (London: Routledge, 1998),

We have argued merely that the laws of logic are real entities, without making any further claims about what *kind* of entities they might be. Indeed, we will argue shortly that the laws of logic *cannot* be concrete in any of those senses. So it should be clear that no fallacy of reification (as conventionally defined) has been committed here.

But what if the fallacy of reification were defined more broadly as the error of treating an abstraction as though it were a *real* entity? The problem with this second definition is that it is no longer clear that it refers to a genuine fallacy. In fact, this definition ends up *committing* a fallacy: that of begging the question. For it can be an error to treat an abstraction as a real entity only if—as a matter of fact—no abstract objects exist.<sup>21</sup> But the view that *only* concrete objects exist is a substantive and controversial metaphysical doctrine, not a self-evident principle of reasoning (such as the principle that no abstract objects can be concrete objects). So to suggest that our arguments in this section commit “the fallacy of reification” (defined in the second way) is merely to assert that the conclusion of those arguments is false *without actually engaging the arguments*.

### V. The Laws of Logic Necessarily Exist

It is a logical truism that whatever exists, exists either *contingently* or *necessarily*. Contingent entities are such that they *might not* have existed; necessary entities are such that they *must* have existed—they could not have failed to exist. In possible-world terms: *X* exists *contingently* if *X* exists in the actual world but there is at least one possible world in which *X* does not exist; *X* exists *necessarily* if *X* exists in the actual world and there is no possible world in which *X* does not exist.

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1:32–5; Gideon Rosen, “Abstract Objects,” in *Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, <http://plato.stanford.edu/entries/abstract-objects/>.

21. Here we treat the terms “abstraction” and “abstract object” as equivalent. The term “abstraction” is sometimes used in a narrower sense to refer to concepts that are formed by extracting general features from multiple concrete particulars. Could one maintain that the laws of logic are abstractions in *that* sense? Richard Swinburne, who favors nominalism about propositions, has defended a linguistic account of logical necessity according to which the necessity of propositions reduces to contingent facts about linguistic practices. Logical necessity is defined in terms of concepts such as negation, entailment, and self-contradiction, which in turn reduce to facts about what (almost all) language users will agree concerning the semantic relationships between pairs of sentence tokens. On this view the laws of logic are nothing more than generalizations from concrete linguistic practices. See Richard Swinburne, *The Christian God* (Oxford: Clarendon Press, 1994), 106–11. One serious problem for Swinburne’s account is that the necessity of at least some propositions cannot be explained in terms of linguistic practices. Take Goldbach’s Conjecture, e.g. There is no consensus among language users about whether it (or its negation) entails a self-contradiction. Nevertheless, we know that Goldbach’s Conjecture is either a necessary truth or a necessary falsehood. Whichever is the case, the necessity of the relevant proposition cannot be reduced to contingent facts about language users. For a more detailed critique of Swinburne’s proposal, see Welty, “Theistic Conceptual Realism,” 58–61.

If the laws of logic exist, as we have argued, we must ask whether they exist contingently or necessarily. A moment's reflection should make clear that they exist necessarily. We have already seen that the laws of logic are *necessary truths*—that is, they are true not only in the actual world but also in every possible world. There is no possible world in which (to use our standard example) the law of noncontradiction is not true. But if the laws of logic are *true* in every possible world, it follows sensibly enough that they *exist* in every possible world. So the laws of logic not only exist, but exist necessarily.

This point can be reinforced by extending two of the four arguments given in the previous section so as to encompass not only the actual world but *all possible worlds*. Consider the first argument, from ordinary language. It would be quite correct to say, for every possible world  $w$ , “There are laws of logic in  $w$ .” (If it makes no sense to say, “The laws of logic are truths, but there are no laws of logic,” how could it make any more sense to say, “The laws of logic are truths in  $w$ , but there are no laws of logic in  $w$ ”?) If such world-indexed statements are true, then ordinary language considerations should lead us to conclude that the laws of logic really exist in every possible world. The fourth argument, from the ontological preconditions of property attribution, can be extended similarly. If only existents can bear properties, and the laws of logic are propositions that bear the property of *truth* in every possible world, then we can only conclude that the laws of logic *exist* in every possible world, as the bearers of that property.<sup>22</sup>

## VI. *The Laws of Logic Are Nonphysical*

The laws of logic really exist, and necessarily so. But what *kind* of things are they? Whatever they are, they cannot be *physical* or *material* entities, such as sentences written on paper or neural configurations in brains. It makes no sense, for instance, to ask *where* the law of noncontradiction is, because the law of noncontradiction quite evidently lacks any location in space. The question commits an obvious category mistake. Nor does it make any sense to ascribe *physical properties* to the law of noncontradiction, such as mass or velocity or electric charge. It simply is not that *kind* of thing.

In fact, the decisive argument against the physicality of the laws of logic has already been given. Physical entities are, by their very nature, *contingent* entities. Any physical object we care to consider (whether it exists in fact, like the Empire State Building, or in fiction, like the planet Krypton) is such that its nonexistence is possible. Even if that object exists now, it might not have existed. (This is this case not only for every physical object *within* the

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22. For further argument in support of this point, see Plantinga, *Warrant and Proper Function*, 117–20; Welty, “Theistic Conceptual Realism,” 54–61.

universe, but also for the physical universe as a whole, as the age-old question “Why does the universe exist at all?” takes for granted.) But as we have seen, the laws of logic are not contingent entities; thus, whatever the laws of logic are, they cannot be *physical* entities.

### VII. *The Laws of Logic Are Thoughts*

The laws of logic are real entities, but not *physical* entities. Do they then fall under some other familiar metaphysical category? We will now argue that the laws of logic exhibit a certain feature, namely *intentionality*, which is best understood as a distinctive mark of *mental* entities, such as thoughts.<sup>23</sup>

“Intentionality” is a philosophical term of art derived from the Latin verb *intendere*: “to be directed toward some goal or thing.” Intentionality is routinely (albeit roughly) characterized as *aboutness*: *X* exhibits intentionality if and only if *X* is *about* something or other. In particular, propositional items (that is, truth-bearers) such as statements and beliefs exhibit intentionality. The statement “Tokyo is the capital city of Japan” is *about* something: the city of Tokyo. In the same way, your belief that Elizabeth I was the daughter of Henry VIII is *about* the woman also known as the Virgin Queen.<sup>24</sup>

Reflecting more closely on the phenomenon of intentionality, we can distinguish two important characteristics.<sup>25</sup> The first characteristic is *directedness*: an intentional entity is *directed* toward something else, namely, whatever it is about. Thus the statement “Tokyo is the capital city of Japan” is directed toward Tokyo (and perhaps also toward Japan). The second characteristic is *aspectual shape*, which can be thought of as the particular *way* in which the object (that is, that to which the intentional entity is directed) is apprehended. For example, the two statements “Mark Twain wrote *The Adventures of Tom Sawyer*” and “Samuel Clemens wrote *The Adventures of Tom Sawyer*” are both directed toward the same object: the man who was born “Samuel Clemens” but later adopted the pen name “Mark Twain.” However, the two statements exhibit different aspectual shapes in their intentionality; they are directed toward that one man in different *ways*. We might say that they reflect different *perspectives* on their object. And for this very reason, a person could believe the first statement but not the second, even though the

23. The argument of this section is a compressed version of the case developed in Welty, “Theistic Conceptual Realism,” 102–30.

24. It should be noted that the intentionality of a proposition (statement, belief, and so forth) is independent of its truth-value. Even a false proposition is a proposition about something; indeed, it is only by virtue of being about something that it can be false.

25. Tim Crane, “Intentionality,” in *Routledge Encyclopedia of Philosophy*, ed. Edward Craig (London: Routledge, 1998), 4:816–20; Tim Crane, “Intentionality as the Mark of the Mental,” in *Contemporary Issues in the Philosophy of Mind*, ed. Anthony O’Hear (Cambridge: Cambridge University Press, 1998), 229–51.

two statements express the same historical fact.<sup>26</sup> They assert the same fact by means of two different propositions.

So propositions, construed as primary truth-bearers, are *intrinsically intentional*; they possess both directedness and aspectual shape. Indeed, it is precisely *because* they are intentional that they *can* be truth-bearers. If propositions were not *about* anything (just as, for instance, a puddle of water is not *about* anything) it would make no sense to ascribe truth or falsity to them.<sup>27</sup>

What more can be said about this quality of intentionality? There is good reason to regard intentionality as *the distinctive mark of the mental*.<sup>28</sup> Mental items—what we might generally term “thoughts”—are distinguished from nonmental items by their exhibiting intentionality. Beliefs, desires, hopes, fears, and intentions (of course) all exhibit intentionality: they are all *about* things (directedness) and they are all about things *in particular ways* (aspectual shape). Nonmental items—rocks, clouds, oil slicks, toe nails, flutes, electrons, and so forth—are not intentional in this technical sense. At any rate, they cannot be *intrinsically* intentional. There is certainly a sense in which physical marks on a page (such as this one) can exhibit intentionality. But it is equally evident that this intentionality is *derivative*; it is dependent on the prior activity of a *mind*. The physical marks exhibit intentionality only insofar as they express *thoughts*. Without minds conferring meaning upon them, no physical structures would ever be *about* anything else, for only a mind has the intrinsic power to *direct* thoughts. In a universe without minds and thoughts, no physical structures could be ascribed truth-values. It is the mental—and only the mental—that exhibits intentionality intrinsically. It is the mental that confers intentionality on the nonmental.

Thoughts, then, are the paradigmatic category of intentional entities. And the existence of thoughts is uncontroversial. (At any rate, we trust that *thoughtful* readers will grant this point.) The question then arises as to how propositions relate to thoughts, given that propositions also exist (as argued above) and exhibit intentionality. Where should propositions be located in our ontology? Are propositions simply *thoughts* of some kind? Are they es-

26. The distinction between *directedness* and *aspectual shape* roughly corresponds to the Fregean distinction between *reference* and *sense*.

27. The fact—if it is a fact—that some propositions lack truth values does not undermine this point (cf. Aristotle’s discussion of the sea battle in *De Interpretatione* 9). The intentionality of a proposition entails only that it *can* be true or false, not that it *must* be true or false. The point here is that *nonintentional* entities *cannot* be true or false.

28. Crane, “Intentionality as the Mark of the Mental.” Following Brentano, Crane argues (against some contemporary philosophers of mind) that intentionality, properly understood, is not only a sufficient condition of the mental but also a necessary condition (i.e., all mental phenomena are intentional in some respect). It should be noted that, strictly speaking, the argument of this section requires only that intentionality be a sufficient condition of the mental. That is to say, the argument is unaffected if it turns out that there are some nonintentional mental states.

entially *mental* items? Or should we posit a separate ontological category for propositions as *intentional-but-nonmental* items?

Surely the first option is the simplest and least arbitrary of the two. Unless we have some good independent reason for insisting that propositions are *not* mental items, we should conclude (on the basis that they possess the distinctive mark of the mental) that propositions are indeed mental items, rather than positing a *sui generis* ontological category for them to occupy. One might go so far as to say that the principle of parsimony demands it. Propositions, then, are best construed as mental in nature.<sup>29</sup> And since the laws of logic are propositions, we should construe them as mental in nature too.

In summary: the laws of logic are propositions; propositions are intrinsically intentional; the intrinsically intentional is none other than the mental; therefore, the laws of logic are mental in nature. The laws of logic are *thoughts*.

### VIII. *The Laws of Logic Are Divine Thoughts*

Let us review the argument up to this point. The laws of logic—whatever those laws happen to be—are truths. (If they *aren't* truths, why should we be concerned to observe them?) Moreover, they are *necessary* truths: they could not have been untrue. There is no possible world in which the laws of logic do not hold, not least because the very notion of possibility is bound up with the notion of logicality. Since the laws of logic are truths, and truths are real (albeit abstract) entities, the laws of logic really exist; and because they are *necessary* truths, they *necessarily* exist. Finally, since the laws of logic are propositional in nature and thus exhibit intrinsic intentionality, they are best categorized as mental entities—as *thoughts*—rather than as physical entities or *sui generis* entities. All this is to say that the laws of logic should be construed as *necessarily existent true thoughts*. Like it or not, these are what the laws of logic must be for our intuitions about them to be correct and for them to play the role in our world that we take them to play.

But now an obvious question arises. Just *whose* thoughts are the laws of logic? There are no more thoughts without minds than there is smoke without fire. Our first inclination might be to say that they must be *our* thoughts. After all, we're the ones who think about the laws of logic and apply them to our other thoughts. But the fact that *we have thoughts about the laws of logic* no more entails that *the laws of logic are just our thoughts* than the fact that we have thoughts about the Eiffel Tower entails that the Eiffel Tower is merely a product of our minds.

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29. It was not without reason that Frege referred to propositions as *Gedanken* (“thoughts”).

In any case, the laws of logic *couldn't* be our thoughts—or the thoughts of any other contingent being for that matter—for as we have seen, the laws of logic exist *necessarily* if they exist at all. For any human person *S*, *S* might not have existed, along with *S*'s thoughts. The law of noncontradiction, on the other hand, *could not* have failed to exist—otherwise it could have failed to be true.<sup>30</sup> If the laws of logic are necessarily existent thoughts, they can only be the thoughts of a *necessarily existent mind*.<sup>31</sup>

It does not require much further thought to see whose mind this must be. A necessarily existent mind must be the mind of a *necessarily existent person*. And this, as Aquinas would say, everyone understands to be God.<sup>32</sup>

### IX. Conclusion

In summary, the argument runs as follows. The laws of logic are necessary truths about truths; they are necessarily true propositions. Propositions are real entities, but cannot be physical entities; they are essentially thoughts. So the laws of logic are necessarily true thoughts. Since they are true in every possible world, they must exist in every possible world. But if there are

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30. Another potential objection must be addressed here. Why must we say that the law of noncontradiction could not have failed to be true? Could we not make the weaker necessity claim that it could not have both *existed* and failed to be true—equivalently, that it could not have been *false*? The problem with this proposal, as Plantinga points out, is that on this weaker account of logical necessity, too many propositions turn out to be necessary (Plantinga, *Warrant and Proper Function*, 119). The flaw in the weaker account can be very simply illustrated. Assume arguing that propositions exist contingently. On the weaker account of logical necessity the proposition *that propositions exist* would turn out (wrongly) to be a necessary truth.

31. It might be objected that the necessary existence of certain thoughts entails only that, necessarily, *some* minds exist. Presumably the objector envisages a scenario in which every possible world contains one or more contingent minds, and those minds necessarily produce certain thoughts (among which are the laws of logic). Since those thoughts are produced in every possible world, they enjoy necessary existence. One problem with this suggestion is that thoughts belong essentially to the minds that produce them. Your thoughts necessarily belong to you. *We* could not have had *your* thoughts (except in the weaker sense that we could have thoughts *with the same content* as your thoughts, which presupposes a distinction between human thoughts and the content of those thoughts, e.g., propositions). Consequently, the thoughts of contingent minds must be themselves contingent. Another problem, less serious but still significant, is that this alternative scenario violates the principle of parsimony.

32. We regard sections 7 and 8 as offering a sustained argument for Plantinga's observation that "truth cannot be independent of noetic activity on the part of persons" and yet "it must be independent of *our* noetic activity" (Alvin Plantinga, "How to Be an Anti-Realist," *Proceedings and Addresses of the American Philosophical Association* 56 (1982): 47–70). But would not some form of Absolute Idealism serve just as well? It is difficult to make sense of the notion of a mind that does not belong to a *person*—at any rate, a mind of such a kind that the laws of logic could subsist in it. One might argue that there are animals which possess minds but do not qualify as persons. But it is doubtful that such bestial minds have the capacity to entertain the law of excluded middle and its companions. The only minds we know of with the capacity to entertain the laws of logic are the minds of persons. In any event, naturalists eager to evade the force of a theistic argument will hardly find a comfortable refuge in Absolute Idealism.

necessarily existent thoughts, there must be a necessarily existent mind; and if there is a necessarily existent mind, there must be a necessarily existent person. A necessarily existent person must be spiritual in nature, because no physical entity exists necessarily. Thus, if there are laws of logic, there must also be a necessarily existent, personal, spiritual being. The laws of logic imply the existence of God.<sup>33</sup>

This argument hardly constitutes an incontrovertible proof of the existence of God. But then few if any philosophical arguments amount to incontrovertible proofs. If a deductively valid argument that (i) has premises that appear to be true and (ii) is not vulnerable to obvious objections is a good argument, then we submit that this argument is a good argument.<sup>34</sup> Still, it could be challenged at a number of points. The subarguments for the real existence of propositions and for the identification of propositions with thoughts are likely to draw the most fire. That said, if the overall argument is cogent and defensible, two significant implications should be noted.

First, the argument does not merely show that the laws of logic *can* be understood as divine thoughts. Rather, it shows that the laws of logic *should* be understood as divine thoughts; more precisely, as divine thoughts about the essential relations between divine thoughts. The laws of logic are nothing other than what God thinks about his thoughts *qua* thoughts.

Secondly, if the laws of logic are metaphysically dependent on God, it follows that *every logical argument presupposes the existence of God*. What this means is that every sound theistic argument not only *proves* the existence of God but also *presupposes* the existence of God, insofar as that argument depends on logical inference. Indeed, every *unsound* theistic argument presupposes the existence of God. And the same goes, naturally, for every *anti-theistic* argument. The irony must not be missed: one can logically argue against God only if God exists.

33. But not necessarily a *unipersonal* God; the conclusion of the argument is entirely compatible with Trinitarianism. Strictly speaking, the argument shows that there must be *at least one* necessarily existent person; it does not show that there must be *one and only one* necessarily existent person. Taking a cue from the patristic doctrine of perichoresis, a Christian theist could hold that the three Persons of the Trinity literally share one another's thoughts (including the laws of logic, if those laws are divine thoughts about divine thoughts).

34. In a preface to the published version of his lecture notes on "Two Dozen (or so) Theistic Arguments" Alvin Plantinga offers a stimulating discussion of what makes for a "good" theistic argument. After noting the difficulty of identifying "a good criterion of argumentative goodness" he observes that it may be more profitable to ask a different question: What can theistic arguments be good *for*? Plantinga identifies four worthwhile accomplishments: (1) they can "move someone closer to theism"; (2) they can "reveal interesting and important connections between various elements of a theist's set of beliefs"; (3) they can "strengthen and confirm theistic belief"; (4) they can "increase the warrant of theistic belief" (Alvin Plantinga, "Two Dozen (or so) Theistic Arguments," in *Alvin Plantinga*, ed. Deane-Peter Baker (Cambridge: Cambridge University Press, 2007), 203–27). We maintain that the argument presented herein can accomplish all four.

In recent years it has become fashionable for antitheists to argue not only that the biblical God does not exist (as if that weren't bad enough) but also that the biblical God is *immoral*. Perhaps the two points are meant to be connected: if there is a God, he must be completely moral; Yahweh violates the laws of morality (so it is alleged); therefore Yahweh cannot be God. Some Christian apologists have responded to the charge by defending the justness of God's actions as presented in Scripture. Others, taking the line that the best defense is a good offense, have argued that the very idea of moral laws *presupposes* the existence of God as the only viable basis for such laws.<sup>35</sup>

If the argument presented in this paper is cogent, a parallel move can be made with regard to arguments against the logical coherence of theism. A natural response to such arguments is to try to show that the concept of God conforms to the laws of logic after all—or more weakly, that it does not obviously violate such laws. But now we can see that another line of response is available, namely, to argue that the very idea of logical laws *presupposes* the existence of God as the only viable metaphysical basis for such laws. It is one thing to try to show that *God conforms to the laws of logic*. But perhaps it is more in keeping with the doctrine of divine aseity to argue that, more fundamentally, *the laws of logic conform to God*. Ultimately, God cannot be illogical for much the same reason that God cannot be immoral.<sup>36</sup>

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35. Paul Copan has combined both strategies, to good effect. Paul Copan, *Is God a Moral Monster? Making Sense of the Old Testament God* (Grand Rapids, MI: Baker Books, 2011).

36. The authors wish to thank Paul Gould for helpful comments on an earlier version of this article.