

“pure gold” and “Au” do not have the same content, even though in this particular case we do not expect pay-offs from open-mindedness about the identification, even though this particular identification approaches common lore. For there are benefits in general to open-mindedness about the technical specification of plain natural-kind terms.

11. I fill in this sketch, and apply it to moral discourse, in *Moral Differences* (Princeton: Princeton University Press, 1992).
12. “Realism and Reason” (1976) in *Meaning and the Moral Sciences* (London, 1982), 125.
13. This realism is especially emphatic in such recent writings as *The Many Faces of Realism* (Lasalle: Open Court, 1987), lecture I, and *Representation and Reality* (Cambridge University Press, 1988), chapter 7.
14. See *Reason, Truth and History* (Cambridge University Press, 1981), 134.
15. *Representation and Reality*, 115.
16. *The Many Faces of Realism*, 77.
17. *Reason, Truth and History*, xi.
18. Because the proposition that p is true, there is no need, here, to unravel the difficult question of how belief is achieved when reference fails (as when people fall into the trap of believing that Ossian wrote ancient epics or that heat transfer is the diffusion of caloric). But such believers must exercise some capacities for detection, or they would not even have false beliefs. Caloric theorists were misguided about heat. Ossianists were misguided about epics. Hence, they were capable of detecting heat, or epics. (Compare cats, who are quite incapable of being taken in by literary hoaxes.)
19. In *Reason, Truth and History*. Putnam was even less tolerant than I have been toward the ascription of massive false belief to brainfolk in the universe that always consists of the brains-vat-automaton situation. He took this ascription to be false, not just the consequence of an unappealing descriptive option, since the brains would lack any causal connection with trees, chairs, and the other subjects of the alleged false beliefs. But I think my response to semantic characterizations of vatic stories is in the spirit of his insistence that semantic facts are not inherent in physical and physiological connections. Indeed, in *Reason, Truth and History* there is a step toward the admission of blocked capacities as sufficient for reference in a suggestion that future causal connection with a natural kind might be a basis for certain means of reference to it at present (16). At any rate, either Putnam’s response or mine rules out the use of vatic stories as a means of establishing separability of actually true beliefs into wholly internal and wholly external components. Either we do not share beliefs with the envatted (as Putnam would say), or the hypothesis that beliefs are shared depends on a characterization that is not wholly internal (as I would say).
20. *Philosophical Papers*, vol. 2 (New York: Oxford University Press, 1986), ix–x.
21. See, for example, “Is the Causal Structure of the Physical Itself Something Physical?” (1984) in *Realism with a Human Face*.
22. See *Realism with a Human Face*, Preface, x, where Putnam notes that the importance this claim has assumed for him marks a shift in emphasis beginning with *The Many Faces of Realism*. In the latter, see, for example, 40, 77.

The Search for Logically Alien Thought: Descartes, Kant, Frege, and the Tractatus¹

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[I]n order to draw a limit to thought we should have to be able to think both sides of this limit (we should therefore have to be able to think what cannot be thought).

The limit can, therefore, only be drawn in language and what lies on the other side of the limit will be simply nonsense.

—Ludwig Wittgenstein²

The only proper way to break an egg is from the inside.

—Parva Gallina Rubra³

This essay is about three things: Wittgenstein’s ideas concerning the question of the possibility of illogical thought, the sources of those ideas (especially in Kant and Frege), and Putnam’s recent interest in both of these matters.

Along the way, this paper briefly sketches the broad outlines of two almost parallel traditions of thought about the laws of logic: one rather long and complicated tradition called the History of Modern Philosophy, and one rather short and complicated one called Hilary Putnam. Here is a thumbnail version of how these two traditions align: Descartes thought the laws of logic were only contingently necessary; not so recent Putnam agreed. St. Thomas Aquinas believed that they were necessarily necessary; relatively recent Putnam agreed (this is only confusing if you think Aquinas should not

be a step ahead of Descartes). Kant thought they were simply necessary. Frege wanted to agree—but his manner of doing so raised the worry that there was no way in which to express his agreement that made sense. Wittgenstein agreed with the worry. He concluded that sense had not (yet) been made of the question to which our two traditions sought an answer; very recent Putnam agreed.

HISTORICAL PREAMBLE: A DIFFERENT KIND OF CARTESIANISM

What is the status of the laws of logic, the most basic laws of thought? Wherein does their necessity lie? In what sense does the negation of a basic law of logic represent an impossibility?

The Scholastics were forced to think hard about these questions since they believed in the existence of an omnipotent God for whom *all things are possible*. If God is omnipotent does that mean that He has the power to abrogate the laws of logic? The Scholastics, on the whole, were quite reluctant to draw this conclusion. But does that then mean that God is not all-powerful, that there is a *limit* to his power, that there is something he *cannot* do? That is a conclusion that the Scholastics were, on the whole, at least equally as reluctant to draw. Posed here in a theological guise is a version of a question that has continued to haunt philosophy up until the present: do the laws of logic impose a *limit* which we run up against in our thinking? If so, what kind of a limit is this? Do their negations represent something that we *cannot* do or that *cannot* be? If so, what sort of “cannot” is this?

Here is Aquinas’s attempt to reconcile the omnipotence of the Divine Being with the inexorability of the basic principles of Reason:

All confess that God is omnipotent; but it seems difficult to explain in what His omnipotence precisely consists. For there may be a doubt as to the precise meaning of the word “all” when we say that God can do all things. If, however, we consider the matter aright, since power is said in reference to possible things, this phrase, *God can do all things*, is rightly understood to mean that God can do all things that are possible; and for this reason He is said to be omnipotent. Now . . . a thing is said to be possible in two ways. First, in relation to some power . . . If, however, we were to say that God is omnipotent because He can do all things that are possible to His power, there would be a vicious circle in explaining the nature of His power. For this would be saying nothing else but that God is omnipotent because He can do all that He is able to do.

It remains, therefore, that God is called omnipotent because He can do all things that are possible absolutely; which is the

second way of saying a thing is possible. For a thing is said to be possible or impossible absolutely, according to the relation in which the very terms stand to one another: possible, if the predicate is not incompatible with the subject, as that Socrates sits; and absolutely impossible when the predicate is altogether incompatible with the subject, as, for instance, that a man is an ass.

. . . Therefore, everything that does not imply a contradiction in terms is numbered among those possibles in respect of which God is called omnipotent; whereas whatever implies contradiction does not come within the scope of divine omnipotence, because it cannot have the aspect of possibility. Hence it is more appropriate to say that such things cannot be done, than that God cannot do them. Nor is this contrary to the word of the angel, saying: *No word shall be impossible with God* (Luke i.37). For whatever implies a contradiction cannot be a word, because no intellect can possibly conceive such a thing.⁴

Aquinas is caught here between the Charybdis of asserting a mere tautology (God can do everything within His power) and the Scylla of implicitly ascribing a substantive limit to God’s power (by declaring God can do all those sorts of things which fall under a certain general description X, and hence apparently implicitly declaring: He cannot do those things which do not fall under X). One way out—a way out which, as we shall see, is gradually refined in the course of these two traditions of thought about logic—would be for this description (of those things which God cannot do) to turn out not to be a genuine description at all. Aquinas, indeed, tries to argue that those things which fall under the (apparent) description *things which God cannot do* are not, properly speaking, things which *can* be done at all. These are things which “cannot have the aspect of possibility.” Of these, Aquinas says, “it is more appropriate to say that such things cannot be done, than that God cannot do them.” But the worry arises: hasn’t Aquinas just offered us a redescription of what kind of a thing a logically impossible sort of a thing is? It would seem that we still have here to deal with a certain (albeit remarkable) *kind of a thing*. If so, the question remains: what sort of a thing is this and is it something not even God can do? Even if we concede to Aquinas that perhaps, strictly speaking, we should not speak of *it* as if it were a doable kind of a thing, nevertheless, there certainly still appears to be an “it” here that our words are straining after and which has formed the subject of our thought throughout the preceding paragraph.

Aquinas appears to be on his strongest ground when he tries to make out that the “it” which falls under these descriptions—“that which is logically impossible,” “that which even God cannot do”—is not a kind of a thing at all. What we have here instead is an attempt to conceive of a kind of a thing which “no intellect [i.e., not just a human intellect] can possibly conceive;”

it is an attempt to speak a word “which cannot be a word.” In order to set up this way of dissolving the appearance of an “it” (which not even God can do), Aquinas invokes Aristotle’s distinction between those things which are impossible in relation to some power and those things which are impossible absolutely. It is not clear, however, that this distinction really helps. It threatens to recreate the appearance that we have to do here with two different kinds of things, belonging to two distinct orders of impossibility: the merely impossible and the absolutely impossible. Just as it is natural to picture that which is possible for a finite being (such as man) as contained within the space of that which is possible for God, it can seem natural to take Aristotle’s distinction as marking an analogous boundary, only at a higher level. One pictures the distinction in terms of two *degrees* of impossibility: things belonging to the second degree (the absolutely impossible) are situated on the far side of the outer limit which encompasses things belonging to the first degree (the merely impossible). So now it seems that although God never chafes against anything which lies *within* the circumference of this exterior circle, nonetheless, Great as He is, that is as far as He can go—even He must remain *within* this circle. This picture of a circle (circumscribing the limits of that which is absolutely possible) lying within a wider space (the space of the absolutely impossible) inevitably leaves us with the feeling that we have, after all, succeeded in describing a genuine limit to His power. The existence of this outer space of absolute impossibility seems to settle the question in precisely the contrary direction from the one in which Aquinas had hoped to lead us. The apparently innocent step of picturing the space of absolute possibility as bounded by a limit seems to have led us to the opposite conclusion about God’s omnipotence.⁵

What sort of a thing lies beyond the limit of God’s power? Answer: the sort which is absolutely impossible. And now it becomes irresistible to add: even for Him.

Descartes concluded that Aquinas, along with most of the rest of medieval theology, had wandered into blasphemy.⁶ “If men really understood the sense of their words,”⁷ they would never speak as they do. For their mode of speech clearly implies a limit to God’s power. The only way to avoid such blasphemy is to refrain from ascribing any limits to what the Divinity is able to bring about:

I turn to the difficulty of conceiving how God would have been acting freely and indifferently if he had made it false . . . in general that contradictories could not be true together. It is easy to dispel this difficulty by considering that the power of God cannot have any limits, and that our mind is finite and so created as to be able to conceive as possible the things which God has wished to be in fact possible, but not be able to conceive as possible things which God could have made possible, but which

he has nevertheless wished to make impossible. The first consideration shows us that God cannot have been determined to make it true that contradictories cannot be true together, and therefore that he could have done the opposite. The second consideration assures us that even if this be true, we should not try to comprehend it, since our nature is incapable of doing so.⁸

Descartes positively asserts here that God could have made contradictories true together.⁹ He further asserts that this means that God can bring about things which our minds are incapable of comprehending. If only that which is comprehensible to minds such as ours were possible for God—if fundamental truths (such as that contradictories cannot be true together) were external and prior to God’s will—then He would not be omnipotent. For His will would not be free with respect to such truths, but rather subject to their determination. But this would be to deny the infinitude and incomprehensibility of God’s power.¹⁰ The only way to avoid such an unworthy blasphemy is to acknowledge that such truths *do* depend upon the will of God and that it lies within His power to bring about the negations of such truths.¹¹ The sense in which they are nonetheless necessary or eternal lies in the fact that God has decreed them to be true: hence they are necessary *for us*. But, from a Divine point of view, they are only contingently necessary. For we must allow that there is some sense in which God could have done otherwise:

[E]ven if God has willed that some truths should be necessary, this does not mean that He has willed them necessarily; for it is one thing to will that they be necessary, and quite another to will this necessarily, or to be necessitated to will it.¹²

If God had not been free to choose such laws as he did, if He were by necessity constrained to will the truth of the laws of logic, then there would be a necessity that binds even Him. God would be inexorably subject to those laws, just as we are subject to His decrees. There would be a *fatum* that binds even the Divinity, making a mockery of his alleged omnipotence. So we must say that God freely willed the laws of logic to be true. Descartes is very careful, however, to insist that, although these laws do not bind God, this does not make them any less binding for us. The hubris lies in our thinking that because we cannot comprehend how the negations of such laws could be true—for example, how it could be true that “He could have made contradictories true together”—we are therefore in a position to conclude that it cannot be done, even by Him. It is hubris to think that the limits of our powers of comprehension enable us to specify something He cannot do:

In general we can assert that God can do everything that is within our grasp but not that He cannot do what is beyond our grasp. It would be rash to think that our imagination reaches as far as his power.¹³

[S]ince God is a cause whose power surpasses the bounds of human understanding, and since the necessity of these truths does not exceed our knowledge, these truths are something less than, and subject to, the incomprehensible power of God.¹⁴

Descartes, nonetheless, wants to be able to say: we think rightly when we think in accordance with these laws. We perceive correctly when we clearly and distinctly perceive the truths of logic to be in some sense ‘necessary’: they are necessary in our world. But Descartes will not follow Aquinas and say that their negations are *absolutely* impossible. They are not, as it were, necessarily necessary: God could have created a very different sort of a world. Of course, since our powers of conception are constrained by the principles of logic, Descartes must say that we cannot make any sense of the possibility of such a world—nonetheless, we should admit the *mere* possibility of its existence:

[T]here is no need to ask how God could have brought it about from eternity that it was not true that twice four make eight, and so on; for I admit this is unintelligible to us. Yet on the other hand I do understand . . . that it would have been easy for God to ordain certain things such that we men cannot understand the possibility of there being otherwise than they are.¹⁵

Descartes concedes that any attempt on our part to comprehend such a world must meet with failure. This raises the worry: doesn’t Descartes’s position ultimately collapse into Aquinas’s? What are we to make of his assertion that we should believe in the possibility of such a world even though he himself freely admits that we cannot hope to comprehend it? How does one undertake to believe in something one cannot understand? Descartes himself feels at least some of the force of this problem. In an attempt to get around it, he helps himself to a fine distinction—a distinction between our being able to conceive of such a world and our being able to conceive that such an inconceivable world could be. The possibility of such a world is not something we can *comprehend*, but it is something we can *apprehend*.¹⁶ Descartes’s own way of expressing this slippery distinction is to say that the ultimate contingency of these truths (which we take to be necessary) is not something we can *embrace* in our thought, but we can *touch* it in our thought:

I know that God is the author of everything and that these [eternal] truths are something and consequently that He is their author. I say that I know this, not that I conceive it or grasp it; because it is possible to know that God is infinite and all-powerful although our mind, being finite, cannot grasp or conceive Him. In the same way we can touch a mountain with our hands but we cannot put our arms around it as we could put them around a tree or something else not too large for them. To grasp something is to embrace it in one’s thought; to know something, it is sufficient to touch it with one’s thought.¹⁷

We have here what I will call “the Cartesian Predicament”: We want to frame a thought (about that which cannot be thought) but we run up against the problem that the thought we want to frame lies in its very nature beyond our grasp.¹⁸ We need a way to pick up this thought by the corner without fully taking it into our hands. We need a way to think right up close to the edge of the limit of thought, close enough to get a glimpse of the other side. Descartes’s distinction between what we can embrace in thought and what we can only touch in thought is an attempt to characterize what is involved in trying to think both sides of the limit.

In drawing this distinction, Descartes concedes that in order for us to be able to properly grasp an illogical thought, our minds would have to be constituted otherwise. We, with our finite powers of conception, simply cannot grasp what it would be like for the fundamental principles of our thought to be false. Nonetheless, we can make contact in our thought with the mere possibility that they might be. The Evil Demon Hypothesis is the way the author of the *Meditations* touches upon such a possibility in his thought. He apprehends what he cannot comprehend: namely, that even his most clear and distinct perceptions of truth might have been implanted in him by a Creator who wished to deceive him. Although the most radical doubts voiced in the *First Meditation* (the Evil Demon Hypothesis and the meditator’s doubt about his own sanity) are in the end ultimately to be overcome, it is important for Descartes that these doubts represent minimally *intelligible* possibilities—possibilities we can sidle up to in our thought, even if we cannot wrap our minds all the way around them. To insist upon the *absolute* impossibility of an Evil Deceiver would be blasphemy; it would be another way of insisting upon a limit to God’s power.¹⁹ The reason we should assert that God does not deceive us is not because we are in a position to claim that it is absolutely *beyond His power* to do so, but rather, because (if we have an adequate idea of God) we can clearly and distinctly perceive that He is infinitely benevolent and hence would *choose* not to do so.²⁰ In His benevolence, He arranged it so that the principles which bind our thought enable us to think in accordance with the truth. He created our minds so that our clear and distinct ideas would correspond to the necessities of *this* world, the one that He created as our habitat. The principles of thought, implanted in us by our Creator, are so ordered that they are in harmony with the fundamental principles to which the natural world accords.²¹

This brings us to a crucial tenet of the Cartesian conception of logic: a logical contradiction is something which is *naturally repugnant* to our reason. Just as God has failed to give us the power to genuinely withhold assent from what we clearly and distinctly perceive, so He has failed to give us the power to affirm that which is utterly repugnant to the natural light of reason.²² The necessity of the laws of logic is to be accounted for by the fact that our minds are so constituted that *we cannot help but think* in accordance with

them. The basic principles of human thought articulate, as it were, the mechanics of the human mind—the optics of the natural light of reason. Their appearance of necessity is simply due to a general fact about our mental constitution: namely, that our Creator endowed us with these (rather than some other) fundamental principles of thought. That we find logical contradictions repugnant is a contingent fact about the structure of our thought. Descartes is perfectly aware of this implication of his doctrines:

I do not think we should ever say of anything that it cannot be brought about by God. For since every basis of truth . . . depends on his omnipotence, I would not dare to say that God cannot make a mountain without a valley, or bring it about that 1 and 2 are not 3. I merely say that He has given me such a mind that I cannot conceive a mountain without a valley, or a sum of 1 and 2 which is not 3; such things involve a contradiction in my conception [my emphasis].²³

He could have made contradictories true together.²⁴ We cannot comprehend this, although we can know it. We can acknowledge that God can do this without being able to fathom it. The attempt to fathom such a possibility would involve us in an effort to think a kind of thought which is logically alien to us. That we cannot do this is due to an ultimately contingent fact about our minds; it is due to how God made them. We cannot think in this other way because of the sort of mind He has given us. That which is logically alien to our minds does not therefore represent an absolute impossibility (in Aquinas's sense), but only something which is incomprehensible to us and hence *seems*, to our finite intellects, to be absolutely impossible. This suggests the following Cartesian diagnosis: Aquinas underestimated the power of God by overestimating the power of human reason—he mistook the limits of human comprehension for the limits of absolute possibility.

Given that Descartes usually figures in a story about the history of philosophy as the archetypical Rationalist, there is a certain irony in the fact that, with respect to the philosophy of logic, Cartesianism would appear to represent the position that even the most basic principles of reason are only contingently necessary truths. This is a position most of the classical empiricists would have recoiled from in horror. Consequently, although the label 'Cartesian' is often used to name the opponent of the 'Empiricist', in the philosophy of logic, 'Cartesianism' can properly be taken to stand for the view that the laws of logic are only contingently necessary—they are the laws according to which we cannot help but think.²⁵ Considered in this light, certain forms of radical empiricism can be viewed as species of Cartesianism.

Margaret Wilson sums up the historical significance of this region of Descartes's thought by casting him as the forerunner both of Kant's account of necessity (in terms of the "structure and workings of our own minds") and of the most stridently naturalistic current in contemporary philosophy.²⁶ She

cites (not-so-recent) Hilary Putnam as an example of a contemporary Cartesian about logical 'necessity'. In support, she quotes a passage in which Putnam allows himself to describe the shift from Euclidean to Riemannian cosmology as a case in which "something literally *inconceivable* turned out to be true."²⁷ Putnam's example here (of something inconceivable which turned out to be true) is the statement "one cannot return to the place from which one started by travelling in a straight line in space in a constant direction." Putnam goes on to describe the moral which he drew from this development in cosmology:

I was driven to the conclusion that there was such a thing as the overthrow of a proposition that was once a priori (or that once had the status of what we *call* an a priori truth). If it could be rational to give up claims as self-evident as the geometrical proposition just mentioned, then, it seemed to me that there was no basis for maintaining that there are *any absolutely a priori truths*, any truths that a rational man is *forbidden* to even doubt.²⁸

After quoting this passage, Wilson comments on the "Cartesian elements" she finds in evidence here: "the generalized suspicion of 'inconceivability' as a basis for claims about what *cannot be*, and a consequent attenuation (at least) of the concept of 'necessary truth.'"²⁹

Wilson's narrative about the place of Cartesianism in the history of modern thought about logical necessity, from Descartes through Kant to Putnam, prepares the way for three further ironies which will preoccupy us in the pages to follow: firstly, Kant's views about logical necessity, on Putnam's reading of them, will not turn out to be a way-station between Descartes and not so recent Putnam; secondly, Kant turns out to be the father of a stridently anti-Cartesian tradition which runs through Frege to Wittgenstein; thirdly, very recent Putnam's views on logical necessity will turn out to be (roughly) Kantian (and hence stridently anti-Cartesian).

A VERY RECENT PUTNAM

There is certainly something to the thought that certain classic papers of Putnam and Quine³⁰ offer perhaps the closest thing to be found in twentieth-century philosophy to an attempt to rehabilitate Descartes's claim that it would be hubris for us to assert of an omnipotent God that He would be inexorably bound by the laws of logic—those laws which happen to bind our finite minds. In a move which is characteristic of much of contemporary naturalistic thought (both in and out of the academy), science is substituted for God. Cartesianism in the philosophy of logic, freed of its theological trappings, becomes the view that it would be hubris for us to assert of the

ongoing activity of scientific inquiry that it will be forever bound by the laws of classical logic—those principles which happen to be most fundamental to our present conceptual scheme. The contrast is now no longer, as in Descartes, between the finite powers of man and the omnipotence of God, but rather between the finite limits of present scientific thought and the infinite possibilities latent in the future of science as such. According to this contemporary accusation of hubris, the laws of logic are merely part (however basic a part) of our best current scientific theory of the world. We should, with proper empiricist humility, hold them to be at least in principle revisable in the course of some major theoretical reconstruction that future scientific research may require of us. If Descartes is led by a sense of theological piety to insist that God can do *anything*—no matter how inconceivable it may be to us—the contemporary ultra-empiricist is led by an equally fervent sense of naturalistic piety to insist that the science of the future might require a revision of *any* of our present axioms of thought—no matter how unacceptable such a revision might seem by our present lights. The exploration of the contours of possibility belongs to the business of the physicists. In this regard, we philosophers must issue them a blank check—it would compromise our standing as underlaborers to put a ceiling on how much they can spend. To paraphrase Descartes on God: we must not conclude that there is a positive limit to the power of science on the basis of the limits of our own (present) powers of conception. All of its hostility to theology notwithstanding, this contemporary form of piety is, in a sense, no less religious (in its unconditional deference to a higher authority) than Descartes's—it has simply exchanged one Godhead for another. But, unlike Descartes, precisely because it is overtly hostile to theology, it is able to easily blind itself to the fact that it *is* a form of piety.

In a paper entitled “There is at Least One A Priori Truth,”³¹ a relatively recent Putnam sheds his piety and argues that there are, after all, a priori truths in exactly the sense that less recent Putnam and (any vintage of) Quine had famously been concerned to deny that there could be. At least one truth is unrevisable, Putnam now declares, in the sense that it would never be *rational* to give it up. Putnam's candidate for such an a priori truth is the minimal principle of contradiction, the principle that *not every statement is both true and false*. Putnam's strategy is to try to argue that there are no circumstances under which it would be rational to give up this principle, and therefore that it provides us with an example of at least one “absolutely, unconditionally, truly, actually a priori truth.”³² Putnam wishes to quarrel with the claim that a fundamental logical law is merely contingently necessary. This leads him occasionally to assert an opposing claim, to declare that a fundamental logical law must be necessarily necessary. Indeed, one can hear an echo of Aquinas's distinction between the merely and the absolutely impossible in passages such as the following:

The statement . . . “This sheet of paper is red and this sheet of paper is not red” . . . simply asserts what *cannot possibly* be the case. And the reason that “when I open the box you will see that the sheet of paper is red and the sheet of paper is not red” does not count as a prediction, is that we know—know a priori—that it *can't possibly* turn out to be the case [my emphases].³³

Putnam adduces in the course of the paper a number of arguments, which I will not rehearse here, that purport to show that the principle of minimal contradiction plays a role in our reasoning which is “prior to anything that might be offered as an explanation of its truth”³⁴ and hence also prior to anything which might count *against* its truth. Putnam summarizes the conclusion of his paper as follows:

The idea is that the laws of logic³⁵ are so central to our thinking that they define what a rational argument is. This may not show that we could never change our mind about the laws of logic, i.e. that no causal process could lead us to vocalize or believe different statements; but it does show that we could not be brought to change our minds *by a rational argument*. . . . [The laws of logic] are presupposed by so much of the activity of argument itself that it is no wonder that we cannot envisage their being overthrown . . . by rational argument.³⁶

Has Putnam here exchanged one form of piety for another: a piety about natural science for a piety about logic? This is the problem that exercises very recent Putnam: how to avoid one of these forms of piety without falling into the other.

So much, for the moment, for relatively recent Putnam. I will be primarily concerned here with very recent Putnam. In particular, I want to try to follow up and flesh out some intriguing claims made in a very recent paper: historical claims about how to understand a tradition of thought about logic (one which runs from Kant through Frege to the *Tractatus*) and philosophical claims about what is involved in attempting to think the negation of a logical truth. The locus of these claims is a paper titled “Rethinking Mathematical Necessity.”³⁷ (I will only discuss those aspects of the paper which bear on the topic of *logical necessity*.) Putnam turns his attention here once again to the ancient and honorable question: what is the status of the laws of logic—analytic or synthetic, a priori or a posteriori? As one has come to expect of Putnam, he approaches the question afresh, defending a conception of logical necessity which he claims to (now) find in later Wittgenstein. Putnam says at the outset of the paper that he sees contemporary philosophy as faced with two equally unsatisfying alternatives—alternatives he associates with the names of Carnap and Quine respectively: a linguistic conventionalism, on the one hand, according to which the laws of logic are analytic truths, and a naturalized epistemology, on the other,

according to which they are synthetic a posteriori and hence not dissimilar in kind from ordinary empirical truths (only—so the mixed metaphor goes—far more deeply entrenched in our web of belief). After canvassing these standing responses to the question, Putnam turns his attention toward what he calls “a very different line of thinking—one which goes back to Kant and Frege.” He continues:

This line is one I believe Carnap hoped to detranscendentalize; and in Carnap’s hands it turned into linguistic conventionalism. My strategy in this essay will be to suggest that there is a different way of stripping away the transcendental baggage, while retaining what I hope is the insight in Kant’s and perhaps Frege’s view, a way which has features in common with the philosophy of the later Wittgenstein rather than with Carnap.

The invocation of Kant and Frege here might lead one to presume that very recent Putnam is simply concerned to uphold the conclusions put forward by relatively recent Putnam in “There is at Least One A Priori Truth.” For, as we shall see, there is much in Kant and Frege that rhymes with those conclusions—that the laws of logic are absolutely central to our thought, that they define what rational argument is, that they are prior to anything which might be offered as an explanation of their truth. Putnam, however, as the above passage indicates, is now after a view he finds in later Wittgenstein: his interest in Kant and Frege is as stepping-stones to that view. Putnam’s concern in the paper is in part to trace the roots of the later Wittgenstein’s views on the nature of ‘grammatical propositions’ through a tradition of thought about logic which begins with Kant and runs through Frege and early Wittgenstein. This is how Putnam tells the story:

Kant’s Lectures on Logic contain one of the earliest—perhaps the earliest—polemic against what we now call ‘psychologism’ . . . [W]hat interests me here . . . is closely related to [that polemic] . . . What interests me . . . is to be found in the *Critique of Pure Reason* itself, as well as in the Lectures on Logic, and that is the repeated insistence that illogical thought is not, properly speaking, thought at all . . .

It is this that brought home to me the deep difference between an *ontological* conception of logic, a conception of logic as descriptive of some domain of actual and possible entities, and Kant’s (and, I believe, Frege’s). Logic is not a description of what holds true in “metaphysically possible worlds,” to use Kripke’s phrase. It is a doctrine of *the form of coherent thought*. Even if I think of what turns out to be a ‘metaphysically impossible world’, my thought would not be a thought at all unless it conformed to logic.

Indeed, logic has no metaphysical presuppositions at all. For to say that thought, in the normative sense of *judgment*

which is capable of truth, necessarily conforms to logic is not to say something which a metaphysics has to *explain*. To explain anything *presupposes* logic; for Kant, logic is simply prior to all rational activity.

While I would not claim that Frege endorses this view of Kant’s, it seems to me that his writing reflects a tension between the pull of the Kantian view and the pull of the view that the laws of logic are simply the most general and most justified views we have. If I am right in this, then the frequently heard statement that for Frege the laws of logic are . . . [the] “most general laws of nature” is not the whole story. It is true that as *statements* laws of logic are simply quantifications over “all objects”—and all concepts as well—in *Begriffsschrift*. There is no “metalanguage” in Frege, in which we could say that the laws of logic are “logically true”; one can only assert them in one language, *the* language. But at times it seems that their *status*, for Frege as for Kant, is very different from the status of empirical laws. (It was, I think, his dissatisfaction with Frege’s waffling on this issue that led the early Wittgenstein to his own version of the Kantian view.)

It was this line of thinking that helped me to understand how one might think that logical laws are *simlos* without being a Carnapian conventionalist. Laws of logic are without content, in the Kant-and-possibly-Frege view, insofar as they do not *describe* the way things are or even the way they (metaphysically) *could* be. The ground of their truth is that they are the formal presuppositions of thought (or better, *judgment*). Carnap’s conventionalism . . . was an *explanation* of the origin of logical necessity in human stipulation; but the whole point of the Kantian line is that logical necessity neither requires nor can intelligibly possess any “explanation.”

The preceding quotation has a lot packed into it. We are being offered roughly the following capsule history of a tradition of philosophical thought about logic:

- 1) Kant held that illogical thought is not, properly speaking, thought at all.
- 2) Frege inherited this view from Kant.
- 3) Frege held another view of logic as well—one according to which the laws of logic are the most general laws of nature.
- 4) These two views of logic are in tension with one another.
- 5) The early Wittgenstein’s view (that the propositions of logic are *simlos*) should be read as attempting to resolve this fundamental instability in Frege’s philosophy.

Putnam then goes on, later in the paper, to argue that the crucial idea here, with which he himself is in sympathy, is that logical truths do not have

negations that we are able to understand. It is not that these propositions represent a content that we grasp and then reject as false; rather, we are simply unable to make *sense* of these propositions in a way which allows the question of their truth or falsity to arise in the first place. As he puts it at one point: “the negation of a theorem of logic violates the conditions for being a thinkable thought or judgment.”³⁸ Putnam argues that it is out of this idea that the later Wittgenstein’s view of logical propositions develops, and so Wittgenstein’s later view is best understood against the background of this tradition of thought.

Relatively recent Putnam asserted the negation of what not so recent Putnam maintained. In particular, he was concerned to argue that at least one logical law (the minimal principle of contradiction) represented an absolutely unrevisable a priori truth. Very recent Putnam (following what he takes to be Wittgenstein’s lead) now wishes to claim that the question whether such a principle can be revised or not is one which we are unable to make any clear sense of.³⁹ In the course of outlining his new position, he offers a suggestive and provocative rough sketch of how to tell the history of an important chapter in the development of contemporary philosophical thought. It is in part through his provision of that sketch that Putnam attempts to indicate what his present view is. My aim in the remainder of this paper will be to try to fill in some of the details of this rough sketch—in part in the hope that it will bring into sharper relief the view Putnam is presently after, but mostly because the story that emerges is one which I find myself wanting to tell. I will argue at the end of the paper that this story sheds a helpful light on why the text of the *Tractatus* assumes the *form* that it does—one of having the reader climb up a ladder which he is then asked to throw away.

THE KANTIAN CONCEPTION OF LOGIC

Kant’s conceptions of reason and freedom—and his conception of the intimacy of these topics—develop to some extent out of Leibniz’s vigorous critique of Descartes’s doctrine concerning the divine creation of the eternal truths.⁴⁰ This critique forms the opening topic of Leibniz’s *Discourse on Metaphysics*:

[I]n saying that things are not good by virtue of any rule of goodness but solely by virtue of the will of God, it seems to me that we unknowingly destroy all of God’s love and all his glory. For why praise him for what He has done if He would be equally praiseworthy in doing the exact contrary? Where will His justice and wisdom reside if there remains only a certain despotic power, if will holds the place of reason . . . ? Besides, it seems that all acts presuppose a reason for willing and that this reason

is naturally prior to the act of will. That is why I also find completely strange the expression of some other philosophers⁴¹ who say that the eternal truths of metaphysics and geometry and consequently also the rules of goodness, justice, and perfection are merely the effects of the will of God; instead, it seems to me, they are only the consequences of His understanding, which, assuredly, does not depend on his will, any more than does His essence.⁴²

Descartes deprives us, Leibniz contends, of any basis upon which to assert of God that He is wise or just. More subtly, Leibniz will conclude from this that Descartes in the end even deprives us of any coherent notion of the one characteristic that Descartes wanted to reserve for God at the expense of all others: his freedom.

God does what is good, Leibniz argues, not because he is constrained by some principle which is external to Him, but because He understands what is good and because He understands that it is good. The nature of the good is prior to and therefore in one sense external to His will, but it is not external to His understanding. That which is internal to His understanding does not represent a form of external compulsion. Without the guidance of His understanding, God would have no conception upon which to act. There would no longer be any sense in which He knew what He was doing. His activity would no longer express his wisdom; it would be merely a string of events. It is the rules of logic which articulate the basic principles of understanding. Without these principles, there can be no understanding; without understanding, there can be no freedom.

The broad outline of an account of freedom emerges here, one which is subsequently filled in by Kant’s practical philosophy—an account which rests upon the distinction between the Realm of Nature, governed by causes, and the Realm of Freedom, governed by reasons.⁴³ Freedom of the will, on this account, consists in the capacity to act in accordance with laws which one gives oneself. Absolute freedom does not consist, as Descartes imagines, in a complete absence of constraint from any law. On the contrary, freedom requires constraint, but through rational principles rather than merely through “alien causes”⁴⁴—a form of constraint which answers (to put it in terms Frege will echo) to what ought to be rather than to what is. To view a principle which is rationally binding (as Descartes does) as a principle in accordance with which the constitution of our minds constrains us to think, is (for Leibniz and Kant) to confuse the causality of rational agency (what Kant calls “the causality of freedom”) with the causality of nature. To view rational constraint as a form of determination by natural law is to deprive one’s conception of agency of any foothold for a coherent notion of free will. Descartes thinks that, in so far as they represent a constraint on how we must think, the laws of logic comprise a limitation on human freedom. Leibniz

rejoins that to view the laws of thought as imposing a limitation on one's freedom is to misunderstand both the character of these laws and the nature of freedom. It is to misconstrue the necessary preconditions for the possibility of freedom as external determinations of the will. Precisely this is Descartes's mistake, says Leibniz:

[T]he will of God is not independent of the rules of wisdom . . . This so-called *fatum*, which binds even the Divinity, is nothing but God's own nature, His own understanding, which furnishes the rules for His wisdom and His goodness: it is a happy necessity, without which He would be neither good nor wise.⁴⁵

God's freedom consists in his ability to freely act in accordance with his understanding, the structure of which is given by the rules of wisdom. The eternal truths do not depend upon God's will but solely on His understanding.⁴⁶ Not only is it wrong to see God as constrained because his will must accord with these truths, but rather His freedom precisely consists in the possibility of such accordance. To strip God of His reason is to strip Him of His will.⁴⁷ Only a rational being can act in accordance with an understanding of the good. And, just as the possibility of such accordance is not only a condition of God's freedom but also a condition of freedom as such (hence also of human freedom), so too, the principles of logic articulate not only the basic structure of God's understanding, but of understanding as such (hence also of human understanding). In the *Critique of Pure Reason*, Kant writes:

Logic contains the absolutely necessary rules of thought without which there can be no employment whatsoever of the understanding. (A52/B76)

The reference here is not just, as Descartes would have it, to the necessary rules of *our* finite thought (as opposed to some other kind of thought, say God's infinite thought), but rather to the necessary rules of thought as such. When Kant speaks of "the understanding" he doesn't just mean "the minds of men," he means *the* understanding (or, as we shall soon see Frege say, *the* mind). These "absolutely necessary rules" of the understanding represent the preconditions of the possibility of *judgment*—not just finite human judgment.⁴⁸

Kant's view is, in this respect, in striking contrast with that of Descartes: the laws of logic are not the laws of *our* thought (as opposed to, say, God's), but of thought *simpliciter*. Kant's anti-psychologism can be seen to be tied to a rejection of Descartes's view that the necessity of the laws of logic is to be understood as a function of the constitution of the human mind. For if one strips this view of its theological aspect (by omitting talk about how the Creator endows us with our mental faculties and restricting oneself to talk about innate propensities) it collapses into a form of psychologism. A conception of thought that explains the apparent necessity of our most basic

principles of thought by appeal to what Kant calls ". . . subjective dispositions of thought, implanted in us from the first moment of our existence, and so ordered by our Creator that their employment is in complete harmony with the laws of nature in accordance with which experience proceeds . . ." leaves us, Kant says, with ". . . exactly what the skeptic most desires . . .": namely, an account of their necessity in terms of the brute fact ". . . that I am so constituted that I cannot think . . . otherwise" (B167–8).⁴⁹ Kant's concern in this passage is with the necessity of the categories (not the laws of pure general logic), but the point extends equally to a Cartesian account of the character of logical necessity: to explain the binding character of logic by reference to subjective dispositions implanted in us (by our Creator, or by the workings of nature) is ultimately to concede to a certain kind of skeptic that which he most desires.⁵⁰

Where Kant breaks sharply with Leibniz's conception of logic is in putting forward the claim that a proper adumbration of the discipline of pure logic must restrict itself to purely *formal* rules, and that the advantages of logic depend entirely upon this limitation:

That logic should have been thus successful is an advantage which it owes entirely to its limitations, whereby it is justified in abstracting—indeed, it is under the obligation to do so—from all objects of knowledge and their differences, leaving the understanding nothing to deal with save itself and its form. (B ix)

But, on the other hand, as regards knowledge in respect of its mere form (leaving aside all content), it is evident that logic, in so far as it expounds the universal and necessary rules of the understanding, must in these rules furnish criteria of truth. Whatever contradicts these rules is false. For the understanding would thereby be made to contradict its own general rules of thought, and so to contradict itself. These criteria, however, concern only the form of truth, that is of truth in general. . . . The purely logical criterion of truth, namely, the agreement of knowledge with the general and formal laws of the understanding and reason, is a *conditio sine qua non*, and is therefore the negative condition of all truth. But further than this logic cannot go. It has no touchstone for the discovery of such error as concerns not the form but the content. (A60/B84)

It is only these purely formal rules, which abstract from all objects of cognition, which properly belong to the science of pure general logic. It is only these that have a claim to being the necessary laws of thinking without which no use of the understanding would be possible.⁵¹ This brings us to the aspect of Kant's conception of logic that Putnam wished to draw our attention to—logic as "the form of coherent thought":

And it also follows from this that the universal and necessary rules of thought in general can concern solely its *form*, and

not in any way its *matter*. Accordingly, the science containing the universal and necessary rules is a science of the mere form of our intellectual cognition or of thinking.⁵²

We are now at the beginning of the passage from Kant's *Logic* that Putnam identifies as the wellspring of the tradition of thought about logic with which he now aligns himself. I offer a final long excerpt from Kant's *Logic*:

Now this science of the necessary laws of the understanding and reason in general, or—which is the same—of the mere form of thinking, we call *logic*.

As a science concerning all thinking in general, regardless of objects as the matter of thinking, logic is to be considered as:

1) the *basis* of all other sciences and the *propaedeutic* of all use of the understanding. For this very reason, however, because it abstracts entirely from all objects, it can be

2) no *organon* of the sciences.

By *organon* namely we understand an instruction for bringing about a certain cognition. . . . But since logic, as a universal propaedeutic of all use of the understanding and of reason in general, need not go into the sciences and anticipate their subject matter, it is only a *universal art of reason (Canonica Epicuri)*, to make cognition in general conform with the form of the understanding; and only to that extent may it be called an organon, which, however, serves not the *expansion* but merely the *judging* and *correctness* of our cognition.

3) as a science of the necessary laws of thinking without which no use of the understanding and of reason takes place at all, which consequently are the conditions under which alone the understanding can and shall agree with itself—the necessary laws and conditions of its right use—logic, however, is a *canon*. And as a canon of the understanding and of reason it need not borrow any principles, either from any science or from any experience; it must contain nothing but laws a priori that are necessary and concern the understanding in general.

Some logicians presuppose *psychological* principles in logic. But to bring such principles into logic is as absurd as taking morality from life. If we took the principles from psychology, i.e. from observations about our understanding, we would merely see *how* thinking occurs and *how* it *is* under manifold hindrances and conditions; this would therefore lead to the cognition of merely *contingent* laws. In logic, however, the question is not one of *contingent* but of *necessary* rules, not how we think, but how we ought to think. The rules of logic, therefore, must be taken not from the *contingent* but from the *necessary* use of the understanding, which one finds, without any psychology, in oneself. In logic we do not want to know how the understanding is and thinks, and how it hitherto has proceeded in thinking, but how it ought to proceed in thinking. Logic shall teach us the right use of the understanding, i.e. the one that agrees with itself.⁵³

The following salient features of Kant's conception of logic emerge from the preceding passages:

—“Pure general logic” is concerned with the form of coherent thought.

—It abstracts entirely from all objects.

—It therefore tells us nothing about the world or the nature of reality.

—It is not an organon, an instrument which furnishes positive knowledge of any sort.

—but rather, a canon, exhibiting those necessary principles and conditions of right use which permit the understanding to remain in agreement with itself.

—In logic, the concern is not with how we think, but with how we ought to think, not one of contingent but of necessary rules.

—Hence the principles of logic must be sharply distinguished from those of psychology.

—The temptation to bring such principles into logic (the error of empiricism) is tied to the impulse to assimilate it to the natural sciences, conceiving of it as propounding contingent truths based on inductive generalizations about how human beings reason.

—This is to miss the special status of the principles of logic as constitutive of the possibility of thought (including thought about how human beings reason).

—The complimentary error (that of speculative metaphysics) is to treat logic as an organon; this gives rise to dialectical illusion.

—This results in the need for a dialectical logic, a prophylactic against such confusions which diagnoses and exhibits the sources of dialectical illusion.

Such illusions, for Kant (which arise from the dogmatic employment of reason), are not comparable to the illusory cogency of something like a logical fallacy which, when pointed out and explained, ceases to exert its attraction on us. In cases of merely logical illusion, Kant says, “. . . as soon as attention is brought to bear on the case before us, the illusion completely disappears.” Whereas:

Transcendental illusion, on the other hand, does not cease even after it has been detected and its validity clearly revealed by transcendental criticism. . . . That the illusion should, like logical illusion, actually disappear and cease to be an illusion, is something which transcendental dialectic can never be in a position to achieve. For here we have to do with a *natural* and inevitable *illusion* . . . one inseparable from human reason, and which, even after its deceptiveness has been exposed, will not cease to play tricks with reason. (A297–98/B353–55)

Dialectical illusion, for Kant, presents us with an *illusion of knowledge*: an attempt to apply the categories beyond the limits of experience.⁵⁴ For

Wittgenstein, who builds on certain insights of Frege's, philosophical illusion involves an even more peculiar form of muddle: an *illusion of thought*—the manufacturing of an appearance of sense where no sense has been made.⁵⁵ For the *Tractatus*, as we shall see, the source of philosophical confusion is to be traced, not (as for Kant) to the existence of a limit which we overstep in our thought, but to our falling prey to the illusion that there is a limit which we run up against in thought.⁵⁶

FREGE'S KANTIANISM

Frege inherits the Kantian idea that accord with the laws of logic is constitutive of the possibility of thought. In the introduction to the *Grundgesetze*, he writes: the laws of logic are “the most general laws of thought . . . [which] prescribe universally the way in which one ought to think if one is to think at all.”⁵⁷ The laws of logic are, for Frege (as for Kant), not only the most fundamental principles of “our” reasoning, they are also constitutive of rationality: they display what is involved in any thinking or reasoning. When Frege recommends his *Begriffsschrift*, it is not merely on the grounds that it is in various respects technically superior to the systems of logic offered by others (from Aristotle to Boole), but also on the grounds that it properly and perspicuously represents the laws of thought—those principles which undergird all rational discourse and inference.⁵⁸ Frege therefore inherits (a great deal of) Kant's philosophical conception of the status of the laws of logic (as constitutive of the possibility of rational thought), but he criticizes Kantian pure general logic for failing to provide (as the *Begriffsschrift* does, for the first time) a proper codification of *the* laws of logic.

The absolute generality of the laws of logic, for Frege, is tied to their ultimate ground in pure thought alone. For Frege, the pair of Kantian distinctions of analytic/synthetic and a priori/a posteriori permit the categorization of propositions according to the kind of ultimate ground that figures in their justification.⁵⁹ There are three possible sources of knowledge, and hence three sorts of ultimate ground: 1) sense perception (for propositions that are synthetic a posteriori), 2) inner intuition (for propositions that are synthetic a priori), and 3) pure thought (for propositions that are analytic).⁶⁰ An analytic truth, for Frege, is one whose *justification* depends on logic and nothing but logic.⁶¹ When Frege says that the truths of arithmetic are analytic, he means they are derivable from the laws of logic which, for him (as for Kant), means the laws of thought.⁶² For Frege (as for Kant) to identify a proposition as synthetic a priori is not to say that it lies outside the domain of the analytic—that would be tantamount to saying that the most general laws of thought do not apply to it.⁶³ But these laws “govern everything

thinkable.”⁶⁴ Frege's tripartite division of ultimate grounds constitutes a hierarchy of generality, and the classification of a truth depends upon how far down one must go in this hierarchy in order to supply all of the materials necessary for its justification.⁶⁵ The most general truths are those whose justification rests solely on the laws of pure thought.

Frege also refers to the laws of logic as ‘the laws of truth’ and, following Kant, will insist that this locution must not be construed psychologically: “I understand by ‘laws of logic’ not psychological laws of takings-to-be-true, but laws of truth.”⁶⁶ Psychology, as a science, is properly concerned only with the nature and genesis of ideas—the contents of individual consciousnesses. Logic, on the other hand, is concerned with the structure of thought. In a strikingly Kantian passage, Frege writes:

Not everything is an idea. Otherwise psychology would contain all the sciences within it, or at least it would be supreme judge over all the sciences. Otherwise psychology would rule even over logic and mathematics. . . . Neither logic nor mathematics has the task of investigating minds and the contents of consciousness owned by individual men. Their task could perhaps be represented rather as the investigation of *the* mind; of *the* mind, not of minds.⁶⁷

Psychologism, as a position in the philosophy of logic or mathematics, according to Frege, conflates the question of how (as a matter of psychology) one comes to hold a certain mathematical proposition to be true with the question of whether (as a matter of logic) one is justified in that belief. He declares that “the irruption of psychology into logic” represents what has in our time become “a widespread philosophical disease”⁶⁸—one that he is out to cure his contemporaries of. There is a sense therefore in which ‘Psychologism’, in Frege's terminology, is not so much the name of some particular philosophical *view* as it is the name of a widespread form of *confusion*—one which can assume a variety of guises. Frege's favorite generic description of the disease is: “the confusion of the logical with the psychological.” Its most characteristic symptom is a confusion of causes with reasons; as, for example, when one confuses the psychological processes which enable one to form a belief with the logical relations which enable one to *justify* the truth of what one believes.⁶⁹ (Frege's critique of psychologism is in this respect very close to Sellars's central criticism of empiricism, namely, that it runs together the space of reasons and the space of causes.⁷⁰ The similarity is due to the fact that both of these thinkers are reformulating, for the benefit of their contemporaries, the upshot of the Kantian critique of empiricism.⁷¹)

An appeal to a distinction between reasons and causes has great argumentative force, however, only if the psychologistic philosopher thinks of what he is doing as a contribution to the justification of knowledge. (Certainly some of Frege's contemporaries who wrote on the philosophy of

mathematics were vulnerable to such an objection.) However, as an isolated move, it cuts little ice against a *thoroughgoingly* psychologistic thinker. The distinctively Kantian aspects of Frege's conception of logic (at least those which interest Putnam most) come clearly to the surface in the course of Frege's attempts to rebut thoroughgoing psychologism. We will turn to a closer examination of this region of Frege's thought when we consider his thought experiment concerning the possibility of discovering logically alien life.

Another way to see how much Frege shares of Kant's conception of logic (as constitutive of the possibility of thought)—and hence how much he shares of Kant's view that the idea of illogical thought is inherently problematic—is to begin by considering Frege's conception of *judgment*, arguably the cornerstone of his philosophy.⁷²

To form a judgment Frege says (in his post-1893 writings) is to advance from the sense of a thought to its truth-value:

A propositional question contains the demand that we should either acknowledge the truth of a thought, or reject it as false.⁷³

This demand—"the demand that we should either acknowledge the truth of a thought or reject it as false"—I shall refer to as 'the demand for judgment'.⁷⁴ For Frege, appreciation of this demand is of a piece with the ability to reason—it is inseparable from our ability to understand language and grasp the thoughts of others. The demand for judgment is made explicit by a propositional (yes/no) question; but it is implicit, Frege thinks, in every genuine proposition. It is a condition of being a genuine thought (*eigentlicher Gedanke*)—as opposed to a mock thought (*Scheingedanke*)—that it be either true or false. As Frege is fond of saying: "[A] real proposition expresses a thought. The latter is either true or false: *tertium non datur*."⁷⁵ (This condition is taken up by the *Tractatus*: "A proposition must restrict reality to two alternatives: yes or no" (§4.023).)

In grasping the content of a thought, we grasp that either it or its negation is true—this is a constitutive feature of what it *is* to grasp the content of a thought. So, for Frege, to grasp a thought is to be faced with the demand for judgment. It is to be faced, that is, with the question of whether the thought is to be affirmed or denied.⁷⁶ The inexorability of the demand for judgment flows from the principle of noncontradiction, which Frege regards as a (Kant as *the*) basic law of logic. To grasp the content of a thought, Frege therefore holds, is to be faced with a *candidate* for judgment. A thought which lacks truth-value is not, properly speaking, a kind of thought at all—any more than the simulation of thunder on the stage is a kind of thunder. We would do better here, Frege suggests, to speak instead of 'mock thoughts'—as we do stage thunder—in order to avoid the appearance that we have to do in such cases with a species of item that belongs to the genus *thought*.⁷⁷ What

we encounter in such cases are forms of expression that present the appearance of being "proper thoughts."⁷⁸ There is a pressure in Frege's philosophy therefore—one which the *Tractatus* does not resist—to conclude that what mock thoughts present us with is the appearance of intelligible thought, one which seduces us into an illusion of understanding.⁷⁹

Descartes wanted to distinguish between that which we can comprehend in our thought and that which we can merely apprehend. Given the finite structure of our minds, there are certain thoughts (for example, those having to do with the infinite) that exceed our grasp—they transcend the limits of our understanding. It would be a grandiose (not to mention blasphemous) self-deception on our part to imagine that we have the mental capacity to even so much as attempt to raise for ourselves the question of their truth or falsity. Hence, Descartes says, we are unable to grasp such thoughts. Nevertheless, on his view, it is possible for us to make contact with them in our own thought. This distinction (between comprehension and apprehension) requires the possibility of a sharp separation between the content of a thought and the conditions which permit it to be a candidate for judgment. There is a pressure in Frege, as we have just seen, to conclude that in such cases (where we imagine that we apprehend a thought we cannot comprehend) what we are confronted with is an illusion of thought. However, as we shall now see, there is also a pressure in the opposite direction.

THE TENSION IN FREGE'S CONCEPTION OF LOGIC

I turn now to Putnam's suggestion that Frege is pulled in two different directions, toward Kant's view (that illogical thought is not, properly speaking, thought at all) and away from it.

Frege tries to combine the fundamentally Kantian conception of logic outlined above with the following distinctly unKantian view: logic is a branch of positive science. Logic differs most significantly from the other sciences (Frege calls them "the special sciences") in this respect: it is the maximally general science. Frege tries to weave this idea into a Kantian story in which the laws of logic prescribe how one *ought* to think:

It will be granted by all at the outset that the laws of logic ought to be guiding principles for thought in the attainment of truth, yet this is only too easily forgotten, and here what is fatal is the double meaning of the word "law." In one sense a law asserts what is; in the other it prescribes what ought to be. Only in the latter sense can the laws of logic be called 'laws of thought': so far as they stipulate the way in which one ought to think. Any law asserting what is, can be conceived as prescribing that one ought to think in conformity with it, and is thus in

that sense a law of thought. This holds for laws of geometry and physics no less than for laws of logic. The latter have a special title to the name “laws of thought” only if we mean to assert that they are the most general laws, which prescribe universally the way in which one ought to think if one is to think at all.⁸⁰

Any law can be considered as a ‘law’ in either of two senses, either as a law which asserts *what is* or as one which asserts *what ought to be*. The laws of physics are laws in the first sense insofar as they assert how matter in motion in fact comports itself; they are laws in the second sense insofar as they tell us how one ought to think if one wishes to think correctly about matter in motion. They are laws in a descriptive sense insofar as they represent true statements about the physical world; they are prescriptive insofar as they prescribe how one should think about the physical world (if one wishes to think in accordance with the truth). The laws of logic, Frege holds, can equally be said to be ‘laws’ in each of these two senses. In the second sense, they are, as Kant held, *the* laws of thought—that is, the most *general* laws of thought. In this sense, the laws of logic are laws which prescribe what ought to be—that is, they prescribe how one is to think if one is to think at all. The unKantian twist comes with the idea that the laws of logic are laws in the first sense as well—laws which assert what is the case in the world. Conceived in the first way, the laws of logic are hardly “purely formal rules” (in either Kant’s sense or Hilbert’s): they state (absolutely general) substantial truths. They are laws to which the “behavior” of everything conforms. The laws of logic hold for anything, any sort of subject-matter whatsoever. Frege writes:

How must I think in order to reach the goal, truth? We expect logic to give us the answer to this question, but we do not demand of it that it should go into what is peculiar to each branch of knowledge and its subject-matter. On the contrary, the task we assign logic is only that of saying what holds with the utmost generality for all thinking, whatever its subject-matter.⁸¹

Tied to this conception of the laws of logic (as possessing an intrinsic positive content) is a feature of Frege’s philosophy which he himself recognizes as a departure from the Kantian fold. Indeed, Frege represents it as his one significant quarrel with the master. He objects to Kant’s claim that logic is an infertile science, unable to extend our knowledge, along with Kant’s related claim that logic cannot afford, on its own, knowledge of objects.⁸² What Frege means by saying logic abstracts from “what is peculiar to each branch of knowledge and its subject-matter” is that—in contrast to the laws of the special (i.e., the other) sciences, like geometry and physics—the laws of logic do not mention any properties or relations whose investigation is the business of the special sciences.⁸³ The break with Kant lies in the idea that the laws of logic have a positive subject-matter. What the laws of logic do

continue to lack, on Frege’s view, is a subject-matter that is specialized in any way; their subject-matter is simply: *everything*. For Frege, the laws of logic are, as Putnam puts it, “the most general laws of nature.”

The *Tractatus* aims to show that Frege’s conception of logic is in conflict with itself: Frege’s overarching (Kantian) conception of judgment is in conflict with his conception of logic as the maximally general science. This is part of what is behind the famous remark in the *Tractatus* that the propositions of logic are tautologies:

The mark of logical propositions is not their general validity (6.123).

The propositions of logic are tautologies.

The propositions of logic therefore say nothing . . .

Theories of logic which make a proposition of logic appear substantial [*gehaltvoll*] are always false (6.1-6.111).

When Wittgenstein calls a proposition a tautology—following Kant’s usage (as well as that of Bradley, the early Moore, and the early Russell)—he is availing himself of a way of *impugning* a proposition, declaring it to be vacuous.⁸⁴ A tautology is *sinnglos*: it fails to express what Frege would call a “proper thought.”⁸⁵ Frege’s own account of judgment forms the basis of Wittgenstein’s critique of Frege’s conception of logic as the maximally general science. Whereas for Frege, the propositions of logic are paradigms of genuine thought, the *Tractatus* is out to show that these sentences cannot withstand the demand for judgment, Frege’s own litmus test for distinguishing mock thoughts from genuine ones. Wittgenstein distinguishes between that which is *sinnglos* (senseless) and that which is *Unsinn* (nonsense). In saying that a “proposition” of logic is *sinnglos*, he is identifying it as belonging to a degenerate species of the genus proposition—like a genuine proposition, it is syntactically well-formed⁸⁶; unlike one, it fails to express a thought (it does not restrict reality to a yes or no)—it says *nothing*.⁸⁷ Wittgenstein can be seen here as returning to Kant’s thought that, in and of itself, logic is barren: it cannot deliver knowledge. Wittgenstein rejects Frege’s claim that the new logic, as codified in the *Begriffsschrift*, furnishes an organon, issuing in a systematic science of maximally general truths. In this sense, the *Tractatus* can be read as a vindication of the warning issued in the *Critique of Pure Reason* that: “. . . general logic, if viewed as an organon, is always a logic of illusion.”⁸⁸

Frege takes himself to be laying the foundations of the *science* of logic. The *Tractatus* throws away Frege’s conception of logic as a science, but retains Kant’s thought that logic has an ineliminable role to play in uncovering and dispelling forms of philosophical illusion. Wittgenstein sees in Frege’s *Begriffsschrift* a tool which can assume what for Kant were the

responsibilities of a branch of transcendental logic. Indeed, he imagines himself to have found a far more powerful dialectical tool than Kant would ever have desired: one which reveals, when properly employed, cracks in the foundations of both the Kantian and Fregean edifices. The sign of a crack in the Fregean edifice first comes to light when one presses the question: what is it to judge a basic law of logic to be true? Or to put the question more pointedly: can the axioms of Frege's *Begriffsschrift* face the demand for judgment?

Ordinarily, when we grasp a thought, we are able to understand it without knowing whether it is true or not. It is this separation between understanding and judging, implicit in the demand for judgment, which enables us, in grasping the sense of a thought, to see that it is either true or false without yet having determined which. Frege's entire account of judgment depends on the idea that we can distinguish a stage of grasping the thought which is prior to the judgment, and which furnishes the act of judgment with something to bear upon. But as we shall see, other aspects of Frege's understanding of logic suggest that, with respect to the basic laws of logic, such a separation of the stages of understanding (grasping the sense of a thought) and judgment (advancing to its truth-value) is unintelligible. That is, there isn't any sense to be made of the idea of someone (even God!) entertaining the falsity of a basic logical law. And this, in turn, would mean that Frege's account of judgment fails to leave room for anything which could count as judging a basic law of logic to be true. The demand for judgment, in the case of the axioms of *Begriffsschrift*, would turn out to be unintelligible.⁸⁹ Yet Frege's account of logic as the maximally general science requires that we be able to judge the axioms of his system to be true. If we are to conceive of the laws of logic as differing from those of the other sciences only in their order of generality, then they must be able to serve as possible candidates for judgment. So Frege's view that the basic laws of logic possess positive content does not afford any basis for their inability to face the demand for judgment.

Although Frege never addresses this problem head-on, he is remarkably forthright in his discussions of some of its symptoms. He acknowledges a close cousin of this problem in his treatment of rules of inference⁹⁰ (rules, such as *modus ponens*, which allow us to assert one judgment on the basis of another). Frege draws his reader's attention to the fact that in his technical writings, the rules of inference are carefully written out in ordinary prose.⁹¹ To attempt to express them in *Begriffsschrift*-notation would represent a fundamental confusion: they form the basis of the system and therefore cannot be expressed in it.⁹² Since these rules are presupposed in every act of judgment, they themselves cannot serve as candidates for judgment. Another cousin of our problem can be seen in Frege's treatment of the Kerry paradox, when he insists that the words that he himself must resort to ("the concept horse is not a concept") in order to illuminate what is confused in

Kerry's talk about concepts do not themselves express a coherent thought—any more than Kerry's own formulations do. Frege's name for the activity in which he engages in this context—one of self-consciously employing nonsense in order to make manifest what is nonsensical in the formulations of his interlocutors (the kind of nonsense to which one is naturally drawn in philosophizing about logic)—is: *elucidation*.⁹³

Frege's discussions of these two cousins of our problem are viewed by many contemporary commentators as among the most embarrassing moments in all of his work—sudden signs of an otherwise uncharacteristic softening of the mind. Yet they are precisely the moments in Frege's work from which Wittgenstein takes himself to learn the most. The central source of confusion in Frege's thought about logic is located elsewhere by the *Tractatus*—in the one assumption that it shares with psychologism (that "widespread philosophical disease"): that logic is a science. The *Tractatus* sees Frege as trying to cure the disease by merely treating its symptoms. It is only once one has broken with the idea that logic is a science that one is free of the disease.⁹⁴ Part of the aim of the *Tractatus*, in its repudiation of the idea that logic sets forth a body of positive truths about the world, is, firstly, to reject the Russellian ideal of a "scientific philosophy" and, secondly, to clarify the proper uses of logic and hence to clarify the manner in which this technical discipline can fruitfully serve the interests of philosophy.⁹⁵ Wittgenstein continues to share with Frege the idea that a well-regimented logical symbolism provides a notation for perspicuously displaying inferential relations, thereby providing a window onto the logical structure of our language and furnishing a dialectical tool for dissolving philosophical confusion. It is, however, this lattermost application of logic—in service of the task, as Frege puts it, of "breaking the domination of the word over the human spirit"⁹⁶—which gains an unprecedented prominence in the *Tractatus*. The *Tractatus* is a work of philosophy, and the work of philosophy, the *Tractatus* says—adapting Frege's own name for the activity of battling nonsense by means of nonsense—is one of elucidation:

The object of philosophy is the logical clarification of thoughts. Philosophy is not a theory but an activity. A philosophical work consists essentially of elucidations. (4.112)

Frege agrees that the activity which he himself calls "elucidation" does not involve putting forward, or arguing against, *theses* (i.e., propositions which correspond to fully intelligible thoughts), but consists rather in a certain kind of activity. However, Frege views elucidation as a *propaedeutic* to the serious business of science. Nonetheless, as we are about to see, the ground for the *Tractatus*'s more radical notion of elucidation (and its concomitant critique of Frege's conception of logic as a kind of science) is prepared in Frege's own critique of psychologism.

Frege's most sustained discussion of psychologism is to be found in the introduction to *The Basic Laws of Arithmetic*. Frege's opponent in these pages is the psychologistic philosopher of logic. Frege's thumbnail sketch of this character describes him as someone who conflates the laws of psychology (the laws of takings-to-be-true) with the laws of logic (the laws of truth), and who thus, through this conflation, ends by completely blurring the distinction between the subjective and the objective. In the introduction to *The Basic Laws of Arithmetic*, Frege proposes a thought experiment which is meant to exhibit the character of this confusion and thereby highlight the fundamental status of the laws of logic as the most general laws of thought. Frege's thought experiment concerns the possibility of our encountering logical aliens.

The psychologistic philosopher of logic is someone who maintains that the laws of logic are empirically established generalizations. His conception of logic would therefore seem to commit him to at least the *intelligibility* of the following scenario: we encounter beings whose thought is governed by laws different from those in accordance with which we judge. Frege's argument against the possibility of such logical aliens, read in its strongest form, amounts to an argument against the very intelligibility of this scenario. This leaves him in the position of arguing that the psychologistic logician is committed to the intelligibility of something which—when properly thought through—turns out to be unintelligible. Frege thus finds himself engaged in a peculiar form of philosophical criticism.⁹⁷ The heart of the peculiarity lies in the following consideration: If there is, properly speaking, no intelligible thought expressed by the form of words to which our interlocutor is attracted, how then can we go on to identify *the* thought which—if it were thinkable—would be the one to which his words aspire and to which he would be committed (if only he could be)? The peculiarity Frege finds himself in here is one which the *Tractatus* comes to see as characteristic of philosophy as such. For Wittgenstein, early and late, it becomes the touchstone of successful philosophical criticism that it arrive at a moment in which one's interlocutor comes to see that there simply is no thought of the sort that he imagines himself to be thinking in his attraction to a certain form of words—words which he took to embody an important philosophical insight.⁹⁸

At first blush, Frege's thought experiment appears to be in the service of resolving a *disagreement* between two opposing conceptions of logic. He appears to be concerned to show that a particular view (namely, that of the psychologistic logicians) is *false*. But as we go along, it will emerge that Frege's discussion (of what would be involved in entertaining the falsity of a basic law of logic) has something like the structure of an onion—one layer

gives way to the next, and something which begins by looking like it has the logical structure of a straightforward disagreement increasingly comes to resemble something which has the elucidatory structure of the *Tractatus* (the structure, that is, of a ladder which one climbs up and then throws away).

Let's begin with the outermost layer of the onion. Frege invites us to try to imagine what it would be like to encounter beings who do not accept a basic law of logic; in this case, the law of identity. That is, we are invited to try to imagine beings who deny straightforward instances of the law of identity (statements which we unhesitatingly affirm). The psychologistic logician takes it to be a perfectly coherent empirical possibility that there might be such beings. He takes this consideration in turn to reflect something about the character of a law of logic. What Frege takes to be *the* law of identity is, according to the psychologistic logician's view, more properly termed *our* law of identity. It would appear, on this view, that the proper scientific description of our law of identity should be stated as follows:

It is *impossible for beings like us* (with the relevant population appropriately circumscribed) to acknowledge an object to be different from itself.

The psychologistic logician concludes that the correct psychological theory pertaining to our inferential habits will assert that it is impossible *for us* to think otherwise than in accordance with this law. Whereas the correct psychological theory pertaining to the inferential habits of the aliens asserts that this is possible *for them*. One set of laws describes how we think, another how they think. The sense in which it is "impossible" for us to deny a law of logic is construed on this account as a psychological fact about us. If we understand the phrase "laws of thought" in this way (Frege would say in a psychological as opposed to a logical sense), then of course there is no inconsistency in claiming one set of laws to be true of us and another to be true of them. The psychologistic logician—being a hard-nosed empiricist—will not, at this point, wish to invoke a Deity (who endowed our minds with the particular form of thought we happen to have). Otherwise, however, his doctrine is a species of Cartesianism: given the constitution of our minds, we think in accordance with the laws of logic; other beings (with fundamentally different mental endowments) will think in accordance with other laws.

One response to the psychologistic logician is to say that he has simply changed the subject. What he ends up talking about are not the laws of logic but something quite different. Frege can be found frequently making a point of this general sort, as, for example, in the following passages:

[T]he expression "laws of thought" seduces us into supposing that these laws govern thinking in the same way as laws of nature govern events in the external world. In that case they can be nothing but laws of psychology: for thinking is a mental

process. And if logic were concerned with these psychological laws it would be a part of psychology. . . .

How, then, is the Principle of Identity really to be read? Like this, for instance: "It is impossible for people in the year 1893 to acknowledge an object as being different from itself"? Or like this: "Every object is identical with itself"? The former law concerns human beings and contains a temporal reference; in the latter there is no talk either of human beings or of time. The latter is a law of truth, the former a law of people's taking-to-be-true.

All I have to say is this, being true is different from being taken to be true, whether by one or many or everybody, and in no case is to be reduced to it. There is no contradiction in something's being true which everybody takes to be false. I understand by 'laws of logic' not psychological laws of takings-to-be true, but laws of truth.⁹⁹

However, simply invoking this distinction (between the logical and the psychological) might appear to be without force against the psychologistic logician. To simply assume this distinction would appear to beg the fundamental question against him, in so far as a thoroughgoing psychologistic logician is precisely concerned to deny the notion of a nonpsychological law any fundamental role in his account of logic. It is open to him to respond: all I countenance on my theory—and all I need in order to provide an adequate empirical description of a set of inferential practices—are laws which accurately project *de facto* general agreement in judgments among subjects (from appropriately circumscribed populations).

Frege's point in these passages takes on more force, however, if we do not read him as simply *insisting* upon a distinction (which his interlocutor pointedly wishes to do without), but rather, as offering it as part of a *diagnosis* of his interlocutor's confusion. Without recourse to some distinction of this sort, Frege argues, his interlocutor will be unable to make sense of the terms in which he wishes to recommend his own theory. For once one entertains the possibility of encountering such logical aliens, the following question arises: whose inferences are correct, ours or theirs (or neither)? This seems to be a perfectly natural and intelligible question. But, if the psychologistic logician admits to being able to understand it, Frege thinks he has wrung a crucial concession from him:

Anyone who understands laws of logic to be laws that prescribe the way in which one ought to think—to be laws of truth, and not natural laws of human beings' taking a thing to be true—will ask, who is right? Whose laws of taking-to-be-true are in accord with the laws of truth? The psychological logician cannot ask this question; if he did he would be recognizing laws of truth that were not laws of psychology.¹⁰⁰

The question that arises here (when we ask: "Who's right?"), Frege argues, is not itself a psychological question. The question cannot be addressed if we restrict ourselves to an empirical description of the inferential habits of various populations. The question presupposes the possibility of a standpoint which cannot be identified with any of the vantage points the psychologistic theory restricts itself to: it presupposes the possibility of taking up a critical attitude toward each such vantage point and judging it in comparison with others—assessing each in normative rather than in merely descriptive terms.

Frege thinks that if the psychologistic logician were to admit the legitimacy of the above question, he would thereby concede the existence of a nonpsychological study of inference and hence compromise his commitment to a thoroughgoing psychologism. The psychologistic logician cannot permit any nonrelativized question about the validity of an inference (or the truth of a judgment) to arise—one which does not rely upon (at least an implicit) reference to some particular population of judging subjects. Frege thinks this places the psychologistic logician in the position of not being able to make sense of the question whether his own theory is true (as opposed to simply true for us). At this juncture, halfway into the onion, Frege can be seen as rehearsing a gambit familiar to readers of Putnam's *Reason, Truth and History*: arguing that the psychologistic theory is self-refuting insofar as it is unable to account for the conditions under which the theory itself can be said to be true.¹⁰¹

When the psychologistic logician first presents his theory, he seems to be suggesting that it represents *the truth* about certain matters. He is telling us what kind of a thing a law of logic is: it is a law which governs the psychological process of reasoning. This account of what kind of a thing a logical law is has the appearance of being perfectly general: it is true of beings who reason as we do, but it will also be true of beings who reason in some other way (such as our friends, the logical aliens). It appears that we are being offered a theory which can encompass our inferential habits and theirs from some broader vantage point. But, according to the psychologistic logician's own account, the fundamental principles in accordance with which we assess his (or any other) theory are merely principles in accordance with which *we cannot help but think*. On his view, all that our talk of "truth" (when we say things like: "These principles enable us to judge in accordance with the truth") comes to in the end is: our minds force us to think this way (rather than some other way). This means that when the psychologistic logician recommends his theory to us as "true," all he means, according to his own theory, is that we (for some 'we') cannot help but find it to be true. So when he says "this theory is true of our thought and of their thought," all he means is that *we cannot help but find it to be true of us and of them*. But *they*, the logical aliens, are not necessarily so constituted that they cannot help but

find it to be true of them. Furthermore, from their apparently equally legitimate standpoint they are not constrained to find the theory to be true of us.¹⁰² The psychologistic logician wants to be able to say both of the following things: 1) we *can* step back from how we think, compare it with how they think, and come to see that the proposed theory is true of both; and 2) given the constitution of our minds, we *cannot* step back from how we think.¹⁰³ The incoherence lies in the psychologistic logician's saying at one moment, "We cannot but take these laws to be true," and in the next, disparaging them as only true for us—if we are *compelled* to take them as true, then we take them to be *true*; and hence we *must* (isn't this what was just claimed) regard anyone who denies them as in the wrong. The psychologistic logician, Frege says, "presumes to acknowledge and doubt a law in the same breadth."¹⁰⁴ In insisting that he must adhere to the standards of consistency, logic provides whilst refusing to reject the aliens' thought as contradictory, the psychologistic logician is, in Frege's words, attempting to jump out of his own skin.¹⁰⁵

Can't the psychologistic logician deny Frege the entering wedge of his argument by just refusing to allow Frege's pivotal question: whose inferences are correct, ours or theirs? He can try to turn all such questions aside by simply refusing to talk about anything other than what kinds of statements are accepted by us and what kinds of statements are accepted by them.¹⁰⁶ It is here, in the inner layers of the onion, in Frege's attempts to get some leverage on this most uncooperative incarnation of the psychologistic logician, that Frege fully slips off the edge and plunges into the Tractarian abyss—argument gives way to elucidation.

It originally looked as if the psychologistic logician wished to depict our encounter with the logical aliens as one in which we and they *disagree* over a certain fundamental question. Frege wants to show the psychologistic logician that he is not in a position to invoke the concept of disagreement here, for his own account requires that he refrain from availing himself of the materials out of which to construct a judgment as to whether two people genuinely disagree. The possibility of judgment, on Frege's account, is tied to the ability to discern relations of agreement and disagreement between propositions. It is the principles of logic which provide the framework within which such discernment operates.¹⁰⁷ It originally looked as if the psychologistic logician wanted to hold on to the idea that logically alien thought *conflicts* with ours, but his account deprives the notion of one proposition's conflicting with another of the context in which it has its life. The underlying claim which fuels Frege's argument here is that one can only recognize two judgments as being in conflict with one another if the framework of logic is already firmly in place. For the criteria by which we are able to so much as recognize (let alone adjudicate) an instance of disagreement presuppose the availability of this shared framework. Thus, Frege's strategy, this far into the onion, is to present the psychologistic logician with a dilemma: either 1) he

can claim that his account reveals that the judgments of the aliens conflict with ours, in which case his idea of one judgment's conflicting with another can be shown to tacitly rely upon the idea of their logical incompatibility (that is, upon a non-psychological notion of incompatibility), or 2) he can refrain from telling us anything about the logical relation in which their judgments stand to ours, in which case he can tell us nothing about their thought whatsoever. The first horn of the dilemma rests in part on the claim that it is one of the criteria for whether someone affirms a judgment with which we disagree that he means to deny what we assert. If we prescind from (what Kant calls) "these criteria of the form of truth" (A60/B84), then we strip ourselves of any basis for mutual intelligibility. It is a feature of Frege's view (one famously taken up by Quine and then Davidson) that we can only discern a disagreement between our beliefs and those of others against a shared background which determines what counts as disagreement. It is the principles of logic, Frege argues, which make such discernment possible. The psychologistic logician, however, wants to arrive at the discovery that our idea of 'logical disagreement' and that of the aliens *disagree*. This latter employment of the notion of 'disagreement', if it is to be purged of any partiality toward 'our' logic, is one in which the ordinary notion must be drained of virtually all its sense. The psychologistic logician (if he does not wish to presuppose 'our' notion of 'logical disagreement') must restrict himself to a notion of 'disagreement' according to which disagreement is simply a form of mere psychological difference, that is a species of difference which does not in any way involve 'our' idea of 'logical' conflict. But if the noises we and the aliens make *merely differ* from one another (and nothing further concerning their logical relation to one another can be said), then they are no more in disagreement with one another than the moos of two different cows or the shapes of two different snowflakes. As long as his account labors under this restriction, the psychologistic logician is in no position to tell us anything about the thought of the logical aliens. For he has banished from his account the resources for discerning *any* sort of logical structure in the utterances of the aliens. If he grasps this horn of the dilemma, the most he will be able to show us is creatures who make noises and movements we do not make. (Creatures who moo and eat grass are not manifesting a logically alien form of thought.) Rather than showing us that they think differently, he will be unable to show us that they are so much as capable of thought. Frege's ultimate aim in the thought-experiment therefore is to try to get his interlocutor to see the force of the (Kantian) point that there isn't any sense to be made of the idea of undertaking to disagree with a principle of logic—that it is these principles which make both agreement and disagreement possible. What we are left with, if deprived of these principles, is not the possibility of agreement of *another kind*, but rather simply the *absence* of the possibility of agreement altogether.¹⁰⁸ The ultimate point of

Frege's thought experiment therefore is to highlight the special role that logic has in constituting the possibility of rational discourse.¹⁰⁹ According to Frege, we would not be able to recognize the logical aliens as reasoning differently from us because (if they failed to manifest any partiality for the laws of logic) we would not be able to recognize them as reasoning at all:

But what if beings were . . . found whose laws of thought flatly contradicted ours and therefore frequently led to contrary results even in practice? The psychological logician could only acknowledge the fact and say simply: those laws hold for them, these laws hold for us. I should say: we have here a hitherto unknown type of madness¹¹⁰.

How are we to understand Frege's invocation of the notion of madness here? The notion of madness for Descartes belongs to part of an attempt to give content to the idea of logically alien thought. "Madness" is the notion Descartes reaches for in an attempt to specify a certain possibility about himself, one which he wishes to entertain in the course of an attempt to bring his most fundamental principles of thought into question. It is, he admits not a possibility he can fully comprehend, but it must be one he can apprehend. Although he cannot really grasp the content of the hypothesis that he might be mad, he must not deny that it is within God's power to have left him in this (incomprehensible) state. Of course, he does not conclude that He did this. Nonetheless, the possibility that He might have must remain a minimally intelligible one. Descartes's doubt about his own madness mimics the incoherence of Frege's thought experiment. In supposing that he is mad, the author of the *Meditations* is supposing about himself that he is bereft of a capacity for reliable judgment. Yet, in the same breath, he presupposes that very capacity (which he supposes himself not to have) in order to draw conclusions about the reliability of his capacity for judgment.¹¹¹ In raising the possibility that he is mad (that his own capacity for judgment is systematically defective), he raises the possibility that sanity (a capacity for reliable judgment) requires a completely different form of thought from his own. What Descartes wants from the notion of "madness" is a way of marking a contrast (between the "madness" of our thought and the "sanity" of a logically alien form of thought)—a contrast which Frege wants to show his interlocutor he has failed to make sense of.

"Madness" is the notion Frege reaches for in an attempt to meet the psychologistic logician halfway. It is a notion one might reach for when confronted by beings whose capacities for rational thought appear deformed—whose processes of thought remain opaque to us. Frege does not reach for this word in the service of an attempt to characterize the Other of reason, but rather in the service of trying to find a sense for his interlocutor's words. Insofar as sense can be made of talk of madness, for Frege, that sense is not conferred through the idea of logically alien thought, but rather

through some idea of *disturbed* thought.¹¹² The closest Frege can come to finding a sense for the psychologistic logician's idea of an antithetical form of reason (deeply illogical thought) is the philosophically innocuous idea of a degenerate form of reason (merely lunatic thought).

Frege's thought experiment begins by presenting us with something which has the form of a question: can there be or can there not be the following sorts of beings? And then we are (apparently) offered a description of these beings: they are, we are told, beings who, on the one hand, are able to reason, and on the other, whose reasoning does not conform to the laws of logic (i.e., those laws which govern our thinking). At first blush, it looks as if Frege is dispensing with this possibility by offering us an argument of the following sort: In order to conceive of such beings, we must conceive of them as able to manifest their rationality (their capacity for reasoning) in some way. But the laws of logic are the touchstones of rationality—they put in place the framework within which it first becomes possible to isolate and adjudicate disagreement. Here, at the penultimate layer of the onion, Frege's objection to psychologism closely parallels relatively recent Putnam's claim that "the laws of logic are so central to our thinking" that we cannot entertain their falsity. It places the accent on the idea that there is something which we *cannot* do: we cannot think in a certain way; we cannot think against the grain of logic and still be thinking. Thus, in the end, it looks as if we are to arrive at the conclusion: there cannot be logical aliens. For deep reasons having to do with the nature of logic, beings who fit this description are an impossibility. A priori reflection on the nature of logic seems to have disclosed a (negative) fact about what kinds of beings are possible. This makes it seem as if, in following Frege, what we have done is grasped the content of the thought experiment—what it would be for beings to be able to think in this remarkable way—and subsequently gone on to reject this possibility. We think of ourselves as rejecting the possibility of *something*: illogical thought. So, in considering the thought experiment, we imagine ourselves to pass through the successive stages of judgment—first grasping the sense of a thought and then submitting it to the demand for judgment. We experience something which has the phenomenology of judgment.

Nonetheless, as we have seen, there is a well-developed strain of thought in Frege which is committed to the conclusion that what we undergo in such an experience is an *illusion* of judgment. For, if the laws of logic prescribe how one ought to think if one is to think at all, then Frege must say that what has been proposed here is not a kind of thought: we are simply not, as it stands, able to make any clear sense of the psychologistic logician's proposal. But where does that leave the conclusion of the argument against psychologism? If the proposal does not add up to sense—does not present a thought, a candidate for judgment—then how can we affirm the negation of the content of the proposal? If we take the sentences "illogical thought is

impossible” or “we cannot think illogically” to indeed present us with *thoughts* (with senses which we can affirm the truth of), then we concede what a moment ago we wished to deny (namely, that the negation of these sentences present us with a genuine content, one which is able to stand up to the demand for judgment). But if we conclude that these words (which we want to utter in response to the psychologistic logician) do not express a thought with a sense, then aren't *we*, if we judge psychologism to be false, equally victims of an illusion of judgment? This is the problem at the heart of the onion. The attempt to say that illogical thought is something that *cannot* be, to say that it involves a transgression of the limits of thought, requires that we be able to draw the limit. But this lands us back in the Cartesian predicament: it requires that we be able to sidle up to the limit of thought.

THE FINAL LAYER OF THE ONION

The attempt to state a *thesis* about the nature of logic (either of a Kantian or an anti-Kantian variety) seems, by the end of Frege's elucidatory exercise, to undermine itself. It is at this point that one begins to feel a powerful attraction toward what should otherwise seem an evidently desperate gambit. The popularity of the gambit testifies to the depth of the problem. The gambit is to concede that our words don't say anything, but to then try to locate that which they seem to say beyond the limit of what can be said. One tries to pry the (illusory) content of the (mock) thought free from the words that engender it. One wants to hold onto the (illusion of) thought, even if one has to cut it free from any form of words which might express it. One concludes: the thought experiment about logical aliens conveys an insight which cannot be put into words. One wants to say: it is true that *there cannot be illogical thought*, but that truth cannot be coherently stated—what our nonsensical words are trying to say is quite true, but it cannot be said, only shown (through a self-defeating attempt to try to say what cannot be said). To mistake this strategy of desperation for the doctrine of the *Tractatus* is to mistake the penultimate rung of the ladder for the final rung, to mistake the final layer of the onion for its center.

This desperate gambit is widely proffered in scholarly works as an account of the *Tractatus*'s solution to the Cartesian predicament. It is not an exaggeration to say that this has become the standard reading of the book. The proffered solution is to completely abandon the core of the Kantian conception of logic as constitutive of the possibility of thought—usually while parroting most of its rhetoric.¹¹³ Proponents of this solution want to hang on, instead, to the idea that one can have hold of a thought even though the logical structure of language cannot accommodate a thought of this sort. But

there's trouble here. If the thought that *there cannot be illogical thought* is an example of a kind of thought which the logical structure of language cannot accommodate, then it turns out to be an example of the very thing it itself declares cannot be: illogical thought. This leads commentators on the *Tractatus* to try to push back the limits of thought: making the space of thought wider than the space afforded by the logical structure of language. There is one obvious problem which now arises for this interpretation, however: the Kantian slogans sprinkled throughout Wittgenstein's text. For example:

Thought can never be of anything illogical, since, if it were, we should have to think illogically. (§3.03)

What makes logic a priori is the *impossibility* of illogical thought. (§5.4731)

There are simple ways around this problem. One distinguishes between 'thought strictly speaking' and "'thought'" (in quotation marks); or one avoids the word 'thought' altogether in this connection and uses other words instead. One uses, that is, a variety of words ("convey," "grasp," "intend," "insight," "meaning," "proposition") for activities and contents which require that the logical framework of judgment be firmly in place, while insisting that the "insight" one "grasps" lies well beyond the limits of logical thought.

On the standard reading, the goal of the *Tractatus* is to lead us to a state of hushed awe in the face of that which lies ineffably beyond these limits. The silence invoked at the end of the book is taken to be a pregnant silence, testifying to the ineffability of certain deep truths concerning the nature of logic (and, standardly, a whole host of other matters as well). These things cannot be said, but they can be shown. This involves us therefore in attributing to the *Tractatus* a version of Descartes's distinction between what we can comprehend (i.e., ordinary thoughts which fall within the limits of sense) and what we can only apprehend (i.e., deeply nonsensical thoughts which lie beyond these limits): we cannot grasp (when we attempt to say what cannot be said) what our words *say*, but we can make contact in our thought with what they *show*. But we need a way to make contact with these truths which cannot be expressed in language. We need something which is like language without actually being language. So we arrive at the idea that (some) nonsensical propositions can convey positive insight. P. M. S. Hacker is one of the more lucid proponents of this reading of the *Tractatus*:

[W]ithin the range of philosophical . . . nonsense we can distinguish . . . between . . . illuminating nonsense and misleading nonsense. Illuminating nonsense will guide the attentive reader to *apprehend what is shown* by other propositions which do not purport to be philosophical; moreover it will intimate, to those who *grasp what is meant*, its own illegitimacy . . .

[T]he *Tractatus* does indeed consist largely of pseudo-propositions. Of course, what Wittgenstein *meant* by these remarks is, in his view, quite correct, only it cannot be said. Apparently what someone *means* or *intends* by a remark can be *grasped* even though the sentence uttered is *strictly speaking* nonsense [my emphases].¹¹⁴

Here we have something very close to Descartes's idea that we can apprehend what we cannot comprehend: we can apprehend what we cannot say by grasping what is *meant* by a piece of nonsense.

If nonsense is nonsense in virtue of its failure to make sense, then how are we to "grasp" its sense? How are we to discern the presence of meaning in the absence of meaning? Well, it's not what the words say that we're after, but what they only *hint at*. But, ordinarily, we grasp what someone's words hint at by first grasping what they say. But how do we grasp what nonsense hints at? The story goes like this: the pieces of nonsense in question are violations of the rules of logical syntax. These violations arise through attempts to try to express fundamental features of the logical structure of language in language. These attempts, Hacker says, "unavoidably violate the bounds of sense, misuse language, and produce nonsense."¹¹⁵ We don't grasp what the nonsense says but what it is trying to say. The rules of logic, however, render "it" unsayable. We encounter here once more the idea that logic imposes a limit we run up against. The logical structure of language keeps us from being able to say certain things.

The central feature of the Cartesian picture persists here: because of the logical structure of our thought there is something we *cannot* do. We cannot think against the grain of logic. When we try, we come out with bits of nonsense. But these bits of nonsense are, nonetheless, useful; they can convey the unsayable thing our words were after but could not reach. Here is how Peter Geach puts it:

Wittgenstein holds that various *features of reality* come out . . . in our language, but we cannot use this language to say, assert, that reality has these features: if we try to frame propositions ascribing these features to reality, then it will be possible to show that *strictly speaking* these are not propositions, only sentence-like structures which violate the principles of logical syntax and are thus devoid of any sense, true or false. All the same, these nonsensical . . . structures may be useful; they may serve to convey from speaker to hearer *an insight* that cannot be put into proper propositions [my emphases].¹¹⁶

We have here a watered-down version of the Cartesian notion of the Infinite: there are certain *features of reality* that cannot be coherently expressed because of the logical structure of our thought. But they can nevertheless be conveyed by language. But not by ordinary language. Ordinarily, language conveys something by using words to say something.

In ordinary language, words may convey (by implication) more than they explicitly say—but even this they do by first saying something. Nonsense, however, says nothing. Thus, the standard reading saddles itself with the question: how is nonsense able to convey an insight into ineffable features of reality? In order to solve this problem one has to attribute to Wittgenstein the idea that one can attempt to think against the grain of logic. It is through an attempt at illogical thought that one can sidle up to the limits of language and peer over them (at those ineffable features of reality which Geach speaks of).¹¹⁷ One therefore ends up attributing to the *Tractatus* the idea that (although we cannot speak on both sides of the limit) we *can* think both sides of the limit.

According to the standard reading of the *Tractatus*, these features of reality can be *made manifest* by language because they correspond to certain *features of language*: they are reflected in the mirror of the logical structure of language. The relevant features of language taken together make up the logical form of language. We cannot express "it"—the logical form of language—in language; but we can gesture at it. One such feature is the distinction between concept and object. We cannot express this distinction in language. When we attempt to, we try to make a concept play the role of an object. That is something a concept cannot do. Logic won't permit it. The attempt to make this feature of the logical structure of language the subject of our thought results in a violation of logical syntax. If such a proposition could be formed, it would involve the combination of logical items from incompatible logical categories. Logic forbids this. Such a proposition would be logically flawed. It would involve, as Hacker puts it, a "misuse" of language. It involves using an expression for a concept where an expression for an object must go. We are trying to give the sign a wrong use. Such counter-syntactically formed propositions are not genuine propositions. They are pseudo-propositions. They are a kind of nonsense. But they are not mere nonsense. Through the manner in which they fail to make sense, they make certain features of the logical structure of reality perspicuous.

This reading of the *Tractatus* relies not only on the distinction Hacker draws (between two kinds of philosophical nonsense), but on another distinction—between counter-syntactic nonsense and mere nonsense. The former is a kind of nonsense in which we can recognize the place in the syntax of a sentence for an item of a certain logical category, but something of the wrong category has been put in that place. Mere nonsense is a kind of nonsense in which we cannot discern sufficient syntactic structure to even identify any part of the string as being the place for an item of a certain logical category. Mere nonsense is not, as it were, even trying to play by the rules of logic.¹¹⁸ Deep philosophical nonsense involves counter-syntactic formation: it plays by the rules up to a point and then breaks them. By breaking the rules of logic, deep nonsense brings these rules out into open view. By transgressing the limits of

the logical structure of language, it makes these limits visible. Here, at the penultimate rung of the ladder, the reader of the *Tractatus* admits that the words he utters—in his attempt to articulate what he takes himself to *see*—are nonsense. Nevertheless, he continues desperately to cling to a fundamentally Cartesian picture of the laws of logic (as representing limits against which we chafe in our philosophizing about the nature of logic)—the very picture the *Tractatus* aims to explode from within.

I have italicized the words “strictly speaking” in the Hacker and Geach quotations above. Geach says pseudo-propositions are like propositions (they convey insight) but, strictly speaking, they’re not propositions. Hacker says they’re nonsense, strictly speaking, but they’re not complete nonsense (indeed, what they mean is quite correct). It is not a coincidence that these two commentators resort to such a device. Every proponent of the standard reading of the *Tractatus* resorts to expressions of this sort. Quotation marks are another favorite way around the problem: pseudo-propositions are not propositions but they can convey “insight.” What such a piece of nonsense “means” is quite correct. What it expresses is not a fact, of course, but it is a “fact.” Here is Eddy Zemach:

Let us refer to formal features of facts as “facts” in double quotation marks. Such a “fact” is not a fact at all but that which makes facts possible. . . . Now formal “facts” cannot be expressed in language.¹¹⁹

You are welcome, in your role as commentator on the *Tractatus*, to utter the words: ‘It’s not a fact, but rather a “fact.”’ Now you have two choices: 1) You can refrain from trying to tell me what a “fact” is—quite properly, on the grounds that it cannot be expressed in language—in which case by resorting to the device of quotation marks you have conveyed *nothing* and we might as well dispense with any further references to “facts.” Or: 2) You can tell me how much like a fact a “fact” is—you can say: “It’s that which makes facts possible”—but then, if these words are able to help me, presumably it is because you have *said* what a “fact” is. Now I can follow what you mean by your neologism “fact” because you’ve given it a meaning. But then don’t go on to tell me that what it means cannot be expressed in language. The standard response to this dilemma is to try: 3) “It looks like I’ve just expressed what cannot be said in language, but I haven’t, because what I have said is nonsense.” I’m inclined to agree. But if it’s nonsense you’ve said nothing. We’re back to 1).

The device of saying “strictly speaking” is more elegant: it allows one to effectively put quotation marks around the contrast term (the unstrictly spoken version of the item) without its being as conspicuous that the dilemma remains: either 1) one has neglected to say what the (unstrictly spoken) term means, or 2) one is playing a shell game. Quotation marks and expressions like “strictly speaking” help to disguise the fundamental inco-

herence which lies at the heart of this way of trying to approach the *Tractatus*.¹²⁰ The commentator is constantly finding himself in the position of doing what he says cannot be done, namely, saying that which cannot be said. He is busily telling you in language what lies beyond the limits of language. His problem is a version of Descartes’s; he wants to touch something with his mind that exceeds the grasp of ordinary thought. The commentator wants language to sidle up and get close to what it cannot encompass. He wants to be able to subtract what can be said “strictly speaking” from what can be said (*simpliciter*) and still have a remainder: what can be shown (“said”) by means of nonsense. Then he wants to simply *say*, in sentences we can all understand, what it is that Wittgenstein’s work is unable to say—and hence only shows. (Though often the commentator will also say that Wittgenstein’s book assumes the remarkable form that it does because these things can *only* be shown through a very special structure of deep nonsense.) According to the commentator’s theory, you can only encounter the limits of language by running up against them. His practice, however, testifies that he thinks you can refer to them without any trouble by using expressions like “the limits of language” (thereby apparently revealing the elaborate form of the *Tractatus* to be utterly incidental to its purpose).

On the standard reading of the *Tractatus*, a piece of elucidatory nonsense is unable to express a judgment—since it violates the logical conditions of judgment—but it is still able to serve up a candidate for judgment: something which we can affirm as a truth. The aim of the work, on this view, is to take us from a piece of nonsense to a positive insight into the nature of things. This reading depends critically on attributing to the *Tractatus* the following three ideas: 1) we can break the rules of logic, thereby producing a kind of deep nonsense; 2) nonsense is able to convey (or “convey”) thoughts (or “thoughts”); 3) there are (ineffable) “truths” which the logical structure of language bars us from being able to say. These three ideas are then combined into the following teaching: breaking the (syntactical) rules of logic in the right way allows us to show the unsayable—by running up against the limits of language, we are able to “convey” what lies beyond these limits.

“Running up against the limits of language? Language is, after all, not a cage.”¹²¹ The standard reading of the *Tractatus* has the teaching of the work inside out. Throwing away the ladder means throwing away the idea that language is a cage and that the rules of logic form its bars.

THE METHOD OF THE *TRACTATUS*

In the Preface to the *Tractatus*, Wittgenstein writes: “*Dieses Buch . . . ist also kein Lehrbuch.*” This book is not a catechism, a doctrinal text. It is not a work which propounds a doctrine. Later he says: “Philosophy is not a body

of doctrine [*Lehre*] but an activity” (§4.112). He then immediately goes on to say what kind of an activity philosophy is: one of elucidation. Both early and late, Wittgenstein will insist that the difficulty of his work is tied to the fact that he is not putting forward *theses*.¹²² But if the work does not culminate in a conclusion about the nature of logic, how then does it effect illumination? What are we supposed to do with the nonsense the *Tractatus* presents us with?

Towards the end of “Rethinking Mathematical Necessity,” Putnam writes:

If it makes no sense to say or think that we have discovered that . . . [logic] is *wrong*, then it also makes no sense to offer a reason for thinking it is not wrong. A reason for thinking . . . [logic] is not wrong is a reason which excludes nothing. Trying to justify . . . [logic] is like trying to say that whereof one cannot speak thereof one must be silent; in both cases, it only looks as if something is being ruled out or avoided.¹²³

Putnam here connects the topic of this paper with the question of how one should interpret the closing line of the *Tractatus*. Putnam suggests that line should not be read as debarring us from being able to say something. The contrapositive of that line is ‘whereof one may speak, thereof one can speak.’¹²⁴ Putnam’s reading of that line suggests that if we are faced with a silence at the end of the book, this is simply because (although there has been a great deal of noise) nothing has been said.¹²⁵ But proponents of the standard reading of the *Tractatus* take this silence to be one that guards the inef-fable. They hear in this line (which speaks of silence) the declaration of a substantive thesis: there are certain things which *cannot* be said and concerning them we *must* remain silent.¹²⁶ At one point in the *Investigations*—in the middle of another discussion about things which cannot be stated in language—Wittgenstein formulates the task of philosophy as follows: “The great difficulty here is not to represent the matter as if there were something one *couldn’t* do” (§374).

Wittgenstein says in our epigraph that what we wind up with when we try to draw a limit to thought is not deep nonsense, but rather *einfach Unsinn*—*simply nonsense*. Frege’s word for a mock thought is a *Scheingedanke*. Both Frege’s and Wittgenstein’s word for a pseudo-proposition is a *Scheinsatz*—a mock proposition. A mock proposition is not just not “strictly speaking” a proposition; it is not a kind of a proposition, any more than stage thunder is a kind of thunder.¹²⁷ A philosophical elucidation aims to show us that the “propositions” we come out with in philosophy are not propositions: the nonsense we are attracted to is plain unvarnished non-sense—words that do not express thoughts.

The significance for Wittgenstein of Frege’s exercise in elucidation can

be put as follows: it enables us to come to see, once we peel off all the layers of the onion, that there is no “it” which has been proposed as the content of the thought experiment. In a sense, we come to see that there is no thought experiment. All that we are left with is the realization that we were subject to an illusion of thought. It becomes the mark of a successful philosophical elucidation for Wittgenstein—as for Kant—that it bring its interlocutor to the point where he can recognize the illusion to which he is subject *as* an illusion. For Wittgenstein, however—unlike for Kant—this means that a philosophical work which is self-conscious about its method will have to abandon the form of the treatise.¹²⁸

To say that a philosophical work consists of elucidations is to say that it must assume the structure of an onion. Frege’s thought experiment is an example of a philosophical meditation which exhibits this structure. What happens is not that we succeed in conceiving of an extraordinary possibility (logically alien thought) and then judge “it” to be impossible. Rather, what happens is—if the elucidation succeeds in its aim—we are drawn into an illusion of occupying a certain sort of a perspective; call it the Cartesian perspective. From this perspective, we take ourselves to be able to survey the possibilities which undergird how things are with us, holding our necessities in place.¹²⁹ From this perspective, we contemplate the laws of logic as they are, as well as the possibility of their being otherwise. We take ourselves to be occupying a perspective from which we can view the laws of logic from sideways on.¹³⁰ The only “insight” the work imparts therefore is one about the reader himself: that he is prone to such illusions.

This illusion of perspective is engendered through an illusion of sense. We imagine ourselves to be making sense of the words in which the thought experiment is couched, when no sense (as yet) has been made. The *Tractatus*’s way of putting this (in §5.4733) is to say that if a sentence “has no sense, that can only be because we have failed to give a *meaning* to some of its constituent parts. (Even if we believe that we have done so.)” The problem is that we do believe that we have given a meaning to all of the sentence’s constituent parts.¹³¹ We think nonsense is produced not by a failure on our part, but by a failure on the sentence’s part. We think the problem lies (when we contemplate “the possibility of logically alien thought”) not with the absence of meaning (in our failing to mean anything with these words at all), but rather with the senses the words already have—senses which the words bring with them into this flawed thought. We think the thought is flawed because the senses of its parts are incompatible (“illogical” and “thought,” “private” and “language”): they clash with one another. They fail to add up to a thought. So we feel our words are attempting to think a logically impossible thought—and that this involves a kind of impossibility of a higher order than ordinary impossibility.¹³² But Wittgenstein’s teaching is

that the problem lies not in the words (we could find a use for them), but in our confused relation to the words: in our experiencing ourselves as meaning something definite by them, yet also feeling that what we take ourselves to be meaning with the words makes no sense. We are confused about what it is we want to say and we project our confusion onto the linguistic string. Then we look at the linguistic string and imagine we discover what *it* is trying to say. We want to say to the string: “We know what you mean, but ‘it’ cannot be said.” The incoherence of our desires with respect to the sentence—wishing to both mean and not mean something with it—is seen by us as an incoherence in what the words want to be saying (if only it were something sayable). We displace our desire onto the words and see them as *aspiring* to say something they never quite succeed in saying (because, we tell ourselves, “it” cannot be said). We account for the confusion these words engender in us by discovering in the words a hopelessly flawed sense.

The heart of the Tractarian conception of logic is to be found in the remark that “we cannot make mistakes in logic” (§5.473). The burden of the *Tractatus*—and much of Wittgenstein’s later writing—is to try to show us that the idea that we can violate the logical syntax of language rests upon a confused conception of “the logical structure of thought”¹³³—that there is no distinction to be drawn between deep nonsense and mere nonsense.¹³⁴ “Everything which is possible in logic is also permitted” (§5.473). If a sentence is nonsense, this is not because *it* is trying but failing to make sense (by breaking a rule of logic), but because *we* have failed to make sense with it.¹³⁵ The *Tractatus* puts it like this: “The sentence is nonsensical because we have failed to make an arbitrary determination of sense, not because the symbol is in itself unpermissible” (§5.473). The idea that there are illegitimately constructed propositions¹³⁶ rests upon a misunderstanding of the logic of our language.¹³⁷ Indeed, one of the most important continuities between early and late Wittgenstein lies in his attack on the idea of a hopelessly flawed sense¹³⁸—the idea which gives rise to the illusion that we can occupy the Cartesian perspective. In the *Tractatus*, Wittgenstein writes: “We cannot give a sign the wrong sense” (5.4732). In the *Investigations*: “When a sentence is called senseless, it is not as it were its sense that is senseless” (#500).¹³⁹ This does not mean that we *cannot* give these words a sense, but only that we have (as yet) failed to do so.¹⁴⁰

In the end, however, the snake bites its own tail. Our guiding idea—the idea that “we cannot make mistakes in logic”—turns out itself to be a piece of nonsense. For if the sentence “we *can* make mistakes in logic” turns out to be nonsense, then so does its denial. But in order to make sense of either of these sentences we have to make sense of “the possibility of illogical thought.” Each rung of the ladder depends on its predecessors for support. The collapse of one rung triggers the collapse of the next. We are initiated into a structure of thought which is designed to undermine itself. The

Tractatus takes the (illusory) structure of the problematic of the logical aliens to be paradigmatic of the “structure” of philosophical confusion generally, and takes its elucidatory burden to be illustrative of the burden of philosophical work generally. The aim is not to take us from a piece of deep nonsense to a deep insight into the nature of things, but rather from a piece of apparently deep nonsense to the dissolution of the *appearance* of depth. This brings us to a second important continuity in Wittgenstein’s work—his conception of the aim of philosophy. In the *Investigations*, he writes: “My aim is: to teach you to pass from a piece of disguised nonsense to something that is undisguised nonsense” (§464). In the *Tractatus*:

My propositions *serve as elucidations* in the following way: anyone who *understands me* eventually *recognizes them as nonsensical*, when he has climbed out through them, on them, over them. (He must, so to speak, throw away the ladder after he has climbed up it.) [My emphases] (§6.54)

Wittgenstein does not ask his reader here to “grasp” his “thoughts.” He does not call upon the reader to understand his *sentences*, but rather to understand *him*, namely the author and the kind of activity in which he is engaged—one of elucidation.¹⁴¹ He also tells us how these sentences serve as elucidations: by enabling us to recognize them *as* nonsense. One does not reach the end by arriving at the last page, but by arriving at a certain point in an activity—the point when the elucidation has served its purpose: when the illusion of sense is exploded from within and one has arrived at the center of the onion.

The Preface and the concluding sections of the *Tractatus* form the *frame* of the text. It is there that Wittgenstein provides us with instructions for how to read what we find in the *body* of the text. In the Preface, Wittgenstein tells us that the idea that we can form thoughts about the limits of thought is *simply nonsense*. The book starts with a *warning* to the effect that a certain kind of enterprise—one of attempting to draw a limit to thought—leads to plain nonsense. In the body of the text, we are offered (what appears to be) a doctrine about “the limits of thought.” With the aid of this doctrine, we imagine ourselves to be able to both draw these limits and see beyond them. At the conclusion of the book, we are told that the author’s elucidations have succeeded only if we recognize what we find in the body of the text to be (simply) nonsense. The sign that we have understood *the author* (as opposed to the body) of the work is that we can throw the ladder we have climbed up away. That is to say, we have finished the work, and the work is finished with us, when we are able to simply *throw* the sentences in the body of the work—sentences about “the limits of language” and the unsayable things which lie beyond them—*away*.¹⁴²

To read the work correctly we need to hold on to something and throw something away. What we hold on to is the frame of the text—the text’s instructions for how to read it and when to throw it away. What we

“eventually” throw away is the body of the text—its mock doctrine. The proponents of the standard interpretation opt for the opposite procedure: they cling firmly to what they find in the body of the text and throw away the warnings and instructions offered in the frame. They peel far enough down into the onion to see that the sentences they are attracted to *are* nonsense, but they still want to hold onto what (they imagine) the nonsense is trying to say. They conclude that the Tractarian onion must have a pit in the middle: an “insight” into the *truth* of certain deep matters—even though, strictly speaking, this truth cannot be put into language. Wittgenstein’s aim is to enable us to recognize that there is no ineffable “it”—the onion has no pit. One is simply left with what one is left with after one has peeled away all the layers of an onion.

A PARABLE

Certain general features of the *Tractatus*’s mode of elucidation are reflected in the following Jewish tale which dates from the beginning of this century.¹⁴³ The parable, like the *Tractatus*, has an ethical point.

A Pole and a Jew are sitting in a train, facing each other. The Pole shifts nervously, watching the Jew all the time; something is irritating him. Finally, unable to restrain himself any longer, he addresses the Jew: “Tell me if you would please sir: how do you Jews carry it off? It’s not that I’m anti-Semitic; but, I must confess, I find you Jews terribly perplexing. I mean, I simply cannot understand how you do it. I simply want to know: how do you succeed in extracting from people everything they have down to their last coin and thereby accumulating your vast wealth? What is your secret?” The Jew pauses for a moment and then responds: “Very well. I will tell you.” A second pause. “But it would not be right for me to divulge such a secret for nothing. First, you must give me five zloty.” After receiving the required amount, the Jew begins: “First, you take a dead fish; you cut off its head and put its entrails in a glass of water. Then, around midnight, when the moon is full, you must bury the glass in a churchyard . . .” “And,” interrupts the Pole, “if I do all this will I become rich?” “Not so quickly,” replies the Jew, “this is not all you must do; but, if you wish me to continue, you must first pay me another five zloty.” After receiving more money, the Jew continues in a similar vein. Soon afterwards, the Pole again interrupts, and before continuing, the Jew again demands more money. And so on, and so on; until all of a sudden the Pole explodes in fury: “You rascal, I see what it is you are aiming at; there is no secret at the bottom of this at all.” “That,” replies the Jew, as he returns the Pole his money, “*is* the secret.”

The Pole has a problem. He is perplexed about Jews. He desires to possess the Jew’s secret. His perplexity will be relieved, he imagines, only if the Jew will disclose his secret. The Pole has a clear picture of the form which the solution to his problem must assume: the Jew must provide him with *knowledge*. The Pole pictures this knowledge as both precious and hidden. Beyond this, the Pole has no clear conception of what such knowledge is like, other than that it is something he does not understand. All he knows for sure about this knowledge is that he wants it. The Jew engages the Pole’s desire by entering into his picture of the form which he imagines his satisfaction must assume. The Jew therefore begins by charging the Pole money and urging him to look in the direction he already wishes to attend. But the Jew’s delivery on his promise to relieve the Pole of his craving for knowledge lies not *in* any of the bits of secret doctrine which the Jew imparts to his listener, but rather *through* the activity by which he succeeds in capturing the listener’s desire for such doctrine. The Pole is relieved of his craving (for the Jew’s secret doctrine) when he recognizes that this doctrine (to which he is so powerfully attracted) cannot satisfy him. It cannot satisfy him because there is no such doctrine: the secret is that there is no secret.

The parable ends by recording the Jew’s final gesture and final words. We are told nothing concerning the Pole’s response to them. His perplexities about Jews may persist and continue to kindle his craving for knowledge. The Pole will find relief from this craving only when he is relieved of the illusion that he will be satisfied by (Jewish) knowledge. He will be relieved of his perplexity about Jews—and the lesson will be complete—when he recognizes that the source of his attraction to Jewish doctrine has nothing to do with Jews and everything to do with himself.

NOTES

1. This paper is indebted to the writings of Cora Diamond and Thomas Ricketts, to conversations with Stanley Cavell, Stephen Engstrom, John McDowell, Hilary Putnam, and Jamie Tappenden, to comments on an earlier draft by Cora Diamond, David Finkelstein, Richard Gale, Martin Stone, Michael Thompson, and Lisa Van Alstyne, to lectures and seminars on Frege by Burton Dreben and Warren Goldfarb, and to John McDowell and A. D. Woozley for telling me about Little Red Hen.
2. *Tractatus Logico-Philosophicus*, Preface.
3. I owe this quotation to Archibald R. MacIntyre, *Curare: Its History, Nature, and Clinical Use* (Chicago: University of Chicago Press, 1947), 209. MacIntyre also employs it as an epigraph, though to make a rather different point (the only proper way to stimulate a

muscle is from the inside—by its nerve). There is no indication one way or the other as to whether MacIntyre is aware of the following significant clue as to the author's identity: "Parva Gallina Rubra" is Latin for "Little Red Hen."

4. *Summa Theologica*, Q. 25, Art. 3.

5. One could, quite justly, charge that the complaint developed in the preceding paragraph against Aquinas fails to distinguish between God's omnipotence (His absolute power) and His aseity (the absolute independence of His existence). I have not distinguished these because my purpose here is to prepare the reader for a discussion of Descartes's dissatisfaction with scholastic views. Descartes moves seamlessly between the question of whether there is something God cannot of His own free will bring about and the question of whether the modal status of the propositions of logic is fixed independently of God. Insofar as Thomas is committed to the claim that the necessary truth of the laws of logic is independent of God's will, Descartes would view him as committed to a doctrine which ascribes a limit to God's power.

6. It seems likely that, in the first instance, Descartes was responding to Suarez, not Aquinas. Suarez explicitly addresses the question of whether the eternal truths are prior to God's will or created by God, and he gives precisely the answer Descartes is most concerned to reject. Suarez's view is that the eternal verities do not derive their truth from God's having chosen to know them; rather, they are known by Him because they are true. Their truth is prior to His knowledge of them and the object of the Divine understanding. If their truth were dependent on God's will, then, contrary to their nature, they would be no more necessary than any other created truth—they would not proceed necessarily but voluntarily. (See *Disputationes Metaphysicae*, Disp. XXXI, sec. 12, No. 40.) In the course of insisting that the eternal truths are independent of God's will, Suarez allows himself to say that the eternal truths would be true even if God did not exist. This formulation of the problem forms the point of departure for many of Descartes's discussions of the status of the eternal truths; as, for example, in the *Sixth Set of Replies*:

If anyone attends to the immeasurable greatness of God he will find it manifestly clear that there can be nothing whatsoever which does not depend on him. This applies not just to everything that subsists, but to all order, every law, and every reason for anything's being true or good. . . . If some reason for something's being good had existed prior to his preordination, this would have determined God to prefer those things which it was best to do [my emphasis]. (*The Philosophical Writings of Descartes*, trans. Cottingham, Stoothof, and Murdoch in 3 volumes [Cambridge: Cambridge University Press, 1984–1991], vol. 2, 293–94. All subsequent references to Descartes will be to one of these volumes.)

Descartes avoids Suarez's conclusion that there are truths which do not depend upon God's existence by rejecting his (much less controversial) claim that there are truths which do not proceed from God's will. Descartes concludes: "every reason for anything's being true" depends upon the will of God and was preordained by Him. Descartes, later in this same passage, goes on to identify the question of whether the eternal truths depend upon God with the question of whether He could have brought their negations about (so "that it was not true that twice four make eight"). Thus the question of the status of the most fundamental truths (whether they would be true even if God did not exist) becomes entangled, for Descartes (as it never would for Aquinas), with the question of the extent of God's omnipotence (whether it lies within his power to bring about the negation of a fundamental truth).

7. In context, the passage runs: "As for the eternal truths . . . they are true or possible only because God knows them as true or possible. They are not known as true by God in any way that would imply that they are true independently of Him. If men really understood the sense of their words they could never say without blasphemy that the truth of anything is prior to the knowledge which God has of it." The passage goes on to make it explicit that Descartes's concern here is to repudiate Suarez's doctrine: "So we must not say that if God did not exist nevertheless these truths would be true; for the existence of God is

the first and most eternal of all possible truths and the one from which alone all others proceed" (vol. 3, 24).

8. *Op. cit.*, vol. 3, 235.

9. A great many ingenious exegetical efforts to rescue Descartes's doctrine of the creation of the eternal truths seem to me to depend upon a neglect, on the part of commentators, of Descartes's unabashed willingness to indulge in such positive assertions.

10. Descartes carefully distinguishes between the 'infinite' and the 'indefinite', reserving the former term for God:

Our reason for using the term 'indefinite' rather than 'infinite' in these cases [the divisibility of a body, the number of stars] is, in the first place, so as to reserve the term 'infinite' for God alone. For in the case of God alone, not only do we fail to recognize any limits in any respect, but our understanding positively tells us that there are none. Secondly, in the case of other things, our understanding does not in the same way positively tell us that they lack limits in some respect; we merely acknowledge in a negative way that any limits which they may have cannot be discovered by us. (vol. 1, 202)

Our idea of God is not simply of a being whose limits exceed our grasp, but rather of a being who is *positively without limits*. "[I]t is in the nature of such a being not to be fully grasped by us" (vol. 1, 199). So, for Descartes, the fact that God is infinite entails that He is incomprehensible:

We should never enter into arguments about the infinite. . . . For since we are finite, it would be absurd for us to determine anything concerning the infinite; for this would be an attempt to limit it and grasp it. (vol. 1, 201–02)

This insistence upon the infinitude of God introduces a profound tension into the heart of Descartes's philosophy—a tension between the foundational role played by an adequate idea of God and the incomprehensibility of God to our finite minds. On the one hand, the project of furnishing a secure foundation for a system of scientific knowledge depends upon our knowledge of God: "The certainty and truth of all knowledge depends uniquely on my awareness of the true God, to such an extent that I was incapable of perfect knowledge about anything else until I became aware of Him" (vol. 2, 49). On the other hand, the idea of God is the idea of a being whose true nature is beyond the reach of our finite minds: "We cannot comprehend the greatness of God, even though we can know it" (vol. 3, 23). This latter claim also gives rise to a further puzzle (which we will begin to explore in a moment): how can we know what we cannot comprehend?

11. Such a view of God's omnipotence (which takes even the most fundamental principles of logical consistency to be subject to the Divine will) leads to theological havoc. I'm not going to explore here any of the many absurdities such a view may seem to immediately entangle itself in. For a brief but penetrating general discussion of the problems, see Richard M. Gale, *On the Nature and Existence of God* (Cambridge: Cambridge University Press, 1991), 18–29. For a crisp discussion of the problems with Descartes's view, in particular, see Peter T. Geach, *Providence and Evil* (Cambridge: Cambridge University Press, 1977), Chapter 1. Among the more helpful attempts to sort out Descartes's views on the creation of the eternal truths are A. Boyce Gibson, "The Eternal Verities and the Will of God in the Philosophy of Descartes," *Proceedings of the Aristotelian Society*, n.s. 30, 1929–1930; E. Bréhier, "The Creation of the Eternal Truths in Descartes's System" in *Descartes: A Collection of Critical Essays*, ed. Doney (South Bend: University of Notre Dame Press, 1968); E. M. Curley, "Descartes and the Creation of the Eternal Truths" *The Philosophical Review* XCIII (4) (Oct. 1984); H. Frankfurt, "Descartes and the Creation of the Eternal Truths" *Philosophical Review* LXXVI (Jan. 1977); A. Funkenstein, *Theology and the Scientific Imagination* (Princeton: Princeton University Press, 1986), 179–92; H. Ishiguro, "The Status of Necessity and Impossibility in Descartes" in *Essays on Descartes's Meditations*, ed. Rorty (Berkeley: University of California Press, 1986); see also the discussions in Guéroult and Wilson cited below.

12. Op. cit., vol. 3, 235.
13. Op. cit., vol. 3, 23.
14. Op. cit., vol. 3, 25.
15. Op. cit., vol. 2, 294.
16. I owe this formulation to Geach, op. cit., 10.
17. Op. cit., vol. 3, 25. Even where Descartes does not explicitly invoke such a distinction (between what we can touch in thought and what we can grasp), he appears to have something of the sort in mind. For example, when he talks of our believing what we cannot grasp, as in *Principles*, §25 (vol. 1, 201)

We must believe everything which God has revealed, even though it may be beyond our grasp.

Hence, if God happens to reveal to us something about himself or others which is beyond the natural reach of our mind . . . we will not refuse to believe it, despite the fact that we do not clearly understand it. And we will not be at all surprised that there is much, both in the immeasurable nature of God and in the things created by him, which is beyond our mental capacity.

18. More generally, one could formulate the Cartesian Predicament as the tangle of philosophical problems one falls into when one attempts to conceive of reason as merely finite or as having limits.
19. Martial Guéroult contests this unqualified way of putting the point and argues that the intelligibility of the hypothesis of the evil genius depends upon an *obscure* knowledge of God. So, although the hypothesis is *prima facie* intelligible, by the end of our meditations we are able to see clearly that such deception would not be possible for God: "That God exists and is not a deceiver is, in fact, an absolute necessity, an uncreated truth. We must have, or pretend to have, an obscure and confused knowledge of God in order not to perceive this" (*The Soul and the Body* [Minneapolis: University of Minnesota Press, 1985], 23). The second paragraph of the *Fourth Meditation*, taken on its own, might appear to bear out such a reading. But the question is whether what is reported there is merely a conclusion that the meditator (following the natural light of reason) is constrained (on pain of contradiction) to "recognize" (vol. 2, 37), or whether it also represents (as Guéroult holds) an absolute constraint on God's power.
20. This immediately raises interpretive issues which lead well beyond the scope of this paper, but which should at least be indicated. A number of commentators (as, for example, Guéroult in the preceding endnote) have thought that to allow that God *could* have chosen to deceive us would be going too far: God after all cannot do anything which is contrary to His nature and it is part of His nature that He is benevolent; it would contradict His nature to deceive us. A being that could deceive us would not be infinitely benevolent and hence would not be God. The thought of God deceiving us therefore involves a manifest *contradiction*. Now Descartes definitely agrees that such a thought involves a contradiction. But, if one takes seriously Descartes's view of the infinite (and how we cannot limit it by our finite conceptions), then a claim about what God must do (because it would involve a contradiction for Him to do otherwise) threatens to collapse into the following claim: we perceive a contradiction when we attempt to conceive of His doing such a thing. The pressure falls in the end on the question of the adequacy of *our idea* of an infinite God. As indicated in the previous endnote, one way out is to say that the appearance of a difficulty here derives from obscurities in our idea of God; as these are resolved the difficulty vanishes—we come to see clearly and distinctly that God could never be so mischievous. But in our reflections on the infinite, are we not limited by our finite powers of conception? The question is: does such a contradiction in *our conception of God* (when we imagine Him as a deceiver) afford us, on Descartes's view, with a sufficient basis for asserting that He *lacks the power* to do such a thing? (For it is equally part of our concept of God that He is absolutely omnipotent.) To put it differently, can we infer from what is absolutely inconceivable to us (given our limited concept of God) to what is absolutely impossible for God (given His infinite power)? Where one comes out on this

interpretive issue will depend a great deal upon how much weight one puts on a host of apparently unequivocal passages in Descartes (which it is tempting to ignore) about how we should not ascribe *any* limits to God's power (especially on the basis of our limited powers of conception)—passages such as *Principles*, §§. 25–27 (vol. 1, 201–02), the reply to the eighth objection in the *Sixth Set of Replies*, and numerous remarks in the *Correspondence*, such as the following:

For my part, I know that my intellect is finite and God's power is infinite, and so I set no limits to it. . . . And so I boldly assert that God can do everything which I perceive to be possible, but I am not so bold as to assert the converse, namely that He cannot do what conflicts with my conception of things—I merely say that it involves a contradiction. (vol. 3, 363)

This suggests that, with respect to the idea that God is a deceiver, we should "merely say that it involves a contradiction," but we should not be so bold as to assert that He cannot do what conflicts with our conception of Him. (I regret that I cannot take up here the issue of how such a passage might bear on the problem of the Cartesian Circle and the related question of what sort of validation it is that our clear and distinct ideas receive within the structure of the *Meditations*.)

21. This formulation (and that of the previous sentence) sidesteps a central problem: our clearest and most distinct idea, according to Descartes, is our idea of God—it is "the one idea which stands out from all the others" (vol. 1, 197). But, if the necessity of our clear and distinct ideas merely derives from the principles which have been implanted in our finite minds, this opens up the possibility of a gap between God's (actual) nature and even the most clear and distinct idea which we are able to form of His nature. This, in turn, raises the following exceedingly corrosive worry (suppressed in the previous note): our clear and distinct perception of God's omnipotence is merely a reflection of the fact that a certain concept of God has been implanted in our minds. But now it is no longer clear what the basis is for Descartes's claim that we should never say that God cannot do something. It starts to look as if all that this means is that omnipotence is a necessary feature of our concept of God—that, insofar as we wish to think of God, we cannot think of him in any other way than as omnipotent. But why shouldn't we conclude that benevolence is an equally essential feature of our concept of God and hence conclude that the idea that God could be a deceiver is one which is simply unthinkable for us? In order to block this, it looks as if Descartes has to say that (unlike the idea that God could be a deceiver) the idea that God lacks omnipotence is one that we cannot even apprehend. Although it is still God we touch upon in our thought when we apprehend the (incomprehensible) possibility of His deceiving us, it is no longer in any sense an idea of God that we form when we imagine a being who is not supremely powerful. But this won't do. For the attempt to privilege omnipotence and treat it as an absolute feature of God's nature (or of our concept of God) not only runs afoul of the doctrine of God's simplicity, but, in the end, it deprives the idea that God has a nature of its sense. Descartes says we should never say that God cannot do X even if X involves something which we take to be contrary to God's nature. But one's grip on the idea of a being's having a nature—and hence one's concept of such a being—is tied to one's understanding of the modalities. To say that X is part of God's nature is to say that He wouldn't be God without X. To hold that God can do anything, even something which is contrary to His nature, is to hold that He can make anything compatible with His nature—which is to hold that God has no nature. Thus, to assign omnipotence an absolute priority over all of God's other attributes is to completely drain the concept of God of all its content by depriving us of any handle on the notion that God has a nature.
22. One way to render what one can perceive clearly and distinctly open to doubt is to have it occur to one that God could have given one a flawed nature (such that one is deceived even about that which seems most evident). When one is working *within* one's nature, as it were, and one turns to the things themselves, one is simply unable to withhold assent to that which is clear and distinct or to affirm a manifest contradiction. See, for example, the *Third Meditation*:

But what about when I was considering something very simple and straightforward . . . for example that two and three added together make

five, and so on? Did I not see at least these things clearly enough to affirm their truth? Indeed, the only reason for my later judgment that they were open to doubt was that it occurred to me that perhaps some God could have given me a nature such that I was deceived even in matters which seemed most evident. And whenever my preconceived belief in the supreme power of God comes to mind, I cannot but admit that it would be easy for him, if he so desired, to bring it about that I go wrong even in those matters which I think I see utterly clearly with my mind's eye. Yet when I turn to the things themselves which I think I perceive very clearly, I am so convinced by them that I spontaneously declare: let whoever can do so deceive me, he will never bring it about that . . . two and three added together are more or less than five, or anything of this kind in which I see a manifest contradiction. (vol. 3, 25)

The idea that God could have given one a flawed nature renders even our most secure beliefs (those based on clear and distinct perception) doubtful by introducing the supposition that reason (one's faculty of clear and distinct perception) is itself defective. This idea has the power to dislodge our confidence in even the most basic truths of reason—a confidence which is otherwise unshakable. Under ordinary circumstances, we are unable to doubt what we clearly and distinctly perceive. A clear and distinct perception is one which is irresistible. The conception of reason at work here (as comprising those principles in accordance with which we cannot help but think) is thoroughly psychologistic. Just as a contradiction involves something which we are incapable of affirming, a clear and distinct perception, if we attend to it, involves something from which we are unable to withhold assent—something which it is psychologically impossible to doubt. Descartes's construal of the goal of rational argument is equally psychologistic: it is to attain a state of unshakable belief—a form of “conviction based on argument so strong that it can never be shaken by any stronger argument” (vol. 3, 147). Descartes's psychologism is evident in a passage such as the following:

As soon as we think that we correctly perceive something, we are spontaneously convinced that it is true. Now if this conviction is so firm that it is impossible for us ever to have any reason for doubting what we are convinced of, then there are no further questions for us to ask: we have everything that we could reasonably want . . . conviction so firm that it is quite incapable of being destroyed; and such a conviction is clearly the same as the most perfect certainty. (vol. 2, 103)

The extent of Descartes's psychologism and its implications for the interpretation of his philosophy as a whole are helpfully discussed by C. Larmore, “Descartes's Psychologistic Theory of Assent” *History of Philosophy Quarterly*, 1984; L. Loeb, “The Cartesian Circle” in *The Cambridge Companion to Descartes*, ed. by J. Cottingham (Cambridge: Cambridge University Press, 1992); and R. Rubin, “Descartes's Validation of Clear and Distinct Apprehension” *Philosophical Review*, 1977.

23. Op. cit., vol. 3, 359.
24. This is explicit, for example, in the passage from Descartes with which we began (vol. 3, 235). This might appear to contradict his remark in the opening of the *Sixth Meditation* that “I have never judged that something could not be made by Him except on the grounds that there would be a contradiction in my perceiving it distinctly” (vol. 2, 50). But Descartes not only says in the former passage that God could have made a contradiction true but also that “we should not try to comprehend it, since our nature is incapable of doing so.” This suggests that what is at issue in the *Sixth Meditation* is a judgment which flows from the naturally repugnant character of a contradiction (to our finite faculty of judgment) and not a judgment which is grounded in a clear and distinct perception of the positive limits of God's power.
25. The crucial tenet of Cartesianism—that reason imposes limits on the structure of our thought—therefore cuts across any facile classification of philosophies in terms of the usual pigeonholes, such as empiricism versus rationalism (or naturalism versus a prior-

ism). Viewed from this perspective, Descartes and Mill are staunch Cartesians; Leibniz and Locke staunch anti-Cartesians.

It is instructive to contrast Locke, one of the founding fathers of empiricism, with Descartes in this regard. Locke, like Descartes, will argue that an inability to conceive how God could do something does not, in general, afford a basis for concluding that He could not do it. To conclude thus would be to deny God's omnipotence. Locke's favorite example in this connection is God's ability to superadd the power of thought to matter: “I confess as much as you please that we cannot conceive how a solid . . . substance thinks; but this weakness of our apprehensions reaches not the power of God” (*The Works of John Locke* [London: 1823], 468).

To deny that God could endow brute matter with the power to think (on the ground that we cannot conceive of how thought could be produced by matter) is to wander into blasphemy. But what is at issue here, for Locke, is our inability to conceive how a certain sort of cause could give rise to a certain sort of effect. We cannot conceive how such an effect could be produced by such a cause, but this does not mean that God could not ordain it to be so. Yet Locke—for all his humility about the limits of human knowledge and all his piety about God's omnipotence—will not hesitate to declare “that Omnipotency cannot make a substance to be solid and not solid at the same time” (465). Our powers of comprehension are woefully finite and hence inconceivability is, in general, not a measure of impossibility. But our inability to grasp a contradiction is not on a par with our inability to conceive certain kinds of causal connection; the former is in no way a symptom of the finitude of our minds. Locke accepts the Cartesian formula “that we cannot conceive something is not a reason to deny that God can do it” only insofar as no contradiction is involved in our description of what God can do. That there is no contradiction involved (in our conception of something) is, for Locke (as for Aquinas), the test of whether something is possible and hence of whether (we can coherently say) God can do it. Hence, Locke writes:

I think it cannot be denied that God, having a power to produce ideas in us, can give that power to another; or, to express it otherwise, make any idea the effect of any operation on our bodies. This has no contradiction in it, and *therefore* is possible [my emphasis]. (253)

26. She writes:

It is clear enough, in any case, that Descartes did regard the ‘necessity’ we perceive in mathematical propositions as in some sense and degree a function of the constitution of our minds—themselves finite ‘creatures’. And even this relatively limited claim has been found extreme by some philosophers (such as Leibniz). It would appear, however, that the history of epistemology and philosophy of mathematics since Descartes has tended very clearly to demonstrate that his position was far from wild, or excessively idiosyncratic. From Hume and Kant onward it has been widely held that alleged perceptions of ‘necessity’ cannot be taken for granted, and that we must in some sense or other have recourse to the structure and workings of our own minds to give an account of these ‘perceptions’. In addition, there have been increasingly extensive doubts about the alleged ineluctable necessity or eternity of the traditional necessary (or eternal) truths. There is even a lively controversy among some leading philosophers of the present century whether logical necessity might not go the same way as the traditional ‘necessity’ of Euclidean geometry. From this point of view what is really extraordinary is not Descartes's creation doctrine itself, but the fact that he has not been given more credit for arriving at it. (*Descartes* [London: Routledge Kegan Paul, 1978], 125–26.)

27. *Mind, Language and Reality* (Cambridge: Cambridge University Press, 1975), xv.
28. *Ibid.*, xvi.
29. Op. cit., 235. Wilson immediately goes on to observe, however:

A principal difference between Descartes and Putnam is that Descartes does not link his position to any observation of ‘conceptual revolutions’ and . . . does not seem to let his creation doctrine ultimately interfere with his own reliance on conceivability as a present guide to certain truth.

This is connected to a difference I will touch on in a moment: for Descartes, the contrast is between the human and the Divine, for (this) Putnam, it is between a present and a future state of human knowledge.

30. Putnam, “The Analytic and The Synthetic” in *Mind, Language and Reality*; Quine, “Two Dogmas of Empiricism” in *From a Logical Point of View* (Cambridge, Mass.: Harvard University Press, 1953).
31. Collected in *Realism and Reason* (Cambridge: Cambridge University Press, 1983), 98–114. Putnam’s paper is followed by a note in which Putnam writes that the paper which precedes the note is actually only “a first draft of a paper I never finished.” In the note Putnam goes on to complicate, and to some extent retract, the view put forward in the body of the paper. The note is followed by a “Note to supercede (supplement?) the preceding note.” This document seems to retract other aspects of the main paper and some of the preceding note’s retractions. In short we have a philosophico-literary structure fully worthy of Kierkegaard in its complexity. I regret that I am unable to do it justice here. What the paper does make clear is that the views of very recent Putnam do not represent a sudden departure in his thought, but form part of a gradual development that has been underway for some time.
32. *Ibid.*, 101.
33. *Ibid.*, 105.
34. *Ibid.*, 107.
35. Putnam’s subsequent arguments suggest that he thinks other logical laws (as well as stronger versions of the principle of noncontradiction) are unrevisable.
36. *Ibid.*, 109–10.
37. The paper will be appearing under this title in a forthcoming collection of Putnam’s essays from Harvard University Press. The same paper is also forthcoming under the title “On the Slogan ‘Epistemology Naturalized’” in *On Quine*, ed. P. Leonardi and M. Santambroggio (Cambridge: Cambridge University Press, 1993).
38. This way of putting the point emphasizes the idea that the negation of a proposition of logic is worse off than the (unnegated) proposition of logic. There is, for very recent Putnam, a significant asymmetry between a logical proposition and its negation: the question of the truth or falsity of a logical proposition makes sense, whereas the parallel question about its negation (in ordinary circumstances) does not; the former meets the conditions of being a thought and the latter does not. This aspect of Putnam’s view, as we shall see, aligns him more closely with Kant and Frege than with the *Tractatus*.
39. This development is anticipated to some extent by the last sentence of the “Note to supercede (supplement?) the preceding note”:

[I]f it is always dangerous to take on the burden of trying to show that a statement is absolutely a priori, . . . it is not just dangerous but actually wrong to make the quick leap from the fact that it is dangerous to claim that any statement is a priori to the absolute claim that there are no a priori truths. (op. cit., 114)
40. This is perhaps the most opportune moment to clear up an inaccuracy in “Rethinking Mathematical Necessity.” Putnam writes that Kant’s view of logical necessity

. . . is in striking contrast to the view expressed in Descartes’s correspondence (which Kant, however, could not have known, since this correspondence was not published then) that God could have created a world which violated the laws of logic.

Descartes’s expression of this view is not limited to his correspondence. As some of my quotations above show, the view is fully explicit in the *Sixth Set of Replies* and

implicit in *The Principles of Philosophy*. More significantly, Descartes’s doctrine of the creation of eternal truths was well known to Leibniz and it is inconceivable that Kant was not familiar with his criticisms of it.

41. In an earlier draft there is at this juncture an explicit reference to Descartes.
42. *Philosophical Essays*, trans. Roger Ariew and Daniel Garber (Indianapolis: Hackett, 1989), 36.
43. Kant’s own full-blooded account of freedom obviously requires a great deal more of a free agent than that he merely manifest a capacity for rational thought. All that matters for our present purposes, however, is that practical reason, for Kant, is a species of *reason*. Descartes’s confusion (about God’s will being constrained by the laws of logic) is tied, for Kant, not only to a confusion about the conditions of rational agency, but also to an insufficient appreciation of the *spontaneity* of reason. Descartes’s account of rational thought and inference (in terms of the clear and distinct perceptions the natural light of reason affords) fundamentally misconceives the character of our faculty of spontaneity, (mis)taking it for, as it were, an alternative form of receptivity—one that is affected by reasons (rather than intuitions) of a determinate sort. The Kantian break with Cartesianism requires exorcising the sensory model of the mind as an organ which perceives reasons.
44. The Leibnizian outline of Kant’s conception of freedom, and its reliance on a distinction between the Realm of Freedom and the Realm of Nature, is evident in a passage such as the following:

Will is a kind of causality belonging to living beings so far as they are rational. *Freedom* would then be the property this causality has of being able to work independently of *determination* by alien causes. . . . The concept of causality carries with it that of *laws*. . . . Hence freedom of the will, although it is not the property of conforming to laws of nature, is not for this reason lawless: it must rather be a causality conforming to immutable laws, though of a special kind; for otherwise a free will would be self-contradictory. (*Groundwork of the Metaphysic of Morals*, trans. H. J. Paton, [Harper and Row, New York: 1964], 114.)

45. *Theodicy* (Open Court, LaSalle: 1985), 246–47.
46. The point is summarized in section 46 of the *Monadology*:

However, we must not imagine, as some do, that the eternal truths, being dependent on God, are arbitrary and depend upon his will, as Descartes seems to have held. . . . That is true only of contingent truths Instead, the necessary truths depend solely on God’s understanding, and are its internal object. (*G.W. Leibniz’s Monadology*, ed. Nicholas Rescher [Pittsburgh: University of Pittsburgh Press: 1991], 156.)
47. “Only a rational being has the power to act in accordance with his idea of laws—that is, in accordance with principles—and only so has he a will” (*Groundwork*, 80).
48. “As all acts of the *understanding* can be reduced to judgments, the understanding may be defined as the *faculty of judgment*” (A69/B94).
49. This is how relatively recent Putnam summarizes the same point:

To say that our faith in the most fundamental principles of deductive logic, our faith in the principle of contradiction itself, is simply an innate propensity . . . is to obliterate totally the distinction between reason and blind faith. (“There Is At Least One A Priori Truth,” op. cit., 108.)
50. Stephen Engstrom argues compellingly (in “The Transcendental Deduction and Skepticism,” forthcoming) that this passage (§27 of the Transcendental Deduction) is *not*—as has often been assumed—to be read as directed against the Cartesian skeptic (but rather against a Humean one). But the Cartesian skeptic Engstrom is concerned to rule out in this context is the more familiar Cartesian *outer-world* skeptic (who doubts the existence of corporeal things outside the mind). Whereas the form of Cartesianism that preoccupies us here—and with which Leibniz contends in the passages quoted above—is of a very different variety; it is one which touches specifically on the question of the character of the

necessity of the most fundamental rules of thought. For Kant, an account of rational constraint in terms of psychological necessity misconstrues the status of both the laws of logic and the categories of the understanding. This suggests that Engstrom could be right that (the unmodified reference to “the skeptic” notwithstanding) no form of classic Cartesian (external-world) skepticism is in view in this passage (as it, for example, clearly is in “The Refutation of Idealism”), without our having to deny that certain Cartesian doctrines are nonetheless coming under fire in §27 of the Transcendental Deduction. Indeed, ‘idealism’, not ‘skepticism’, is Kant’s favored term of description for skepticism concerning outer objects. What Kant calls ‘skepticism’ largely coincides with what I have been calling ‘Cartesianism’.

My point is not that Kant necessarily has Descartes in mind in the Transcendental Deduction, but rather that he is concerned to respond to a Cartesian problematic which he comes to by way of Leibniz and Crusius (and which closely parallels—as Engstrom’s article bears out—a problematic which Kant takes to have been raised by Hume as well).

51. Kant elaborates this point in the *Logic*:

We cannot think or use our understanding otherwise than according to certain rules . . .

All rules according to which the understanding proceeds are either *necessary* or *contingent*. The former are those without which no use of the understanding would be possible at all; the latter are those without which a certain use of the understanding would not take place. The contingent rules which depend upon a certain object of cognition are as variegated as these objects themselves. . . .

If, now, we set aside all cognition that we must borrow from *objects* and reflect solely upon the use of the understanding in itself, we discover those of its rules which are necessary throughout, in every respect and regardless of any special objects, because without them we would not think at all. Insight into these rules can therefore be gained a priori and *independently of any experience*, because they contain, *without discrimination between objects*, merely the conditions of the use of the understanding itself, be it *pure or empirical*. (Kant’s *Logic*, trans. R. Hartman and W. Schwarz [Mineola: Dover, 1974], 14.)

52. *Ibid.*, 14–15.

53. *Ibid.*, 14–15. See also the *First Critique*:

There are therefore two rules which logicians must always bear in mind, in dealing with pure general logic:

1. As a general logic, it abstracts from all content of the knowledge of understanding and from all differences in its objects, and deals with nothing but the mere form of thought.

2. As pure logic, it has nothing to do with empirical principles, and does not, as has sometimes been supposed, borrow anything from psychology, which therefore has no influence whatever on the canon of the understanding. (A54/B78)

54. We have to do here with a transgression not of the limits of thought (the limits, as it were, imposed by the principles of pure general logic), but rather of the limits of the legitimate employment of the categories—the limits not of thought per se, but of *thought about objects*. Pure general logic deals with the conditions of thought in general, transcendental logic with the conditions of thought about objects. Transcendental illusion, for Kant, has to do with the possibility of supersensible knowledge (as opposed to extralogical thought). Transcendental dialectic, as a prophylactic against transcendental illusion, is a branch of transcendental logic.
55. Thus, for Kant (unlike Wittgenstein), the questions which give rise to dialectical illusion—those questions which are prescribed by the very nature of reason itself, which we are unable to ignore and yet also equally unable to answer (A vii)—are themselves *intelli-*

gible. They are not (as they are for Wittgenstein) simply nonsense. For Kant, the problem is not that they simply fail to furnish us with thoughts; rather, the illusion to which they give rise is that they furnish us with thoughts about objects.

56. The limit Kant wishes to draw, however, is not to be identified with the one Wittgenstein wishes to erase. The Kantian notion of a limit (which we transgress in philosophical speculation)—as the two previous endnotes attempt to make clear—cannot be equated with the Cartesian notion of a limit (which the laws of logic impose on our thought). As we shall see, Kant can be seen as initiating a tradition of thought about logic which holds that the laws of (pure general) logic (which are constitutive of the possibility of thought) should not be represented as imposing a limit on thought. The *Tractatus* is concerned with the Cartesian notion of a limit (with showing that the appearance of such a limit rests upon a form of illusion). A popular recipe for providing a Kantian reading of the *Tractatus* depends upon failing to distinguish these two notions of a limit, identifying the Kantian notion of the limits of theoretical discourse with the Tractarian notion of the limits of logic (or language). This mislocates the Kantian moment of the work. It, on the one hand, leads commentators to ascribe to the *Tractatus* the sort of Kantian (as well as Schopenhauerian and Russellian) project the work is precisely out to undermine (one of drawing limits to make room for something: faith, ethics, the omnipotence of God, the logical form of reality), while, on the other hand, completely missing the fundamental (Kantian) insight of the work—the one which is summarized in the epigraph to this paper: what lies on the far side of the limits of logic is “*simply nonsense*.”
57. *The Basic Laws of Arithmetic*, trans. Montgomery Furth (Berkeley: University of California Press, 1967), 12.
58. This is connected to a point Frege makes when comparing his own system with that of Boole: the *Begriffsschrift* is not merely a *calculus ratiocinator* but also a *lingua characteristica*—not merely a useful calculus but also a universal language. The language it furnishes is *universal* because it is an explicit representation of the (logical) framework within which all rational discourse proceeds. The *Begriffsschrift* offers us not merely a system, but the true system of logic. It provides a perspicuous representation of, as it were, the universal medium of thought. This means that the distinction between a formal system and its interpretation is entirely alien to the *Begriffsschrift*. For Frege, logic is not about the manipulation of mere signs on paper; questions concerning their disinterpretation or reinterpretation do not arise, and logical truth is not defined by way of schemata. For Frege there is no metalogical standpoint from which to interpret or assess the system. The hallucination of the possibility of such a standpoint, for Frege, depends upon a misunderstanding of the status of the laws of logic (as the fundamental presuppositions of thought about anything whatsoever). For Frege, as for Russell, there is no possibility of ‘alternative logics’ in the contemporary sense—there are at most competing attempts to faithfully and optimally represent the logical structure of rational thought. On this view, as Wittgenstein puts it: “[L]ogic should be, as one might say, in no way arbitrary. . . . The whole essence of . . . [the] view is that there is only one logic” (*Lectures on the Foundations of Mathematics*, ed. Cora Diamond [Ithaca: Cornell, 1976], 172). For further discussion of this and related matters, see Jean van Heijenoort, “Logic as Calculus and Logic as Language” in *Selected Essays* (Naples: Bibliopolis, 1985); Warren Goldfarb “Logic in the Twenties,” *Journal of Symbolic Logic* 44 (3) (Sept. 1979); and “Poincaré Against the Logicians” in *Minnesota Studies in the Philosophy of Science* XI, eds. W. Aspray and P. Kitcher (Minneapolis: University of Minnesota Press, 1988); and the papers by Thomas Ricketts, cited below.
59. “When a proposition is called a posteriori or analytic in my sense, this is not a judgment about the conditions, psychological, physiological and physical, which have made it possible to form the content of the proposition in our consciousness; nor is it a judgment about the way in which some other man has come, perhaps erroneously, to believe it is true; rather, it is a judgment about *the ultimate ground* [my emphasis] upon which rests the justification for holding it to be true” (*The Foundations of Arithmetic* [Evanston: Northwestern University Press, 1980], 4.)
60. It is an important difference between Kant and Frege that Frege sees logic, taken on its

own, as being a distinct source of knowledge. This is explicit, for example, in the following passage:

What I regard as a source of knowledge is what justifies the recognition of truth, the judgment:

I distinguish the following sources of knowledge:

1. Sense perception
2. The logical source of knowledge
3. The geometrical and temporal sources of knowledge (*Posthumous Writings*, ed. H. Hermes, F. Kambartel, and F. Kaulbach [Chicago: University of Chicago Press, 1979], 128, 267)

61. A number of commentators have thought that the following formulation should be read as an attack on the Kantian formulation of the analytic/synthetic distinction:

Now these distinctions between a priori and a posteriori, synthetic and analytic, concern, as I see it, not the content of the judgment but the justification for making the judgment. (*Foundations of Arithmetic*, 3)

They have therefore wished to dismiss the following footnote, which Frege appends to this passage, as disingenuous:

By this I do not, of course, mean to assign a new sense to these terms, but only to state accurately what earlier writers, Kant in particular, have meant by them. (*Ibid.*)

Frege remarks in a number of places that he thinks Kant's "true view was made . . . difficult to discover" (*ibid.*, 37n.) because his mode of expression sometimes obscures his agreement with Frege about the importance of sharply drawing the distinction between the psychological and the logical. Frege makes it clear in his discussions of Kant's account of arithmetic that he understands Kant's view (that the truths of arithmetic are synthetic a priori) to amount to the claim that pure intuition must be invoked as "the ultimate ground of our knowledge of such judgments" (*ibid.*, 18). Frege takes Kant's concern here to be, like his own, with the *justification* of the truths of arithmetic. Frege's motive in recasting the analytic/synthetic distinction in terms of justification (rather than content) is in part to make it clear that the question at issue is not one that can be illuminated by a psychological investigation. (He views his contemporaries as prone to confuse subjective psychological content with objective logical content.) He is also concerned to head off psychologistic misconstruals of his (and Kant's) talk about tracing an item to its ultimate ground. He is out to draw the distinction (as the full context of the passage on page 3 makes clear) in a manner which marks off as crisply as possible the question of how we arrive at a proposition from the question of where it derives its justification from.

So Frege's intention is to remain faithful to the spirit, if not the letter, of Kant's philosophy. Nonetheless, his reconstrual of the analytic/synthetic distinction marks more of a shift than Frege would have us believe. Kant defines an analytic judgment as one whose predicate is contained in its subject. Kant's definition of analyticity permits one to inspect an *individual* judgment, taken in isolation, and see whether its internal structure is of the appropriate composition. Frege's definition departs from this conception in three significant respects. First, attention is shifted from the question of the internal logical structure of an individual judgment to the question of the logical relation between an individual judgment and an *entire body* of judgments (from which it may be derivable). Secondly, in determining whether a proposition is analytic, the relevant body of propositions is the basic laws of logic taken collectively (rather than, as for Kant, simply the principle of non-contradiction). Thirdly, the line between the logical and the extra-logical has shifted dramatically, since the scope of (pure general) logic is vastly enriched by Frege's *Begriffsschrift*.

62. "The basis of arithmetic lies deeper, it seems, than that of any of the empirical sciences, and even than that of geometry. . . . Should not the laws of number, then, be connected very intimately with the laws of thought?" (*The Foundations of Arithmetic*, 21).
63. "The truths of arithmetic govern all that is numerable. This is the widest domain of all" (*ibid.*, 21).

64. *Ibid.*, 21.

65. I owe this way of formulating the point to Joan Weiner. In general, Chapter 2 of her book *Frege in Perspective* (Ithaca: Cornell University Press, 1990) offers an excellent discussion of this aspect of Frege's thought and its relation to Kant.

66. *Ibid.*, 13.

67. *Collected Papers on Mathematics, Logic, and Philosophy*, ed. Brian McGuinness (London: Blackwell, 1984), 368–69.

68. *Ibid.*, 209.

69. Psychologistic philosophers of mathematics, for example, (according to Frege) will attempt to ground the most basic concepts and procedures of mathematics by appealing to introspectible contents of consciousness—or to underlying psychological (or even physiological) processes—which transpire while one is doing mathematics. Frege does not deny that such a study of *what goes on* in us while doing mathematics may be interesting for this or that purpose:

It may, of course, serve some purpose to investigate the ideas and changes of ideas which occur during the course of mathematical thinking; but psychology should not imagine that it can contribute anything whatever to the foundation of arithmetic. (*The Foundations of Arithmetic*, vi)

What Frege wants to hammer home, is that an appeal to such considerations has no role to play in the mathematical activity of giving and asking for reasons why a proposition is true. "Otherwise," he says, ". . . in proving Pythagoras's theorem we should be reduced to allowing for the phosphorous content of the human brain" (*ibid.*).

70. Wilfred Sellars, "Empiricism and the Philosophy of Mind" in Herbert Feigl and Michael Scriven, eds., *Minnesota Studies in the Philosophy of Science*, vol. 1 (Minneapolis: University of Minnesota Press, 1956), see especially 298–99:

In characterizing an episode or a state as that of *knowing*, we are not giving an empirical description of that episode or state; we are placing it in the logical space of reasons, of justifying and being able to justify what one says.

71. In the tradition of Frege and Sellars, John McDowell's John Locke Lectures (forthcoming, Harvard University Press) offer an example of a recent attempt to reformulate—for the benefit of his contemporaries—how aspects of this Kantian critique bear on various currently fashionable forms of psychologism.
72. To show that Frege's conception of judgment is one of the cornerstones of his philosophy is a central burden of Thomas Ricketts's invaluable article "Objectivity and Objecthood: Frege's Metaphysics of Judgment" in *Frege Synthesized*, ed. L. Haaparanta and J. Hintikka (Dordrecht: Reidel, 1986). The ensuing discussion is enormously indebted to Ricketts; in a number of places I find myself paraphrasing his useful formulations.
73. *Collected Papers*, 373.
74. I am following Ricketts here.
75. *Collected Papers*, 379.
76. In order to make it clear that affirming and denying do not comprise two different kinds of judging, i.e., two distinct sorts of *acts*, Frege will prefer to say: in the demand for judgment, we are faced with the question whether the thought or its negation is to be recognized as a truth.
77. *Posthumous Writings*, 130
78. *Ibid.*
79. In the preceding discussion, I allow myself to simplify what is in fact a complicated and hotly debated interpretive issue concerning Frege's views on nondenoting singular thoughts. Gareth Evans, in *Varieties of Reference* (Oxford: Oxford University Press, 1982), see 22–30, argues that Frege's own best view is that mock-thoughts "do not *really* have a sense of the kind possessed by ordinary . . . sentences" (30). John McDowell, in "Truth-Value Gaps" in *Proceedings of the Sixth International Congress of Logic, Methodology and Philosophy of Science*, North-Holland: 1982) 299–313, builds on

Evans's interpretation in order to suggest that Frege's better self is after the view that what we achieve in such cases (when we imagine that we grasp the sense of a mock-thought) is an *illusion of understanding*. In such cases

... one takes oneself to understand an utterance as expressing a singular thought, but the singular thought which one thinks one understands the utterance to express does not exist. (305)

It would be in the spirit of ... [Frege's] talk of apparent thoughts to talk of apparent understanding; certainly the belief that one understands one of the problematic utterances as expressing a genuine thought would be an illusion. (312)

McDowell sees Frege's employment of the grab-bag category of 'fiction' as a way of trying to render this radical consequence of his own doctrines more palatable:

Frege's use of the notion of fiction is peculiar: ... he uses the notion in such a way that it is possible to lapse into fiction without knowing it. Now the idea that one can unknowingly lapse into fiction is so wrong-headed about fiction that we urgently need an account of why it should have attracted so penetrating a thinker ... Frege writes that in fiction we are concerned with apparent thoughts and apparent assertions, as opposed to genuine thoughts, which are always either true or false. This ... suggests that what attracted Frege to his peculiar use of the notion of fiction was that it seemed to soften the blow of the implication that there is an illusion of understanding. By the appeal to fiction, Frege equips himself to say that it is not a complete illusion that one understands one of the problematic utterances. ... (311–12)

Frege shrinks here from a consequence of his own doctrines which the *Tractatus* goes on to unflinchingly embrace.

80. *Basic Laws of Arithmetic*, 12.

81. *Posthumous Writings*, 128.

82. Frege writes:

Kant ... underestimated the value of analytic judgments. ... The conclusions we draw from them extend our knowledge, and ought therefore, on Kant's view, to be regarded as synthetic; and yet they can be proved by purely logical means, and are thus analytic. ... I must ... protest against the generality of Kant's dictum: without sensibility no object can be given to us.

... I have no wish to incur the reproach of picking petty quarrels with a genius to whom we must all look up with awe; I feel bound therefore to call attention also to the extent of my agreement with him, which far exceeds any disagreement. (*The Foundations of Arithmetic*, 99–101)

83. I am here once again extremely indebted to an article by Ricketts ("Frege, the *Tractatus*, and the Logocentric Predicament," *Nous*, XIX (1) (March 1985), and once again find myself paraphrasing many of his formulations.

84. Carnap, appropriating all of the *Tractatus*'s terminology, would later say many of the same things that the *Tractatus* says here: the propositions of logic are tautologies; they are *inhaltsleer*—empty of content. But Carnap completely shifts the sense of such terms, investing them with an explanatory role in a philosophical account of the character of mathematical (and other forms of a priori) necessity. When writing the *Tractatus*, Wittgenstein had no reason to anticipate the possibility that someone (like Carnap and generations of philosophers following him) would read into his text the idea that tautologies are a *kind* of meaningful statement—ones that are true by virtue of their meaning. Nonetheless, the account the *Tractatus* offers of how one forms a logical proposition and determines its truth value clearly rules out any appeal to meaning: "[W]ithout bothering about sense [*Sinn*] or meaning [*Bedeutung*], we construct logical propositions out of others using only *rules that deal with signs*" (§6.126).

85. For an excellent discussion of the history of the term 'tautology' and Wittgenstein's point in applying it to the propositions of logic, see Burton Dreben and Juliet Floyd, "Tautology: How Not to Use a Word" in *Wittgenstein in Florida*, ed. Jaakko Hintikka (Dordrecht: Kluwer, 1991).

86. Rather than saying that for the *Tractatus* a logical proposition is well formed, it would be better to say that it forms (as Wittgenstein puts it) "a part of the symbolism." For the standard notion of a proposition's being logically 'well-formed' depends upon a contrasting notion of a proposition's being logically ill-formed (or, as Carnap puts it, "counter-syntactically formed")—a notion which the *Tractatus* is, as we shall see, out to undermine.

87. Thus, for the *Tractatus* (unlike for very recent Putnam), there is no significant asymmetry between a logical "truth" and its negation. Both tautologies and contradictions are (what the *Tractatus* calls) "logical propositions," and both fail to meet the conditions of being a thought—the truth value of neither results from the fulfillment of truth conditions: neither represents a state of affairs.

88. The passage continues:

For logic teaches us nothing whatsoever regarding the content of knowledge, but lays down only the formal conditions of agreement with the understanding; and since these conditions can tell us nothing at all as to the objects concerned, any attempt to use this logic as an instrument (organon) that professes to extend and enlarge our knowledge can end in nothing but *mere talk* [my emphasis]. (A61/B86)

89. The subsequent discussion closely follows Ricketts's "Frege, the *Tractatus*, and the Logocentric Predicament," *op. cit.*

90. See the discussion of Frege's treatment of rules of inference in Ricketts, *op. cit.*

91. See, for example, *Posthumous Writings*, 37, 39.

92. *Begriffsschrift*, § 13 in *From Frege to Gödel: A Sourcebook in Mathematical Logic, 1879–1931*, ed. Jean van Heijenoort (Cambridge, Mass: Harvard University Press, 1967), 28.

93. I am moving quickly over difficult matters. Considerations of space prevent me from properly exploring the parallels and differences between Frege's and the *Tractatus*'s respective conceptions of elucidation. However, see Weiner, *op. cit.*, chapter 6; and also Cora Diamond, *The Realistic Spirit* (Cambridge, Mass.: MIT Press, 1991), chapters 2 and 4.

94. This, in turn, requires breaking with Frege's idea that there is a logical source of knowledge, which is wholly distinct from (yet in the same line of business as) the sensory source of knowledge:

When it is held that logic is *true*, it is always held at the same time that it is not an experiential science: the propositions of logic are not in agreement or disagreement with particular experiences. But although everyone agrees that the propositions of logic are not verified in a laboratory, or by the five senses, people say that they are recognized by the intellect to be true. This is the idea that the intellect is some sort of sense; it is the idea that by means of our intellect we look into a certain realm, and there see the propositions of logic to be true. (Frege talked of the realm of reality which does not act on the senses.) This makes logic into the physics of the intellectual realm. (*Lectures on the Foundations of Mathematics*, 172)

95. "The word 'philosophy' must mean something which stands above or below, but not alongside the natural sciences" (*Tractatus*, § 4.111). The aspiration to find a perspective on logic which is neither psychologism nor Fregean scientism remains a defining feature of Wittgenstein's later thought:

Next time I hope to start with the statement: "The laws of logic are the laws of thought." The question is whether we should say we cannot think except according to them, that is, whether they are psychological laws—or, as Frege thought, laws of nature. He compared them with laws of natural science (physics), which we must obey in order to think correctly. I

- want to say they are neither. (*Lectures on the Foundations of Logic*, op. cit., 230)
96. *Begriffsschrift*, Preface, op. cit., 7.
97. At various junctures in his writings (such as his treatment of the Kerry paradox), Frege is quite self-conscious about the peculiarity of the form of philosophical criticism he engages in when he argues against philosophical interlocutors who have failed to grasp the special status of logic. Weiner (op. cit., Chapter 6) is very good on this point.
98. Wittgenstein, in his later writing, continued to return to Frege's thought experiment concerning logical aliens. See, for example, *Remarks on the Foundations of Mathematics*, rev. ed. (Cambridge: MIT Press, 1983), 89–95 and *Lectures on the Foundations of Mathematics*, op. cit., 201–03. Part of what interests him, in his recurring to these pages, is the question: what sort of activity of philosophical criticism is involved in such a thought experiment? How does it engender illumination?
99. *Basic Laws of Arithmetic*, 12–14.
100. *Basic Laws of Arithmetic*, 14.
101. Frege's argument here is an application of Putnam's more general argument against criterial conceptions of rationality. See *Reason, Truth and History* (Cambridge: Cambridge University Press, 1981), 105–13.
102. At bottom, therefore, Frege will argue, thoroughgoing psychologism is simply a disguised form of philosophical solipsism—or as Frege prefers to call it: subjective idealism—and Frege's arguments (at this point, halfway into the onion) for why such forms of philosophical solipsism are self-refuting accord with those scattered throughout Putnam's work. See, for example, "Why Reason Can't Be Naturalized" in *Realism and Reason*, op. cit., 229–47.
103. Acceptance of the theory depends upon the intelligibility of a claim—namely, that the theory is *true*—which, by the theory's own lights, must be unintelligible for us. Descartes's view is in this respect considerably subtler (though no less elusive) than that of the psychologistic logician. For Descartes concedes that the possibility of logically alien thought must be unintelligible to (beings like) us. (The problem for him comes in explaining how we should go about trying to believe in something which we can make no sense of.)
104. *Basic Laws of Arithmetic*, 15.
105. *Ibid.*
106. This way of putting the point helpfully disguises the fact that, on his view, the statement "what sorts of statements are accepted by them" ultimately comes to nothing more than: "what sorts of statements are accepted by us in regard to the question 'what sorts of statements are accepted by them.'"
107. See Ricketts, "Objectivity and Objecthood" for a much fuller discussion of this point than I am able to offer here.
108. Despite all of the development it undergoes, a descendant of this Kantian point remains of critical importance for Wittgenstein's later thought. In the *Remarks on the Foundations of Mathematics*, op. cit., it sounds like this:
- [T]he logical "must" is a component part of the propositions of logic, and these are not propositions of human natural history. If what a proposition of logic said was: Human beings agree with one another in such and such ways (and that would be the form of the natural-historical proposition), then its contradictory would say that there is here a *lack* of agreement. Not, that there is an agreement of another kind.
- The agreement of humans that is a presupposition of logic is not an agreement in *opinions*, much less in opinions on questions of logic. (353)
- In the *Investigations*, it sounds like this:
- "So are you saying that human agreement decides what is true and what is false?"—It is what human beings *say* that is true and false; and they agree in the language they use. That is not agreement in opinions but in form of life. (§ 241)
109. Later Wittgenstein would not put the point this way. But (in commenting on these very pages of Frege's *Basic Laws*) he is willing to talk like this:
- The propositions of logic are "laws of thought," "because they bring out the essence of human thinking"—to put it more correctly: because they bring out, or show, the essence, the technique, of thinking. They show what thinking is. . . .
- Logic, it may be said, shows us what we understand by "proposition" and by "language." (*Remarks on the Foundations of Mathematics*, op. cit., 90)
110. *Basic Laws of Arithmetic*, 14.
111. This criticism is elaborated by Hide Ishiguro in "Skepticism and Sanity" in C. Ginet and S. Shoemaker, eds., *Knowledge and Mind* (Oxford: Oxford University Press, 1983).
112. For a strikingly parallel discussion of how the idea of the moral alien collapses into that of the moral lunatic, see Isaiah Berlin, "Does Political Theory Still Exist?," § viii, *Concepts and Categories* (Viking: 1979), 166.
113. A particularly splendid example of brandishing the (Kantian) rhetoric while draining it of its content is furnished by the first chapter of Jaakko and Merrill Hintikka's *Investigating Wittgenstein* (Oxford: Blackwell, 1986), titled "Wittgenstein and Language as the Universal Medium." The Hintikkas first attribute to the *Tractatus* a "Fregean thesis" concerning the "inescapability of logic"—logic provides "the universal medium of thought." Then they immediately go on to attribute a second thesis to the work, one concerning "the inexpressibility of semantics"—we "can have many and sharp ideas" about the relation between language and world, but these "thoughts" cannot be expressed in the (purportedly) "inescapable" and "universal" medium of thought!
114. *Insight and Illusion*, rev. ed. (Oxford: Oxford University Press, 1986), 18–19, 26.
115. *Ibid.*, 21
116. "Saying and Showing in Frege and Wittgenstein" in *Essays in Honour of G. H. von Wright*, ed. J. Hintikka (*Acta Philosophica Fennica* 28), 54.
117. Wittgenstein writes: "[I]n so far as people think they see 'the limits of human understanding,' they believe of course that they can see beyond these" (*Culture and Value*, trans. Peter Winch [Oxford: Blackwell, 1980], 46).
118. I am simply putting aside here, for the purposes of this discussion, the case of what Annette Baier calls 'vocabulary nonsense.' See her helpful typology of different varieties of nonsense in her entry (entitled "Nonsense") in *The Encyclopedia of Philosophy* (Macmillan, New York: 1967).
119. Eddy Zemach, "Wittgenstein's Philosophy of the Mystical," *Review of Metaphysics* 18: 43.
120. In the service of attempts to circumvent the central exegetical puzzle of the work (namely, how one is to understand a book which consists of nonsense), there is another (far less interesting) way of employing the device of saying 'strictly speaking' (and the related device of quotation marks) which is also to be found among commentators on the *Tractatus*. Instead of attributing to the work an ineffable doctrine, according to this strategy, one finds in the work a perverse mode of expression. One attributes to the *Tractatus* an idiosyncratic terminology according to which 'that which can be said' is much narrower than that which can actually be said. Everything which 'cannot be said' (according to this technical notion of that which can be said) is, technically speaking, 'nonsense' (according to a purely technical and extraordinarily broad notion of what counts as nonsense). According to this way of employing the device, 'what cannot be said' is only unsayable according to a strict notion of what is sayable; unstrictly speaking, it is perfectly expressible in language (although, according to the work's own peculiar strict way of speaking, these instances of language-use count as 'nonsense'). So the *Tractatus* actually says lots of things but those things do not count as instances of 'saying' in the work's own narrower sense of this word. Unlike the Geach/Hacker reading (which seeks to distinguish between that which can be expressed in language and that which is ineffable) this exegetical strategy renders the distinction between what can and what cannot be said a mere *façon de*

- parler*—it draws the distinction firmly within language. It is worth distinguishing these two ways of employing the device of saying something is ‘strictly speaking’ nonsense (and related devices) because a number of commentators mask the incoherence of the ineffability-interpretation by waffling back and forth between these two ways of employing the device.
121. Wittgenstein, *Conversations with the Vienna Circle*, recorded by Friedrich Waismann (Oxford: Blackwell, 1979), 117. This remark is often read as repudiating a doctrine (about the limits of logic) which Wittgenstein formerly propounded in the *Tractatus* and the “Lecture on Ethics.” Such a construal of this remark misses the transitional character of early Wittgenstein’s employment of talk about ‘the limits of language’. I do not take this remark to declare a shift in doctrine but rather an explicit acknowledgment of the way in which the *Tractatus*’s employment of the locution ‘the limits of language’ represents a form of talk that the reader (or listener) is to be brought to recognize as nonsensical; in the end, such talk is to be thrown away.
122. Here are some representative instances:
- I don’t try to make you *believe* something you *don’t* believe, but to *do* something you won’t do. (Quoted by R. Rhees, in *Discussions of Wittgenstein* [London: Routledge Kegan Paul, 1970], 43.)
- You are inclined to put our difference in one way, as a difference of *opinion*. But I am not trying to persuade you to change your opinion. . . . If there is an opinion involved, my only opinion is that this investigation is immensely important and very much *against the grain*. (*Lectures on the Foundations of Mathematics*, 103.)
123. I have excerpted this passage to disguise the fact that Putnam is here (and elsewhere in the paper) concerned both specifically with logical necessity and more generally with *mathematical* necessity. I wish to avoid the latter topic because the focus of this paper would vanish without a trace if it had to juggle the very different stories about arithmetic (not to go any further) that are told by Kant, Frege, and the *Tractatus*—the first and the third of whom wish to draw a distinction between logic and arithmetic. Later Wittgenstein, in turn, is concerned to distinguish (more carefully than Putnam perhaps suggests) between two different notions of logic: 1) a mathematical notion (logic as a “calculus” in which proofs are carried out) and 2) a successor to the Tractarian notion of “the logic of our language” (for which he increasingly comes to favor the term “grammar”). It is the latter which is at issue in the quotations to be found in the endnotes of this paper. Therefore, insofar as Wittgenstein in his later writing wishes to sharply distinguish 2) from 1), he continues to insist upon a notion of logic which is neither a branch of mathematics nor a quasi-mathematical calculus.
124. This is obscured by the Pears and McGuinness translation, which introduces the idea that there is something which “we must *pass over* in silence.”
125. This is the topic of my “Must We Show What We Cannot Say?” in *The Senses of Stanley Cavell*, ed. R. Fleming and M. Payne (Lewisburg: Bucknell University Press, 1989).
126. The tendency is for commentators to equivocate furiously on just how unsayable the unsayable is. It is not uncommon to find an author of an essay on the *Tractatus* trying to have it both ways. He will alternate between the language of necessity and that of volition, suggesting both 1) that these things are *absolutely* unsayable and 2) that there is room for choice in the matter and that the enlightened reader is the one who *remains* silent—he exhibits his status (as one who has been enlightened by the text) by *passing over* these things in silence instead of speaking of them.
127. “We are inclined to say we *can’t* . . . think something. . . . To say that something is ‘logically impossible’ sounds like a proposition. . . . [W]e make the mistake of thinking this is a proposition, though it is not. . . . It is misleading to use the word ‘can’t’ We should say, ‘It has no sense to say’” (*Wittgenstein’s Lectures: Cambridge, 1930-32*, ed. Desmond Lee [Totowa: Rowman and Littlefield, 1980], 98.)
128. See my “Kierkegaard, Wittgenstein and Nonsense” in *Pursuits of Reason*, ed. Ted Cohen, Paul Guyer, and Hilary Putnam (Lubbock: Texas Tech University Press, 1992) for further discussion of this point.
129. The *Tractatus* is standardly read as simply underwriting the view from this perspective. For an incisive criticism of the standard reading, see Diamond, *op. cit.*, Chapter 6.
130. I am borrowing a phrase of John McDowell’s here; see his John Locke Lectures, *op. cit.*; and “Non-Cognitivism and Rule-Following” in *Wittgenstein: To Follow a Rule*, S. Holtzman and C. Leich, eds. (London: Routledge Kegan Paul, 1981), 150.
131. To properly discuss why Wittgenstein is committed to thinking that we are confused here (when we think we can identify the logical parts of a piece of nonsense) would take us too far afield. Such a discussion would require establishing the importance for the *Tractatus* of a very strong version of Frege’s context principle (a word only has meaning in the context of a meaningful proposition) as it is developed in §§3.3–3.327.
132. Wittgenstein:
- The difficulty is in using the word “can” in different ways, as “physically possible” and as “making no sense to say. . . .” The logical impossibility of fitting the two pieces seems of the same order as the physical impossibility, only more impossible! (*Wittgenstein’s Lectures: Cambridge, 1932-1935*, ed. Alice Ambrose [Chicago: University of Chicago Press, 1979], 146.)
133. See Diamond, *op. cit.*, chapter 3, for an excellent discussion of this point.
134. “The task will be to show that there is in fact no difference between these two cases of nonsense, though there is a psychological distinction in that we are inclined to say the one and be puzzled by it and not the other. We constantly hover between regarding it as sense and nonsense, and hence the trouble arises.” (From unpublished notes taken by Margaret Macdonald, Michaelmas, 1935; quoted by Diamond, *op. cit.*, 107).
135. This is a pervasive theme of the interpretation of Wittgenstein developed in Stanley Cavell’s *The Claim of Reason* (Oxford University Press, Oxford: 1979):
- “Not saying anything” is one way philosophers do not know what they mean. In this case it is not that they mean something *other* than they say, but that they do not see that they mean *nothing* (that they mean nothing, not that their statements mean nothing, are nonsense). (210)
- [Wittgenstein] asks us to look again at . . . [a philosophical] utterance, in particular, to be suspicious of its insistence. We are, one might say, asked to step back from our conviction that this *must* be an assertion . . . and incline ourselves to suppose that someone has here been prompted to insistent emptiness, to mean something incoherently. . . . This is not the same as trying to mean something incoherent. (336)
136. See §5.4733:
- Frege says: Every legitimately constructed proposition must have a sense; and I say: Every possible proposition is legitimately constructed, and if it has no sense this *can only be* because we have failed to give meaning to its parts. [my emphasis]
137. We can now see how the second paragraph of the Preface of the *Tractatus* is tied to the subsequent two paragraphs (which form our epigraph): “the problems of philosophy” which the book deals with depend upon a “misunderstanding of the logic of our language”—one which requires that we be able to break the rules of the logic of our language and thereby draw a limit to logical thought.
138. This is a particularly pervasive topic of *Lectures on the Foundations of Mathematics* (184: “Don’t imagine a sort of logical collision,” 243: “There is only one thing that can be wrong with the meaning of a word, and that is that it is unnatural,” etc.), as well as of *Cambridge Lectures, 1932-35* (see especially 138-46).

139. This passage derives from *Philosophical Grammar* (Blackwell, Oxford: 1974), 130:

But it isn't as if were their sense that is senseless; they are excluded from our language like some arbitrary noise, and the reason for their *explicit* exclusion can only be that *we are tempted* to confuse them with a sentence of our language.

A proper understanding of this region of Wittgenstein's thought tells as much against standard readings of his later conception of nonsense (as resulting from violations of grammar) as it does against a standard reading of his early conception (as resulting from violations of logical syntax).

140. Putnam points to these features of Wittgenstein's conception of nonsense in a late passage in "Rethinking Mathematical Necessity." Citing a passage of Wittgenstein's, he invokes the example of riddles:

Concerning such riddles, Wittgenstein says that we are able to give them a sense only after we know the solution; the solution bestows a sense on the riddle-question. This seems right. . . .

A question may not have a sense . . . until an "answer" gives it a sense, . . . I want to suggest that, in the same way, saying that logic may be "revised" does not have a sense, and will never have a sense, unless some concrete piece of theory building or applying gives it a sense.

Putnam acknowledges a debt here to Cora Diamond's "Riddles and Anselm's Riddle" (*The Realistic Spirit*, chapter 11) both for drawing the (unpublished) Wittgenstein passage in question to his attention (quoted by Diamond on 267) and for her discussion of it.

141. Janik and Toulmin (in the German edition of their book, *Wittgenstein's Wien* [Vienna: Carl Hanser Verlag, 1984], 269) point out that §6.54 is careful to say ". . . he who understands *me*. . ." (rather than ". . . he who understands *them* [i.e., my propositions] . . ."). They explain that this is a clear and scrupulous "terminological hint" on Wittgenstein's part: we cannot understand the sentences of the book since they are nonsense. We can only understand the author. Bravo! But then, in their next sentence, they write: "As soon as the *sense* of these aphorisms has been *grasped* they are no longer necessary" [my emphases]. This renders Wittgenstein's "terminological" scruples completely mysterious. Fortunately, Cora Diamond also notices his scrupulousness. She goes on to explore the implied distinction between understanding a sentence (*grasping* a sense) and understanding an utterer of nonsense (participating in an illusion of sense), see Cora Diamond, "Ethics, Imagination and the Method of the *Tractatus*" in *Wiener Reihe: Themen der Philosophie*, Band 5, ed. R. Heinrich and H. Vetter (Vienna: R. Oldenbourg Verlag, 1990).

142. I explore what this involves in more detail in my "Throwing Away The Top of the Ladder" in *The Yale Review*, 79 (3).

143. My attention was first drawn to this parable by Slavoj Zizek. His interpretation of it is presented in the context of a discussion of Hegel and Lacan, see his *The Sublime Object of Ideology* (London: Verso, 1989), 64–65.

Chasing Quantum Causes: How Wild Is the Goose?¹

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No recent philosopher has been quicker to appreciate the relevance of physical science to philosophical problems than has Hilary Putnam. On occasion this has led him to extremes, as in the claim that quantum mechanics establishes the falsity of the distributive laws of classical logic, or the denial "that there are any longer any *philosophical* problems about Time; there is only the physical problem of determining the exact physical geometry of the four-dimensional continuum that we inhabit."² I see a more lasting contribution in his unparalleled ability to puncture overinflated philosophical views by a well-chosen counterexample derived from physics. Conscious of the fate of Euclidean geometry, I won't try to parallel the unparalleled. Instead, I shall draw some skeptical conclusions for philosophical accounts of causation from a study of some recent attempts to establish the presence or absence of causal relations among events that figure in situations where quantum mechanics (correctly) predicts violations of Bell inequalities.³ Though our aims are quite different, I sense a certain shared outlook with the Putnam of "Is the Causal Structure of the Physical Itself Something Physical?"⁴