Also check Trinity.rtf for comments on logic and formal systems

XxxYes and no, putsverd, December 7, 2011

From the point of view of results, philosophy is disreputable, unreliable. So I am only making points that belong to a less reputable and less reliable subject than logic. But from the point of view of the importance of its questions, philosophy is the highest subject. Still the points I am trying to make here deserve to be considered minor and unimportant to those interested in logic for its own sake, and logic certainly deserves interest for its own sake. For example, the fact that we cannot understand multi-valued logic unless we can understand that a wff either is or is not assigned the value M, should be of little interest for someone interested in multi-valued logic. It is only of interest for those of us interested in epistemological facts about the conditions for understanding what we are doing when we are doing multi-valued logic.

Perhaps what I am doing would not be worth doing at all were it not for some people who wish to make claims in another area, the area of philosophy and epistemology, based on multi-valued logic. But since there are such people, what I am doing here has a place.

xxxYes and NO. putsverd, AA, August 2, 1999

XXXA TOOL LIKE MATH

Maybe start this way, or may be introduce ECQ this way: quote Maritain and on logic vs. logistic. Or at least bring up the issue of two epistemological types as a theme of the essay. Then say that I will use ECQ to illustrate the distinction between these two types.

Point out that just as mathematics is entirely valid subject on its own, and not just an aid to science, so the formal methods used by logic or the study of those that is entirely valid subject on its own. But viewed as a means to awareness of inferential validity, formal methods are a tool. That is, viewed as an epistemologically useful means, and epistemologically successful means, to the awareness of inferential

validity.

The technical success of nonstandard logic cannot and does not do away with the role of the principles of standard logic in our grasp of the technical success of nonstandard logic. That is all I am saying. My point should be considered a very minor one for those whose chief interest is logic itself; for their just is no other way to get any place than by the use of formal methods. but it is more than of minor point for those who want to draw philosophical conclusions from what logic can achieve. Just as Putnam has shown that Tarski's great technical achievement tells philosophers nothing about truth in natural languages, so I am only saying that the success of nonstandard logic tells philosophers nothing about the epistemological status of consistency, bivalence, or necessary truth.

Here is an idea I can use if I separate the section on disapproving that everything follows from contradiction into its own article. At the end of that article I can make the distinction between logic and logistic. Then I can ask why it's worth pointing out. When the early critics of modern logic pointed it out, it might not have been worth noting. But for want of making that distinction, certain claims are made for the later results of modern logic, certain epistemological claims, that would have been better served to acknowledge this distinction first. Putnam's critique of the disquotational theory of truth is a good example of this. Other examples are the claims that are made about consistency, necessary truth, and bivalence.
The technical success of nonstandard logic cannot and does not do away with the role of the principles of standard logic in our grasp of the technical success of nonstandard logic. That is all I am saying. My point should be considered a very minor one for those whose chief interest is logic itself; for their just is no other way to get any place than by the use of formal methods. but it is more than of minor point for those who want to draw philosophical conclusions from what logic can achieve. Just as Putnam has shown that Tarski's great technical achievement tells philosophers nothing about truth in natural languages, so I am only saying that the success of nonstandard logic tells philosophers nothing about the epistemological status of consistency, bivalence, or necessary truth.

Obviously, for classical logic to allow the truth of contradictories will be ad hoc. I want to say "must" be ad

hoc. But the very reason why I want to say must is the reason why I cannot, namely, there's no more necessity. Because there is no more necessity, there is only the ad hoc. (But really there can only be the ad hoc. And that shows that you can't really get rid of necessity; he still have to use it. If all necessity were gone, per impossible, then we would have to describe the consequences, or have to be able to describe the consequences, using phrases like "then there can only be," "then there must only be," etc.) but we would need some rules, and therefore ad hoc rules, precisely because without new rules, nothing follows from contradiction. (Use ECQ ex contradictione quodlibet.)

Logic in my sense of the word in no way replaces modern logic and its contribution. Frege's contribution, or at least the only noncontroversial one, is the use of computational methods in logical reckoning.

All this may seem obvious. What, however, if awareness of the validity of the steps requires awareness of necessary truth? I will argue that it does.

Watch for the use of words like implies, consequence, as opposed to words like the due us, derive, and yield. The former are semantic, and the latter are the syntactical.
Formal language method vs. natural language method: in the latter symbols appear not just as objects of manipulation, that is, not so that their correct or incorrect use is determined by rules for concatenating and detaching, which is to say that natural language is not a calculational language. But that raises the question of why numbers can be the "object" of a merely calculational language.

XXXEPISTEMOLOGY NOT LOGIC
Graeme Forbes in his article "logic, philosophy of" in the Routledge encyclopedia philosophy gives the following great example:

"a distinction between propositions (or statements, or sentential contexts) which are de dicto and propositions (and so on) which are de re originates in medieval philosophy. But only contemporary modal logic affords the tools for a precise characterization of this distinction, although it must be granted that the

distinction remains a puzzle in epistemic contexts. (His emphasis)

Rutz's point is within logic itself; in addition to that, there is the following epistemological point.

It is perfectly fine to create all of the alternative logics that you like. We do not have the change classical logic to avoid the conclusion. The questions raised are at the level of the epistemology of logic, of the evaluation of what goes on the classical logic. You do not even have to deny that classical logic use composed of necessary truths.

In paraconsistent logic, does saying that there are true contradictions amount to saying that both parts of the contradictions are true, or that the compound sentence composed of the contradictories is both true and false.

In paraconsistent logic, does saying that there are true contradictions amount to saying that both parts of the contradictions are true, or that the compound sentence composed of the contradictories is both true and false.

The kind of arguments that might be brought against my claims are not, for example, that we can use this or that formal device method to construct a different kind of formal method, language, or system. Such arguments would not be relevant to my argument. What could be relevant to my argument, if their premises were true, would be, for example, claims about the fact that words can change meaning, incommensurability.

One motivation for paraconsistent logic is that inconsistent theories can be nontrivial. But I eliminate that motivation.

Emphasize that a causal analysis of how we are aware of the validity of deduction is not the same thing as a deductive defense of the validity of deduction. See Susan Haack, p. 198. Rather my causal analysis shows why we do not need a deductive defense of the validity of deduction. For it shows that if certain conditions hold, we cannot not be aware of that validity. And it shows that if we are aware of how to use certain words, those conditions cannot not hold. Also, these are not causal explanations I'll on Dummett's "explanatory" arguments (haack, p. 181). Also, this is not a "justification" of deduction (p. 200).

Maritain could have said "there is such a thing as recognition of logical necessity, and that is something different from awareness of satisfying movements." But that distinction would not have mattered much before the development of nonstandard logics, since logistics are clearly a more powerful method for studying those very necessary truths that Maritain would have been referring to. (Still any method has limitations from some point of view, because any tool has limitations from some point of view. For example, the success of this tool mislead people, for example, Russell, about the centrality, the epistemological centrality, of the principle of noncontradiction. But that is a different question. Epistemological centrality is not the issue here.)

But now that we have nonstandard logics, the impression can be that they eliminate the epistemological need for necessary truth is, that is, for consistency and bivalence. So now the distinction implied by Maritain is crucial.

Concerning nonstandard logics, the issue is not whether they work, but so what if they do. That is, the extra-logical question of what difference they make. Or better: concerning nonstandard logics, there are issues concerning what difference they make. (In other words, don't say that these are the only issues, just that here are some legitimate questions nonstandard logics raise.)

All I really want to say is that nonstandard logic is no reason to give up necessary truth, and that there are good reasons for keeping it.

Traditional logicians also would have said that inference principles are necessary truths and self-evident truths.

Precisely because the methods of modern logic open up infinite possibilities for semantics and syntax, modern logic cannot provide answers for philosophical questions. Those questions call for definite answers, not infinite possibilities. They call for specific answers.

XXXECQ

Principles of noncontradiction express the function of "negation," which is to prevent the (use of) contradictories from both achieving some presumed goal.

In any argument a sign that indicates that a premise is contradictory (a negation sign) must have the same use in each of the inference principles that allow us conclude to "q". Otherwise, the contradictory premise and the principles are irrelevant to each other. The sign indicates the assignment or lack of assignment of some target value (1, T, etc.) to a formula. So we have simultaneous assignment and lack of assignment of a binary value to an expression (assignment or association with; value or state). It is the fact that the premise has the simultaneous presence or absence of the value that prevents any principle employing a sign indicating contradiction in a premise from being a truth functionally valid principle (or true on every model, or true under every possible assignment of 1, 0, etc.)

For if a principle using a sign indicating absence of a value is now valid, that is, true under all interpretations, it need not be true under all interpretations. Under contradiction, a principle whose validity turns on the absence of the value will not be truth functionally valid. Likewise a principle was validity results from the presence of that value will not be truth functionally valid, if the simultaneous absence and presence of that value is allowed.

Perhaps add to the short article: the refutation of the everything-follows argument opens up several kinds of questions. One kind concerns the use of the concept of something implying that everything is true within a formal system. For example, within a system of intuitionistic logic. Nothing in my refutation implies that the use of such a concept could not have some interesting purpose, some valuable purpose, for some system of formal methodology (as opposed to "formal system").

Another kind of question concerns the invoking of the concept of everything following as a justification for structuring a formal system or formal methods certain way. Here the examples I'm thinking of are relevance logics or paraconsistent logics. They sometimes claim to justify themselves by the need to avoid

that consequence. If that were there only justification, they needn't have bothered. But it does not follow that they should not have bothered. For there may be other justifications. Nor does it follow that a logician cannot achieve interesting and important results by constructing such a system, even if he had no other justification for doing so.

But there is one other kind of question that needs to be raised. It is important to know first that this other kind may be of no direct interest to the logician whatsoever. She needn't not be concerned about it at all. Because it is a question outside of logic itself. It is the question of the epistemology of logic, specifically, the epistemology of formal methods. By that I mean, the question of how we are aware that a step in a formal process is justified by the rules of the process. That step is related to my refutation of the everything follows argument in the following way.

We can be aware that the everything follows conclusion follows from ordinarily truth functionally valid rules of inference and at the same time aware that these rules are no longer truth functionally valid, when we permit contradiction. (Does the concept of the truth-functionally valid replace that of necessary truth in a way that lets ECQ off the hook?) This shows that we can be aware that a step in a formal process satisfies the formal rules and yet be aware that neither the rules nor the result of following them has any logical value or force of its own. But independently of whether or not the rule or results reflects something that is logically valid, in being aware that a step satisfies a rule, we have to follow a rule of inference that we are implicitly aware of in being aware of the rule and of the fact that using the rule here yields a certain result.

To show this, bring in or at least mention Lewis Carroll's Achilles-tortoise paradox here. This raises a number of questions that are epistemological in nature and not directly logical in nature. Our awareness, our implicit awareness of an inferential rule and of the value of the rule. Is it awareness of a necessary truth? If so, is it justified awareness of a necessary truth? If so, what is that justification and how are we aware of it? And if it is not awareness of a necessary truth, or awareness of the justification of a necessary truth, what is it awareness of? These questions, or rather such questions, cannot be answered in ignorance of the contributions of formal methods to questions about necessity and about knowledge, but

neither can the contributions of formal methods completely answer these questions. But neither can the contributions of formal methods provide final answers to these questions in the last analysis.

The reason is that these questions concern our awareness of the epistemological value of formal methods themselves. Or rather these questions concern how we are aware of the epistemological value of formal methods and their results. For example, if our implicit awareness of the value of modus ponens while we are using modus ponens to draw conclusions is an awareness of something with only provisional value, something whose value really depends upon the fact that so far we have commonly used it, then our awareness of the value of a step, a step in a formal process, is an awareness of something with only provisional value. But a step in a formal proof's having only provisional value would defeat the purpose of the formal proof. But even more, it would be contrary to fact. We know that the correctness of the step is not provisional. (Compare an explicit formal proof of modus ponens and an explicit formal proof of something else. In both proofs we have an implicit awareness of the truth of modus ponens.)

It would be a mistake to think that formal methods themselves answer such questions. This would be a forest-for-trees fallacy. For example, someone like Wittgenstein might think that the analysis of logical validity in terms of truth functional tautologies can explain logical necessity. But to recognize a well formed formula as a truth functional tautology we have to be able to recognize that a particular set of distributions of truth values to its atomic formulas exhausts the possibilities of distributing truth values to the atomic formulas. In other words, we have to recognize the necessary truth that all the possibilities are covered. That there are no other possibilities.
I gave you half a truth table, for instance, and said "here, this defines an operator," you would know that the operator had been inadequately defined from the point of view of being a function of the truth values of its component wffs. The same requirement that we recognize that all the possibilities have been covered applies to rigorous definitions of formal proofs and to rigorous specifications of formal languages.

What about consistency proofs? Don't they at least get us a step closer to the question of necessity ? But even in this case, awareness that steps in the proof satisfy rules is not awareness that the rules have a

certain value and so not awareness that the results have any certain value. First, application of the rules requires the use of modus ponens. If modus ponens is only provisional, than the value of the transition from the rule to the result is only provisional. If the result is meant to show that a system containing a string corresponding to, or representing modus ponens, belongs to a system that is consistent or complete or both, we must have some awareness that whatever other rules we are using to get that result have some connection with an interesting definition of such a result, that is "consistency" or "completeness" defined" interestingly," and how do we know that connection, and whether that connection is true, and whether that connection is necessarily true or provisional, and so on and so on and so on?

Start: prior to Frege we could have said... Here bring in the nontechnical way of saying it. But Frege does not help this argument, or any argument to show that everything follows from contradiction.

Later, include Ashworth in the text; explain virtual, absolute, formally valid.

start section 3: we can choose, stipulate, etc. definitions, rules, etc. but awareness of rule keeping is not awareness of logical necessity. Still, awareness of rule keeping presupposes awareness of the validity of principles of inference. That consciousness depends on awareness of how words are used; so it depends on consciousness of the contradictoriness of the opposite. And incommensurability does not affect contradictoriness. Putnam shows that there cannot be a computational proof of what I want to say (Godel same).

If recognizing the truth of the implied inference principles depends only of knowing how its words are used, then the truth is a necessary truth. For knowing its truth depends on knowing that if *p* is not true, then the meaning of “F” is not what it is; that is, *p* could be false if and only if what F is is not what F is.

Principles of noncontradiction just express certain, or a certain, use of "negation" signs. And a particular formal system may not need those uses, or that use, but if it does not include that use, it cannot contradict principles of noncontradiction that to use signs in that way.

And sentence and predicate negation signs determine the truth conditions of sentences and so the truth values of sentences. So predicate negation signs result into the truth values of sentences. And they cause the truth of one of their sentences.

Give an example of an inference implied in checking validity by means of truth tables. And for example, when 1 or 0 is assigned to a component sentence one place, it must be assigned to the sentence wherever the sentence occurs. So you cannot even use truth tables if you allow contradiction. That is, give an example of an inference implied in using a decision procedure.

Consider the truth table for one formula expressing the decision procedure method of showing that everything follows from contradiction, the formula using material implication. At this point, which truth table rules to use seems to become arbitrary. So the very method itself of using formal methods becomes the issue. So I will henceforth use nontechnical terms as well as technical. And the later medievals appear to have done the same using vocabulary, which from our point of view, was technical but not rigorous by our standards.

So what should we do? We should say that nothing follows from contradiction.

Explain that by the "terms" of relations, I mean the "relata" of relations.
In order to avoid the consequence that everything follows from contradiction, or in order to avoid the validity of arguments to that effect, we do not need a non classical logic, for example, a paraconsistent or relevance logic. Without resort to any modern methods, some traditional logicians rejected ECQ. So modern methods are not needed, for example, those of Pena. When you accept contradiction, you have already rejected disjunctive syllogism. This fact is important in its own right.

To avoid ECQ, you don't have to go outside of classical logic. You have to go outside of classical logic to get ECQ.

XXXCRITERIA

The question is not whether it might be possible to have a criterion but what purpose the criterion would serve in a particular case, especially the case of the argument I am now making.

In the web of belief, there are places where the use of criteria is more appropriate than in other places. And there are some places where it would not be useful. And there are some places where it could not be useful. The use of criteria are not even possible in the case of the self-evident necessity of the validity of an inference. It would generate an infinite regress of inferences, since the awareness of the self-evident necessity of the validity must be implicit in awareness of the premises.

So the move away from axiomatic method does not eliminate the need for self-evident necessity.

If a sentence is true by the meanings of its terms, we must be able to know that it is true by knowing the meaning of its terms alone. (True by meaning of terms does not mean we can know that it is true by the meaning of terms or know that is truth is caused by the meaning of terms. For example, “God exists.” We have to prove that it is true by the meaning of its terms. But the only way to prove it is to use truths that are known true by the meaning of terms.)

Awareness that an inference is a valid requires implicit awareness of the validity of an inference principle. It is impossible that the implicit awareness of the validity of the inference principle take place by means of a criterion for recognition. Use of a criterion would require an implicit inference the just as the use of rules A and B do. So awareness of the validity of the implicit inference would requires another use of a criterion, which would require another implicit inference, which would require another use of a criterion, etc.

Mention what Putnam said in conversation about criteria in science. Then point out that still criteria must serve some end. And they do not serve any similar end in this case. And what end would they serve?

Also, the whole issue with Quine is whether in addition to the so-called "empirical" (read: "scientific") there is also something called "the analytic." The logical positivists had said that in addition to the empirical,

there is another zone called the "analytical." So contrary to Putnam, Quine was not arguing against the logical positivists that there could be no such analytical zone on the grounds that criteria are useful in the other zone, the empirical zone. Putnam says that I am unfair to Quine precisely because criteria are useful in the empirical zone. But the logical positivists never denied that.

In even if Quine did not intend to deny that there are self-evident truths, only deny that such truths can be classified as "true by meaning," "true by convention," etc., that's fine with me.

On p. 177 of "methods of logic" there appears to be a good example of the fact that substitution uses inference by way of modus ponens.

XXXLCOs

Once LCOs are in existence, they are properties of whatever predicates like "red" and "colored" apply to. But there need not be separate words for that. What about when there are separate words, like" if," "not," etc.? When such LCOs make us aware of the logical necessity of inferential principles, there is an implicit awareness of the principles only. For the explicit awareness concerns the premises of the inference, not the inference principle. One of the consequence of this is that these inference principles are not rules for the arrangement of marks. In order for rules for the arrangement of marks to function in our awareness of the correctness of a step in a computational process, the awareness of the rule has to be explicit, not implicit. Quine on Carroll's paradox, Truth by Convention, shows this. That's what such a rule is all about. That is, an explicit instruction for how to arrange marks. So the role of inference principles in awareness of logical validity, the epistemological role, is completely different from the role of formal rules and awareness of formal correctness. (Logical principles have implications for the arrangement of marks, as Sommers shows. Specifically, they imply that we should substitute marks in certain ways and have certain explicit rules about arranging marks, for our formal system to be useful as a tool of logic.

Put LCO's and self-evidence as close to the end as possible, that is, to explain "what has gone before," where the latter includes as much as possible. When you get to LCOs, start by saying that they will not be a novelty; they have roots in medieval logicians. The medievals did not give formal arguments or analyses

of them. But what I am adding to the medievals is not formalism, it is a genetic causal argument of how logical LCOs come into cognition. That, not formalism, is what we need philosophically.

12-22-99

What red is and what color is are prelinguistic values. Now what color is is vague in relation to what red is. So of a prelinguistic value, for example, what red is, we can predicate a linguistically constituted value, for example, being more precise than. That is, linguistically constituted values can be features that accrue to prelinguistic values. If so, they are features belonging to prelinguistic values as a result of being expressed in language. The combination of these 2 kinds of features makes all the difference when we talk about logic and logical necessity.

This shows that logic is not about laws of thought. It is about properties belonging to what red is and what color is. Nor is logic about "abstract objects", for example structures, models, sets, or set-theoretically defined relations.

We don't grasp that Red is a color by first identifying an LCO that distinguishes color from red.

True by virtue of the fact that the meanings imply that the things they objectify must be identical, either because of CDO relations between the diverse means of objectifcation or, if there are such, causal relations.

Important. In this section where I started talking about Quine, I make the statement that a particular truth that I call attention to is "true by virtue of meaning". That needs to be clarified later. The fact is that it is true by virtue of the fact that the meanings differ only by LCO's, or true by virtue of the fact that the meanings are linked by necessary causal relations. So the nonlinguistic objects that are meant cannot be different in their prelinguistic state. If they were different, that would contradict the hypothesis that the meanings differ only by LCO's.

It happens that if we use language in certain ways, we cannot avoid being aware of certain LCOs. And it happens to be the case that if we are acquainted with certain LCO's, we cannot avoid being able to see the necessity of certain truths. If LCO's become objects of awareness in any other way, they would not be

LCO's.

When we are acquainted with such relations, we are acquainted with relations that make certain sentences necessarily true. And acquaintance with these relations is sufficient for knowing that the meanings, that for which we use, certain words do not differ except on the side of those relations, except by such relations. If we are acquainted with some meanings, we cannot fail to be acquainted with relations between them that render some sentences necessarily true. But acquaintance is one thing, ability to explain their difference from others, or to express criteria for identifying them, is another.

In the last paragraph, should I express myself in terms of what formal clarity and rigor presuppose, or in terms of what awareness of formal clarity and rigor presupposes?

Routley has shown formally how, even in a formal context, we can apply W.. E. Johnson's terminology (without all its baggage) to express the relation of normal negation to other negations, without loss of formal rigor.

what has the LCO analysis of "red is a color" got to do with modern logic? Each entry in the truth table is a set of 1 0 assignments to component statements: for example, "p" assigned 1, and "q" assigned 2. So just as red is a case of color, Green is a case of color, etc. because of the necessary identity and, so "p & q" being assigned 1 is a case of "p -> q" being assigned 1, because assigning 1 to the first is distinct only by the linguistic construct from assigning it to the second. And so on.

What do I mean by "a feature"? I mean what it is to be something red, something colored, etc. because that, namely, what it is to be something red, is really distinct from what it is to be something oblong. Notice however, that in the phrase "what it is to be something red" and other such phrases the linguistic analyst would put red in quotation marks.

In the definition of logical properties as properties belonging to objects as objects, we can include the fact that "as" refers to a causal relation, namely, the fact that logical properties are the result of our making things objects, and are for the sake of (teleonomic cause) making them objects, because logical properties are ways of being objects. A logical property like vagueness or precision is a way in which we make things objects, where "a way of making" does not refer to a psychological act but to the result of whatever

psychological act makes (in psychological way X) a thing an object (in logical way Y).

Means of diverse objectification can be so related logically, can be so logically related, that the objectified cannot be distinct other than logically. Here "logically" means related with reference to properties of the modes of objectification as such and only to the modes of objectification as such.

Logical relations, 09-16-01

Logical relations and logical properties are objects of awareness with which other objects of awareness become associated as a result of being objects of awareness. "Associated" might be better than "accrued to," etc.

Not all languages with color words need to have a separate word for color. Nor do we need to have many color words to abstract a concept of color.

Linguistically constituted objects that make sentences necessarily true sometimes occur. And it happens that we cannot be aware of how some words are used without being aware of such linguistically constituted objects.

BIG:

Do I really need they ontology metaphysical discussion of properties? Isn't the issue really epistemological. I am making the assumption that, epistemologically, whatever "color" communicates is also communicated by "red". That assumption is true of non-philosophers innocent of any problems about the ontology of "properties." For the man on the street, whatever is communicated by "color" is communicated by "red" but "red" communicates more than does "color."

BIG:

Maybe of metaphysics of distinctions between properties will later be... call for. But if so that later theory must not be inconsistent with the epistemological fact that the speakers of English understand "color"

when they hear "red." And I am not making a factual claim. I am just assuming that "red" logically includes "color," but that epistemological assumption happens to be true. So I do not even need to establish its truth, but it is important to note that the assumption that I am choosing at the beginning of this dialectical argument happens to be a true assumption.

Are we not able to articulate a data of experience to whatever level of precision or vagueness our language allows us to? Can we look at something and say "something," "a body," "a plant," "a flower," "a tool of," etc.? So why he would we need distinct, really distinct, properties corresponding to me to these words? And if there were distinct properties, there would have to be real connections, real links, and so real relations between them. That would be another level of complexity.

XXXANALYTIC NOT LINGUISTIC

Necessity and self evidence do not concern relations of ideas, relations of concepts, etc. the relation is between what it is to be color and what it is to be red; and what is to be color or read is not something linguistic or conceptual.

BIG:

Analytic truths are supposed to be "linguistic" in some more or less clear way in which empirical truths are not" linguistic." Perhaps there is/are some useful senses in which analytic truths are "linguistic" in ways in which other truths are not. But I wish to point out that there is at least one important sense of "linguistic" in which truths whose necessity derives from linguistically constituted objects are not linguistic in a way in which empirical truths fail to be linguistic. I'm not saying this is the only sense of that word that is useful. But there is another very important sense which has been neglected and which needs to be pointed out. It is that sense that I will use here. (“Conceptual,” “linguistic,” or “FORMAL.”)

BIG:

So-called analytic truths are not true by virtue of meaning. Nor are they linguistic as being true by virtue of meaning. Meanings are not something necessarily linguistic. The word "sentence" has a meaning that is linguistic. The word "neutron" has a meaning that is not something linguistic. Analytic truths our true by

virtue of the fact that the meanings are distinguished only by linguistically constituted objects (a causal analysis, not of our cognition of their truth, but of their truth. But this analysis of their truth still is not a criterion for recognition and still implies that the recognition of truth is not caused by a criterion). But to say that is not the same as to say that the meanings themselves are linguistically constituted objects. It is only to say that those means have acquired linguistically constituted features by becoming that for which certain words are you just. Those meanings were around for any words were around.

BIG:

If we want, can say that thousands were killed by the meaning of the noise "atomic bomb," or by the meaning of the noise "cancer." The statements are perfectly true. They do not make the cause of millions of deaths linguistic.

In denying that analytic truths are linguistic in some way peculiar to themselves, I am not denying that they are in some way linguistic. What I'm trying to point out is that all truths are linguistic by their nature. So I am not denying the importance of language for all truths. Rather, in asking how analytic truths are linguistic in ways that other truths are not, I am trying to assert the importance of language for all truths.

The usual reply to Carol's paradox is that rules are not premises but there is more to it. For we must grasp the truth of the rules by knowing the words of the premises; otherwise he cannot be aware of the validity of the argument; otherwise there would be an infinite regress. Therefore we must now investigate self-evidence (or "the analytic"). Doing so will illuminate the relevant issues such as synonymy and Quine's critique of the analytic.

XXXPOST-FREGEAN PARADOX

Maybe it would be helpful to think in terms of a letter addressed to a philosophizing logician, not a snide letter but a letter asking sincere questions that are backed up by actual examples. The immediately preceding quotation from "logic, philosophy of" provides a good example.

The letter might begin by quoting Aristotle on the difference between dialectic and metaphysics, the difference being that you cannot build a metaphysics out of logic. Then you might ask whether a modern logician thinks that modern logic has changed the situation. And state that you know some reasons why someone might think that modern logic does not change that situation, and that you'd like to present those reasons in order to get his response.

The first reason is that mathematical logic is even further removed from what Aristotle had in mind by metaphysics, and what most traditional philosophers had in mind by philosophy, that is what Aristotle meant by logic (that is the logic Aristotle had in mind). Relative to the traditional role of logic, mathematical logic is a tool that is not identical with the subject its serves, just as mathematics is and indispensable tool for physics. In physics you cannot at all get along without mathematics, but knowledge of physical truths is a different kind of famed from knowledge of mathematical truths. So if metaphysics cannot be built on logic, much less can be built on a tool of logic.

To describe mathematical logic as a tool to service something other than itself is not to imply that mathematical logic is not intrinsically valuable. Mathematical logic is entirely worth studying for its own sake, just as mathematics is worth studying for its own sake. And just as mathematics could not be a tool for physics were mathematics not a valid subject on its own right, so mathematical logic would not be for logic were mathematical logic not a valid study on its own right.

So my questions should not be taken to apply in a disrespect for the achievements, the very great achievements, a modern logic. But I must confess to being suspicious, not a modern logic, but a certain modern logicians, suspicious that they are not satisfied with the great achievements that logic can boast of for its own sake but will only be satisfied if their method monopolizes the ways of dealing with questions that philosophy has always asked.

A good example of this was Michael Martin's talk at the society of Christian philosophers at Merrimack college. His thesis was that was incoherent to say that God had "knowledge." To establish this, he gave

three definitions of knowledge couched in post Fregean terminology. Of course, none of these definitions corresponded to what any earlier philosopher would have meant by predicating knowledge of God. When this objection was raised, his reply was basically that none of the earlier attempts to predicate knowledge of God were worth considering because they were not as clear as his definitions for knowledge. They were not as clear because they were not using post Fregean techniques.

So unless you're using post Fregean techniques, according to someone like him, is not even worth discussing with you have to say. But is it worth discussing what he has to say, if it really doesn't have anything to do with what anybody has meant when they predicate knowledge of God? Isn't this intellectual imperialism, or dictatorship, or tyranny. Isn't he saying "I won't play with you unless you play my game?" And there is no doubt, or there are no doubt, standards by which one can justly say that his methods are more clear than those of traditional theists. But if his methods cannot formulate positions of traditional theists, why is that not a limitation on his methods, rather than on the value of traditional methods. And no matter what standard judges his methods as clearer, what if his kind of clarity just isn't relevant to the topic under discussion? Finally, as I will discuss below, what evidence is there that his kind of clarity has been helpful in solving any philosophical problems.

Another example pertinent to the question whether there is a limitation in a formal method that cannot express certain theories about God, or whether or there is a shortcoming in the theory: somewhere in one of Pena's articles, he criticizes certain kinds of talk about God that use reduplicative predications, that is, "as" phrases. The reason for his criticism, or one reason for his criticism, is that no one has worked out a successful formal method using such phrases. But we did not have to wait for formal methods to know that syllogisms were valid inferences, that modus ponens was a valid form of inference, etc. so why should we not say that the fact that formal methods cannot capture the logic of such statements is merely an innocent limitation to formal methods? Likewise, for the Trinity. A criticism of the Trinity based on formal methods could not be relevant unless that formal method was capable of formulating traditional assertions about the Trinity.

In suggesting that their method is not the only one worthy of pursuing, I am sure that they will have a corresponding suspicion of me. They will think that I am suggesting that we go back to the kind of obfuscation that afflicted philosophy or 2500 years before Frege. At this point, however, another questions concerning the role of modern logic in doing philosophy arises.

Yes, philosophy has been afflicted with disagreement and paradox throughout its history. But 100 years after Frege, is there any less disagreement and paradox in philosophy? The answer must be no. Then what has mathematical logic contributed, not to logic where mathematical logic has proven to be the indispensable tool, but to philosophy? One reply might be that the old kinds of disagreement and Paradox were bad kinds, but the kinds of paradox in disagreement that have arisen since Frege are good kinds. But why? Because the current obfuscation in philosophy is based on the most clear and precise formal methods? But if those methods cannot produce clarity and precision in philosophy, why is the current obfuscation any better than the old?

BIG:

No, earlier methods did not succeed at all in eliminating disagreement and Paradox from philosophy. But I for one believe that at least one earlier method is able to provide an explanation for the constancy of disagreement and paradox in philosophy that the approach to philosophy via mathematical logic is completely incapable of providing. For that explanation predicts the occurrence of obfuscation in philosophy without self referentially claiming that philosophy is in anyway in valid. In other words, I am not offering an explanation that would produce more clarity and less paradox then would the methods of mathematical logic in philosophy. But why should that burden be on me?

But rather than bore you with my account of that explanation, I would like to have you answer one more question which is relevant to this whole issue of whether I am suggesting that we go back to a kind of obfuscation that your methods have put behind us for ever. Could you mention any successes that your method has happened over the last 100 years? I don't mean successes within logic itself. No one can fault, for example, the contributions of a Tarski, a Kripke, a Craig, etc. to logic itself. But where have these

contributions gotten us any closer to answering any philosophical questions?

By philosophical questions, I mean the kind of questions philosophers have always asked about, for instance, truth, necessity and possibility, the relation of theories to experience, etc. you might reply that the whole point of your method is to redefine those questions. No doubt about it. But we have already raised the issue of what successes your method has given, in contrast to previous methods. And if the current reply is the one you would like to make, there is always the issue of whether by the time you are through redefining a question is really the same question. And if it is not the same question, what reason have you given for believing that the old question is invalid other than your act of faith in your method, in spite of the fact that your method hasn't produced any better results than the old methods?

For example, the way the problem of universals is currently expressed that problem is not the problem that traditionally vexed philosophy. And not only does the modern approach not suppress that previous question but the very conditions that give rise to the modern question presuppose the conditions to which the previous question is addressed. That is, the answer to the modern question presupposes that the earlier question can be answered.

And when I ask about your successes, another important thing has to be kept in mind. I'm not talking about your successes in criticizing your own predecessors. Granted, philosophers of modern logic have been successful in moving beyond, or I should say, in negatively criticizing, for example the approach of the Tractatus and of the logical positivists, or that of ordinary language philosophers or that of the disquotationalists. Those successes, or that type of success, does not necessarily constitute a success relative to answering the questions philosophers have always asked. Much less does a constitute success in answering those questions as replaced by other questions using post Fregean vocabulary.

What about the rest of us who never had the kind of hangups exemplified by the Tractatus or the logical positivists or ordinary language philosophy?

Another question about formal methods and their use in philosophy would be whether they produce

paradoxes of their own, paradoxes that are artifacts of formal systems and formal methods. I think of the paradox on p. 184 of the 4th edition of Quine's "methods of logic." He calls it a truth of logic; why should we not call it simply an artifact of one otherwise great of logic? After all, mathematics produces paradoxes as its artifacts, without diminishing the validity of mathematical method or the importance of it. So the occurrence of paradoxes in this study of formal systems would not diminish the importance or value of that study anymore than paradoxes do in mathematics.

Another reply would be that some and perhaps many analytic philosophers recognize the problem of doing metaphysics based on logic, and so they escape the criticisms I have made so far. But this raises the question of what constitutes a successful attempt to escape from basing metaphysics on logic. And that question brings up some of the same issues I have already mentioned.

For example, in his book on noncontradiction and excluded middle, Nicholas Rescher bends over backwards to say that he is doing ontology and not doing logic. But an examination of what he actually does, an examination for my point of view, shows that he is still just doing metaphysics by extending logic. For he gets himself into trouble precisely because he neglects the fact that the truth of propositions is an effect of what exists in a particular world. As a result, he winds up with so-called "worlds" in which sentences are true even though the required causes of their truth are absent from the world.

The root of this problem is the attempt to define a "world" in an ontological sense in terms of the truth of propositions. Where the reality is that the truth of propositions is a byproduct of what is the case in a world. In other words, truth must be defined in terms of existence rather than existence being defined in terms of truth. And is leads to some specific things that can be said about what the proper way of doing metaphysics, as opposed to improperly basing it on logic, is.

Whatever else must be true of the correct method and metaphysics, that method must define other values in terms of the extra logical value we call "existence." Not the other way around. From the primacy of extra logical existence, however, it does not follow that existential quantifiers must have more than one

meaning. The opposite follows. Precisely because existence is not a logical value, the logical role of quantifiers can be the same at every level.

Even if there were no arguments in favor of the fact that existence is an extra logical value, you want to maintain that we are incorrect in holding that position, you should at least recognize this as a fundamental point of departure for two radically different philosophical paths. Just as I am trying to understand, and hope I do understand, why someone would think that metaphysics should be based on logic, I ask you to understand why someone would think that whatever else is existence cannot be merely a logical value.

But in fact there are arguments for my position. They are of 2 kinds. The first are arguments to show that to be is not to be known. The second kind are arguments to show that in the structure of what exists there is a distinct factor that should be described as act with respect to everything else being described as potency of one kind were another. And the factor whose cognition--independent presence these arguments establish is at least one of, and actually more than that, the meanings of our ordinary word "existence."

XXXPOLYADIC PREDICATES

Against two-place predicates: given the relation expressed by aRb, it is not the case that relation R, or it need not be the case, that relation R is just as much a property of a as it is of b. For example, Tom knows Dick, Tom kicks Dick,, Tom laughs at Dick.

BIG:

Compare "Tom knows dick" to "Dick is known by Tom." From a metaphysical point of view, the first relation is a real relation, a real existent, while the second relation is a logical relation only, a nonreal existent. But from the point of view of the way they are represented logically, the way they are objectified, they are equally relations. For both we use a "tom related to Dick" "Dick related to Tom" logical structure to objectify them. This should clearly show that metaphysics cannot be based on logic. Also, it should clearly show that for every predicate with a distinct meaning there is not a really existing feature distinct

from another really existing feature.

Polyadic predicates are not the reason logic is a serious subject. Logic always has been a serious subject, and monadic symbolic logic has never pretended to absorb all questions from traditional serious logic. Polyadic predicates are the reason why the use of Fregean methods are a serious undertaking.

In terms of the goal, the teleonomic cause, of knowing the truth of "Fxz -> Fzy," the objectification of x and y must be subordinate to the objectification of z, as means of objectifying z. For the identity required for the recognition of truth is formally the identity between z and z. Using x and y to objectify z will require other at least implicit identity relations, but those other identities are used as a means to grasp the identity of z with z. If not, we could never grasping the identity of something with something.

XXX

This counterfactual argument does not require that there be languages that express the same thing we do or that we could know that they do, if in fact they exist.

In the last section where I talk about self-evidence about arranging strings of marks being less abstract and foundational I could say less abstract and epistemologically foundational or metaphysically foundational.

Do not say that necessary truth is defined as a "function of" what make sentences true, but that they are defined by "reference to" what make sentences true. That is, what makes multiply predicative sentences true. They are defined by a condition for the truth of multiply predicate of sentences.

May be drop the stuff about epistemology using psychological concepts. Just point out that LCOs are not psychological relations.

12-26-00, BIG

Delete the last paragraph. Delete the Quine paragraph. Delete the paragraph on the reality of properties and on Wittgenstein in the Tractatus. Remove the paragraph on a Putnam's defense of criteria. Move bivalence to the end. By dropping references to principles of noncontradiction (especially in the plural), I can delete the stuff about negation altogether. The drop the reference to causal realism in the indeterminacy of translation footnote. Drop the stuff about no arguments working in. And if I drop the Tractatus paragraph, I can move the statement about the irrelevance of the ontology of properties below, and add it to the heuristic sentence. If I drop the Quine and Kripke paragraph, perhaps I can drop the stuff about the necessary not being the same as the linguistic.

Either remove the paragraphs about other operations not being able to be defined, or recast the discussion strictly in terms of classical logic and the dependence of classical operators on the exclusion of contradiction.

He said, "this sentence is", and what he said is true. Also try using italics. Or how about "this string of shapes is true" or "the space occupied by this string of shapes is true"? Or "the first so many digits in this string of letters between quotation marks is true"? In each of the latter cases, the subject is something that is neither true nor false; because whatever causal conditions are necessary for a string of marks to achieve the status of being true or false, and I do not need to know all of what those conditions are, they certainly are not achieved in those strings. And if they are not achieved in the latter cases, there is no reason to think they are achieved in the first case, the "sentence is" case.

In the short article, say that since you are talking about logic you will not be talking about philosophical arguments concerning consistency and bivalence.

Perhaps instead of truth tables say matrix.

Possible worlds are only relevant to philosophy to the extent that possible" means "could be the case that" where that means "the following state of affairs could exist," and so could be the cause of the truth of a statement. Possible worlds are relevant only to the extent that they are possible existents and therefore possible causes of truth.

How about this as a translation of "supposition": place holding.

Without any further understanding of "truth" or truth conditions," we can see that the question of necessary truth is the question of why, if "F" can be truthfully predicated of some x, then "G" can also be truthfully predicated of that x; in other words, the question is why must those predicates be truthfully predicable of the same x. And we can answer that for multiply predicative truths, that is, for truths such that the question is whether if one predicate is true, the other must also be true, without any further consideration of truth conditions other than the truth conditions, individually, for "F" on the one hand and "G" on the other.

To avoid paradoxes such as the liar, we don't need to know why a string of symbols lacks truth value, only that it does lacks truth value. Such paradoxes are often by themselves proof that a particular string of symbols lacks truth value, for example, the string "this sentence is", or the string "this theorem is" as in "this theorem is not provable." Nor does this reply mean that truth and falsity are always contraries rather than contradictories. (Check Putnam on Dummett, The Threefold Cord.) The preceding statement can be true of strings of symbols without prejudice to the question whether there are such things as propositions which must be either true or false and cannot fail to be one or the other.

We have to be aware that our definition of a proof can cover all the possible cases and that the rules of the language can cover all possible cases.

Quantification, June 26, 2001

Why call existence of form of quantification? Because quantification is saying "all of them" or "some of them". But this presupposes existence. What are about them? In other words, quantification presupposes that a universe of discourse is posited. But the object in that universe of discourse need not be existents in the ontological sense.

Tarski, truth, self reference, metalanguage, June 26, 2001

In "snow is white" is true if and only if snow is white. The words "true" and the words in "snow is white" must belong to the same language. But a language that can talk about snow can only have a word for truth if it can also talk about language about snow. A language that does not at least have the potential for talking about itself is an incomplete language and an epistemologically unuseful language. (re-read Putnam's argument against disquotation.)

Material implication, 09-16-01

The material conditional is really an enthymeme. As such, the question is not whether it is true or false; the question is whether the reasoning of which it is an abbreviation is a sound, where "sound" means both true and valid.

You cannot combine Frege and Hume. My logic article shows that the concept of self evidence explains and is more compatible with the success of post Fregean methods than are Humean and Kantian skepticism. The reason post Fregean methods haven't worked in philosophy is bad philosophical assumptions. Good philosophical assumptions explain the success of post Fregean methods. They do this by showing that philosophy is something other than an application of logic. The same process of explaining the success of post Fregean methods shows that philosophy is something other than an application of logic, and so simultaneously shows why post Fregean methods are not successful in philosophy.

Do I have to get into the issue of quantification over properties?

My position is not fallibilism.

First I establish that inference principles are necessary. Then I establish that they are self-evident by the tortoise Achilles argument.

To recognize logistic correctness, (1) I need to know necessary logical truths, but (2) logistic knowledge in itself does not give me that recognition.
After talking to Chuck Kelly, Mar. 2nd, 2002

Those words on p., between the previous. And the following. Are not a sentence just by being what they physically are. Physically they are not words just scratches. Those scratches become a sentence by being associated with things other than themselves. But the things other than themselves with which they become associated fall into two classes.

First, there are objects of reference, of naming, of description, etc. that are pre-linguistic and pre-logical. That is simply to say that language does not start by talking about language. In order to have a language to talk about, we have first to talk about things that fall into our apprehension before language exists. After language exists, we can talk about objects of naming, describing, referring, etc. that are linguistic in nature.

But extra linguistic objects are not the only objects with which those scratches become associated in order to become words and sentences. They also become associated with objects we later describe as being a subject, being a predicate, being a copula, being singular or plural, being past or present tense, masculine, feminine or neuter, etc. such objects come into existence and come into apprehension when language exists for the initial purpose of talking about prelinguistic objects. But the way language happens to work is that in order to communicate about those initial prelinguistic objects, the scratches become associated both with prelinguistic objects and linguistic objects.

in other words, the scratches have to be associated with prelinguistic objects in certain forms of association, in certain ways, ways that are necessary for language to do its job of communicating about prelinguistic objects.

Once language is in existence, we can name, describe, refer to, etc. objects of kinds other than our initial prelinguistic objects. We can use language for any kind of objects that comes into apprehension, including objects that are specifically linguistic. In other words, we can talk about names, predicates, descriptions, etc. but it is important to note that even when we are talking about specifically linguistic objects, a distinction must still be made between the objects that the scratches name, describe, refer to, etc. and objects that the scratches become associated with for the sake of naming, describing, etc the former objects.

In other words, when I am talking, for instance, about what it is for a group of scratches to function as a subject, the word "subject" must have two kinds of association's. It must have that kind of association with subjects that is the kind we call being the meaning of the word "subject." But assume that the scratches "subject" used with that meaning also happen to be a subject of a sentence in which they are so used. Those scratches then have two kinds of association with what it is to be subject. In order to function linguistically those scratches have the association with what is to be a subject that we call the meaning of those scratches. But those scratches also have the kind of association with what it is to be a subject that we call actually being a subject.

One way to distinguish these different kinds of association is to note that when the scratches "subject" are used as a subject they share the characteristic of being a subject with any other group of scratches that can be so used. But when the scratches "subject" have the meaning of what is to be a subject, they have a characteristic they do not share with other groups of scratches except for those groups of scratches whose meaning is synonymous with the meaning of "subject."

Talking about the relations between these two different kinds of association can be tricky, obviously. But I want to say some things that hopefully will avoid any unnecessary trickiness. I want to talk about a certain

aspect of the relation between those two kinds of association that concerns our belief in the truths of sentences in which scratches have both kinds of association. For the sake of avoiding unnecessary complications, I assume that the objects with which the scratches have the first kind of association are the kind of prelinguistic objects that we must be communicating about in order for language to come into existence in the first place: trees, rocks, motion, color, shape, multiplicity, warmth, speed, granularity, wind chill, etc..

When we believe that a group of scratches has the characteristic of truth, we are not believing in any sort of correspondence between the linguistic or logical characteristics with which any or all of those scratches are associated, on the one hand, and prelinguistic reality on the other. We are not believing that any of the linguistic or logical characteristics with which those scratches are associated reflect prelinguistic reality. We are not attributing any of the linguistic or logical characteristics with which those scratches are associated to prelinguistic reality.

That is precisely what we do not and cannot be doing. Whatever the relation between those scratches and reality is that makes that group of scratches true, whether it is correspondence or coherence or something else, it cannot be a relation between the logical or linguistic characteristics those scratches are associated with and reality.

The reason is that logical or linguistic characteristics are just means, tools, for understanding, in the mode appropriate for human reasoning faculties, the relation between the prelinguistic and prelogical objects with which those scratches are associated and reality, what ever that relation may be. But in knowing the truths about prelinguistic reality in the mode that is appropriate for our reasoning faculties, we do not attribute that mode of knowing to the reality that we know. If we did the sentences in which we made attribution would be false; for the mode of understanding has a relation to reality only to the extent that the prelogical and prelinguistic objects with which scratches are associated have a relation to reality. (Geach's quote from Aquinas ST I, 13 ?? ad ?)

The goal, the purpose, of linguistic and logical characteristics of groups of scratches is for us to know the relation between prelinguistic and prelogical objects and reality. Whatever the way that linguistic and logical characteristics serve that function is, it cannot be by our attributing such characteristics to prelogical reality. Doing so would entirely defeat the purpose of those characteristics. Their purpose is to enable us to know and communicate about something entirely distinct from and prior to them.

The reason why we need to use logical and linguistic relations, characteristics, and objects to communicate about prelinguistic reality, is not that those relations, characteristics and objects correspond to, reflect, or are true of prelinguistic reality. The reason is the partial and fragmentary nature of human intelligence. We can only understand things by breaking the job of understanding in parts. In the process of breaking the job of understanding and parts, before we complete the job understanding by seeing the unity of those parts by means of the truth of proposition, those prelinguistic parts become related in ways they are not related outside of being objects of human modes of knowing. (Partial, incomplete, glimpses of varying degrees of detail and precision; glimpses that call for further analysis. Not just glimpses of really distinct physical parts, but partial and incomplete glimpses of things that are really and physically the same. So the partiality does not map to or correspond to the fact that things are whole made up of really distinct physical parts, causal parts.)

They become related as, for example, the meaning of the scratches that function as a subject or predicate in a sentence. Or for example, they become related as the meaning of this name or the referent of this name. Those relations simply do not apply to them in their prelinguistic reality. So such relations cannot be what we know about prelinguistic reality when we know the truth about prelinguistic reality.

But when we are aware of truth, we are aware of both kinds of objects. Because we are not just aware of reality but the relation between reality and a sentence, where “sentence” does not refer to scratches in their physical existence. “Sentence” can only refer to scratches with both kinds of characteristics. So knowing truth we have to know both kinds of characteristics. And that is one place where the confusion can come from, from the fact that both kinds of characteristics have to be our consciousness when we

know the relation between one kind of characteristic in prelinguistic reality. It is not just a fact or an accident that both kinds of characteristics have to be in our consciousness. As long as we can only know reality and partial and fragmentary manners, the characteristics that define our tools and means of knowing prelinguistic reality have to be part of that which we know. For you can only know the truth about reality by uniting things that have previously been broken up by a process in which they have necessarily acquired logical and linguistic characteristics as well as being associated with prelinguistic characteristics.

We know the identity of a thing with itself, not directly of mind or mental constructs with things, because we know that X is a thing and that X is objectified. We know the identity of that which exists and that which is objectified.

In other words what we have to know is precisely the prelinguistic unity of objects that have become logically and linguistically diverse. And we have to be aware of them in their logically distinct states in order to go through the process of recognizing their unity in their prelogical state. Because we can only recognize the truth about that prelogical unity by comparing prelogical realities that we have made logically diverse by our mode of knowing (our incomplete mode of knowing, our always to some degree vague and abstract mode of knowing.).

It is important to notice that when I talk about our mode of knowing being partial and fragmentary, I am not talking about the fact that in order to know reality we must know a multiplicity of distinct truths, where each truth only expresses part of what is true in reality as a whole. Rather, the partial and fragmentary mode of knowing manifests itself in the formation of concepts prior to the formation of propositions. The reason that we need multiple propositions is that our concepts are fragmentary. (Not just fragmentary because aspects of things are really distinct and hence really multiple, but because our grasp of any one aspect is abstract, vague, and so incomplete.) So even though any one truth can be described as partial with respect to the total set of truths, any one truth is in itself an overcoming of the partial and fragmentary character of knowing from which logical relations take their origin.

New topic

Traditional logicians would have said: Arguments that everything follows from contradiction work if and only if other premises, for example, disjunctive syllogism, are true. Are they true? They are not necessarily true if the principle of noncontradiction is not true. So maybe they are just true by stipulation. But can that be all there is to logical knowledge: from the stipulations, this follows. After all, we have to use modus ponens or modus tollens. But are not these just further stipulations?

No, because it is just another stipulation, you get the Achilles tortoise paradox. Quine shows that stipulation gets that. Modus ponens has to be used but can't be a stipulation, short of an infinite regress. It has to be implicitly known as valid. How? Again, Quine can help, that is, his critique of the analytic can help us see how.

The reason that stipulation gets an infinite regress is that stipulation makes something an explicit premise. And get from explicit premises to an explicit conclusion you need to use the rule of modus ponens on those premises, even though one of those premises is modus ponens itself. Because if modus ponens is just stipulation, it can't get you to this conclusion rather than that conclusion necessarily. It can't get you to any conclusion. We have to apply a rule to the premises to get to a conclusion. If our knowledge of the truth of the rule, or of the applicability of the rule is the same kind as our knowledge that we have made a stipulation, we are in an infinite regress.

August 16, 2002

Questions such as self evidence, analyticity, necessary truth, etc. do not arise from ordinary language as opposed to formal language. They arise from an investigation of the epistemological conditions necessary for doing things like using formal languages and recognizing that a step in a formal process is valid according to the rules.

Don't forget to have a reference at the end about Tarski. Also church and touring machines.

Instead of saying "p" also is 1, say "p" also has the value T, or the value 1.

Trinity, Logic, Formal systems, BIG

Assume my discussion of the Trinity works. The discussion is essentially metaphysical and ontological, not logical. But our knowledge, which we are capapble of having, that my argument works shows that we have an implicit grasp of logical principles that permit what would otherwise be violations of the transitivity of identity. We need not be able to articulate those principles, anymore than a person, say a child, who recognizes the validity of a syllogism (can chimps do this?) need be able to articulate a law expressing the validity of syllogisms of that structure.

The next step would be to try to articulate this principle. This would be entirely comparable to coming up with concepts like supposition and ampilation to express different causes of the truths, and our knowledge of the truths of apparently similar sentences, so that invalid inferences are known to be blocked by fallacies of equivocation. These concepts would be employed in the formulation of logical laws.

A final step would be to try to construct a formal system in which these laws could be arrived at by rearrangement of symbols according to rules of formation and detachment. This would probably be the kind of thing Chuck Kelly is doing. While this would be a very interesting and even important thing to do, doing it would not be necessary in order for us to possess the kind of knowledge described in the previous two paragraphs. And that illustrates the relationship of constructing formal systems to logical knowledge and ontological, metaphysical knowledge.

Math, number, Trinity, June 29, 1993

There are four relations and three persons in the Trinity. This proves that number, discrete quantity, is not an accident in the sense of a mode of being

inhering in a substance over and above what the substance is substantially. It is an "accident" in the sense of something extrinsic to the substance. Maybe number is transcendentally identified with being the way truth and goodness are. That is, it is not itself a relation of reason but is being taken together with a relation of reason. That would be enough to save it from being a set of sets, etc. The Thomistic theory of transcendentals, as well as the Thomistic theory of universals, gives us other alternatives for the nature of numbers. The number of the persons are the persons taken as . . . ., taken as the extralogical terms of logical relations of identity with the objective concept person. Number is not just the CDO “identity with an objective concept.” At the very least, it is “satisfying an objective concept together.

Logic, math, metalogic, formal systems, principle of non-contradiction, Trinity Nov. 24, 94 BIG

In what sense are multi-valued logics governed (Causal Realism, p. 199) by the same common principles that govern our discourse about extralogical things? For one thing, our knowledge of the truth (or validity or whatever) of statements within (or about or whatever) multivalued logics, presupposes the principle of non-contradiction as the term of a reductio ad absurdum. And our knowledge so presuppposes that because those statements could not be true (or valid or whatever evaluative concept we use) if they did not conform to the PNC.

Formal systems do not capture the centrality of the PNC, as my critique of the argument that everything follows from contradiction shows. Quote Russell about formal systems showing that the PNC is just another principle. My argument shows that many and perhaps most of those other principles do not work without the PNC.

Formal systems, logic, Putnam, P of NC, Trinity, September 15, 1993

It is not whether the p of NC is in the language or in the metalanguage. It is not whether a language contains the corresponding formula. It is whether what the formula expresses, what the P of NC expresses, is obeyed by the sentences, any sentence, in any language.

The same with a formula for transitivity of identity and the Trinity.

Could a notation whose marks had the same meaning as "God is good and God is goodness" really be a formal system? No, the formulas of a formal system are not designed to mean this, not meant to mean this. Rather, given sentences that mean things such as what "God is good . . ." means, formal syntax is supposed to represent X about such sentences. So what is X? Is it self-evidently clear what X is?

Why am I a priori skeptical about the construction of a formal system that would, say, allow saving the principle of noncontradiction, while permitting violation of transitivity of identity for relations that can be genuine formal relations (using “formal relation” as defined in Causal Realism) and still be predicated directly of the essence to which they belong? Is it just that I see no successes in attempts to solve philosophical problems by the methods of formal systems? Is it just a reaction against the imperialism of method that is practiced in the name of such systems? Or is it an intuition of the essential inappropriateness and even incompatibility between the nature of the problem to be solved and what is accomplished by means of such systems?

"First order, "second order," "empirical," "logical," etc. are not the only alternatives for explaining the usefulness and power of quantification and the function/argument syntax. Ontological analysis and the fact that being is first known and known by judgment is another possibility, and this posibility is a necessity. See my “Analytical Thomism” article. (Existence is logically included in knowledge by judgment, not concept.) As Putnam said,

Frege is not to blame for making "exists" logical; subsequent interpreters did that.

If a formal language cannot describe its own relation to its objects, that is a limitation of formal languages. When someone says a language cannot state its own relation to its objects, I reply that English does it all the time. If the opponent answers with talk about the "metalanguage," I respond by asking whether he means middle English, old English, or Latin. Why can't one sentence of English say something about the weather, and another sentence say something about how English expresses facts about the weather? Why must we sleep on the Procrustean bed of the metalanguage/object language distinction? Answer: because someone is in love with that distinction and wants to force it on us. Why? Because of the a priori idea that it will produce clarity, when in fact it constantly produces obfuscation over and over again. But the opponent is in love with the dream of the clarity he imagines it creating.

Formal systems, logic, Putnam, P of NC, Trinity, September 15, 1993:

It is not whether the principle of noncontradiction is in the language or in the metalanguage. It is not whether a language contains the corresponding formula. It is whether what the formula expresses, what the Principle of NonContradiction expresses, is obeyed by the sentences, any sentence, in any language.

The same with a formula for transitivity of identity and the Trinity.