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Contradictory Belief and Epistemic Closure Principles

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Abstract: Kripke's puzzle has put pressure on the intuitive idea that one can believe that Superman can fly without believing that Clark Kent can fly. If this idea is wrong then many theories of belief and belief ascription are built from faulty data. I argue that part of the proper analysis of Kripke's puzzle refutes the closure principles that show up in many important arguments in epistemology, e.g. if S is rational and knows that P and that P entails Q, then if she considers these two beliefs and Q, she is in a position to know that Q.

1. Introduction

The two sentences 'Lois believed that Kent can fly' and 'Lois believed that Superman can fly' differ only in the two names 'Kent' and 'Superman'. If the sentences differ in truth value, as it seems they do if we pretend that the Superman story is true, then that difference must be traced to the difference in the two names (since the rest of the sentences are identical). But how are the names different? They don't differ in reference, so they must have some semantic function other than referring to Superman. Fregeans typically called this additional semantic role the *sense* of the name. The name 'Superman' has one sense and the name 'Clark Kent' has another sense. These senses, if there were such things, would most likely be crucial for understanding thought for the following reason. Philosophers believe that one of the most productive ways to theorize about thought is to study the ascription of thoughts to people, the ins and outs of sentences about people's thoughts. If the intuition that 'Lois believes that Kent can fly' and 'Lois believes that Superman can fly' differ in truth value is correct, then in order to understand thought ascription we must understand these semantically relevant senses (i.e. semantically relevant in that they partly determine the truth value of belief ascriptions such as those concerning Lois). Thus, if there are such things as semantically relevant senses, then they are crucial for theorizing

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about thought via studying thought ascription. So it turns out, perhaps contrary to initial appearances, that quite a bit rides on the question whether Lois believed that Clark Kent could fly.

In the contemporary philosophy of mind a debate rages concerning how one should respond to Kripke's puzzle about belief, which will be analysed below. This puzzle seems to demonstrate the inadequacy of the traditional, time-honoured argument for the highly intuitive thesis that one could believe that Superman can fly even though one did not believe that Kent can fly (Kripke, 1979).[1] If one cannot support this fundamental intuition with any argument, then we must seriously consider the rival Millian position that one could not believe that Superman can fly while failing to believe that Kent can fly, since these two thoughts are identical. The Millian admits that it would be *inappropriate* to say 'Lois believes that Kent can fly', but this inappropriateness isn't falsehood. The Millian might attempt to account for our mistaken intuition that Lois doesn't believe that Kent can fly by claiming that Lois has two ways of grasping the single idea that Superman, i.e. Kent, can fly. Under the way associated with 'Kent can fly' she rejects the proposition; under the way associated with 'Superman can fly' she accepts it. She just doesn't realize that she is grasping the same proposition via both ways or sentences. Thus, if the Millians are right, then we might not need to appeal to semantically relevant senses in order to understand thought or thought ascription.

On a seemingly unrelated front in contemporary epistemology, a debate rages concerning closure principles, such as the thesis that if S is as rational as one can realistically get, and if S knows that P, knows that P entails Q, and reflectively entertains the thought that these two pieces of knowledge give her reason to believe that Q, then S is in a position to know that Q. Such principles appear to play a crucial role in some compelling Cartesian arguments for scepticism, arguments that have greatly deepened our understanding of knowledge and justification. For if the preceding closure principle is correct, then if I know that I have two children, and that my having two children entails that I have not always been a brain in a vat being fed illusory sense experiences by mad scientists, then I can know that I have not always been a brain in a vat. If I do not have the latter knowledge, as the sceptic powerfully argues, then by closure I fail to know that I have two children. And of course if I do not possess the latter knowledge, then I can hardly be said to know much of anything.

There is dispute concerning some alleged counterexamples to the closure principles.[2] Very briefly, most of these counterexamples are variations of the

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[1] Reprinted in Salmon and Soames, 1988. For some discussion of Kripke's puzzle see Bach, 1997; Crimmins, 1992; Forbes, 1990 and 1994; Frances, 1998b and 1999; Lewis, 1981; Loar, 1987; McMichael, 1987; Marcus, 1981 and 1983; Over, 1983; Owens, 1995; Salmon, 1986; Sosa, 1996; and Taschek, 1987.

[2] For some discussion of these examples see Dretske, 1970; Goldman, 1976; Heller, 1989; Stine, 1976; and White, 1991.

following. Suppose Mary is at a zoo and knows that the only mammal in cage 3 is a zebra and knows that the fact that the only mammal in cage 3 is a zebra entails that there is no cleverly disguised mule (which is a mammal and not a zebra) in that cage. In spite of this knowledge, it seems to many that Mary need not know that there is no cleverly disguised mule in that cage—since she may not have appropriate evidence for the latter belief. Regarding such cases it is granted that the agent can rationally *believe* that there is no cleverly disguised mule in cage 3; the controversy surrounds the person's justification or epistemic right to that belief. Mary may or may not be adequately justified in thinking that there is no cleverly disguised mule in cage 3, but no one should challenge her *rationality* in so believing—at least not in the sense of being so unreasonable that her epistemic situation borders on incoherence.

I think that there are successful counterexamples to the epistemic closure principles, but those I will discuss below are nothing even remotely like the zoo one. As hinted at above, these counterexamples arise from an analysis of Kripke's puzzle. Furthermore, they are importantly different from those offered by other theorists. First, in my counterexamples it is not the belief's justificatory status that is challenged but its *existence*. S fails to know that Q, and if she did come to believe that Q then she would be highly irrational. Second, my counterexamples defeat even more intuitive epistemological closure principles that are impervious to attacks based on situations like the zoo example, such as the principle that if S is as rational as one can realistically get, knows that P, knows that P entails Q, and reflectively entertains the thought that these two pieces of knowledge give her reason to believe that Q, then either S is in a position to rationally believe that Q or she does not (rationally and) reflectively believe that it's not the case that Q. In fact, I suspect that there are counterexamples to an even more intuitive, a priori version of the previous principle, the thesis that if S is as rational as one can realistically get, knows a priori that P, knows a priori that P entails Q, and reflectively entertains the thought that these two pieces of knowledge give her reason to believe that Q, then either S is in a position to rationally believe that Q or she does not (rationally and) reflectively believe that it's not the case that Q.

In what follows I argue for the existence of counterexamples to the closure principles by defending a partial analysis of the class of thought experiments generated from Kripke's puzzle about belief.[3] I then consider an improved closure principle and a principle connecting rationality and contradictory belief.

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[3] My modification of Kripke's puzzle, designed specifically to deal with closure principles, was inspired by a similar one of Brian Loar's (1988). However, upon rereading Kripke's paper I found that most of the counterexample's essential elements are on p. 122 of the reprint in the Salmon and Soames volume. Thus, the template for the counterexamples is Kripke's, not mine (or Loar's).

2. The Counterexample

Suppose that Peter is a monolingual English speaker who learns of Geoffrey Hellman the philosopher of mathematics and comes to know that if Hellman lives in Minneapolis, then Minneapolis is home to a philosopher of mathematics. Some time later he hears about Hellman the pianist, comes to know that Hellman lives in Minneapolis, but does not learn that the philosopher is the pianist: he thinks there are two Hellmans. Peter thinks the philosopher lives in St Paul, not Minneapolis. Even so, he is perfectly willing to assent to sentences such as 'The combination of the putative facts that Hellman [the philosopher] lives in Minneapolis and if Hellman [the philosopher] lives in Minneapolis, then Minneapolis is home to a philosopher of mathematics, entails that Minneapolis is home to a philosopher of mathematics'.[4] Since he thinks the philosopher lives in St Paul, not Minneapolis, he is in no position to rationally believe that Minneapolis is home to a philosopher of mathematics. In fact, he firmly and quite reflectively believes the very opposite, that Minneapolis is *not* the home of a philosopher of mathematics.

In short, the counterexample is as follows:

(1) Peter knows that P: Hellman [the pianist] lives in Minneapolis and if Hellman [the philosopher] lives in Minneapolis, then Minneapolis is home to a philosopher of mathematics (knows that R, and if R then Q).

(2) He knows that P entails Q: The combination of the putative facts that Hellman [the philosopher] lives in Minneapolis and if Hellman [the philosopher] lives in Minneapolis, then Minneapolis is home to a philosopher of mathematics, entails that Minneapolis is home to a philosopher of mathematics (knows that (R, and if R then Q) entails Q).

(3) He is as rational as one can realistically get and has reflectively considered whether his two pieces of knowledge (in (1) and (2)) give him reason to believe that Minneapolis is home to a philosopher of mathematics.[5]

(4) He does not know and is not in a position to rationally believe that

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[4] The purpose of the bracketed insertions is merely to remind the reader of the context in which the sentence without the bracketed insertions would be assented to by Peter. The insertions could be avoided with cumbersome expressions such as 'Peter assents to the sentence 'Hellman lives in Minneapolis' when he thinks he is thinking about a philosopher; he does not assent to 'Hellman lives in Minneapolis' when he thinks he is thinking about a pianist'.

[5] By 'as rational as one can realistically get' I do not intend any idealization. All I mean is that Peter is just about as rational as we, in fact, ever get. Also: although I frequently appeal to Peter's *two* pieces of knowledge—e.g. his knowledge that R and that if R then Q—it is clear that he also has *one* conjunctive belief corresponding to these two: the belief that R, and if R then Q. Thus, related closure principles also meet their doom in Peter's situation.

Minneapolis is home to a philosopher of mathematics (not in a position to rationally believe that Q).

(5) He rationally and reflectively believes that Minneapolis is not home to a philosopher of mathematics (rationally and reflectively believes that it's not the case that Q).

Given the truth of (1)–(5), the epistemological closure principles given in the Introduction are refuted (with the exception of the a priori one, which I treat in section 6). (1)–(5) are entailed by the following four premises of my argument.

Rationality: Peter is as rational as one can realistically get.
Assent: Peter honestly[6] assents to
(a) 'Hellman [the pianist] lives in Minneapolis and if Hellman [the philosopher] lives in Minneapolis, then Minneapolis is home to a philosopher of mathematics';
(b)'The combination of the putative facts that Hellman [the philosopher] lives in Minneapolis and if Hellman [the philosopher] lives in Minneapolis, then Minneapolis is home to a philosopher of mathematics, entails that Minneapolis is home to a philosopher of mathematics'; and
(c)'Minneapolis is not home to a philosopher of mathematics'.
Disbelief: If S is as rational as one can realistically get, is not disposed to assent to *any* sentence that means that P, dissents from at least one and in fact *every* sentence that S understands and that means that P, and even honestly assents to some sentence that means that not-P, then S neither believes that P nor is in a position to rationally believe that P.
Disquotation: If S is as rational as one can realistically get, then if S honestly assents to an English sentence 'P', then S reflectively believes that P.[7]

As long as Peter is ignorant of the identity of the pianist and the philosopher, he neither assents to nor is disposed to assent to *any* sentence that means that Minneapolis is home to a philosopher of mathematics; in fact he vigorously dissents from *every* sentence that has this meaning and is understood by him, e.g. the sentence 'Minneapolis is home to a philosopher of mathematics'. This strongly suggests that Peter does not have that *de dicto*

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[6] By 'honestly' I intend sincere, reflective, knowing, etc., assent meant to exclude assents made while acting, etc.

[7] Here and elsewhere 'P' is to be replaced so that 'S believes that P', true or not, ascribes a first-order *de dicto* belief. Also, due to the nature of the counterexample, we can ignore sentences containing indexicals, ambiguous terms, and other problematic devices (see subsequent discussion in text as well). One might think that 'Hellman' is ambiguous (in a nonstandard sense) since in Peter's idiolect it expresses two senses, one associated with 'philosopher' and one associated with 'pianist'. This view will be discussed in sections 3 and 4.

belief. Neither, I think, is he in a position to rationally have that belief. That is, if in the described situation he came to believe that Minneapolis is home to a philosopher of mathematics, he would not be rational. The reason is simple: he would then be in the position of believing both that Minneapolis is home to a philosopher of mathematics and that Minneapolis is not home to a philosopher of mathematics—even though he is in no Kripke puzzle situation with regard to any of the concepts or terms involved in those contradictory and occurrent beliefs that Q and not-Q. He may, in some sense, have *justification* for the belief that Q—in spite of the fact that he does not have that belief. He has plenty of justification for and knows that P, he knows and is justified in believing that P entails Q, he has rationally considered whether Q, and Q is true. Normally this is *quite a bit* of justification for believing that Q! Is justification supposed to be closed under known entailment: if S is as rational as one realistically gets, has justification for believing that P, knows that P entails Q, and has reflectively considered whether these two thoughts give her reason to believe that Q, then S has justification for believing that Q? If this principle were true, then Peter's justification for believing Q would be completely unknown and introspectively inaccessible to Peter; furthermore, we would have the odd conclusion that someone can be justified in believing something even though she does not believe it and would be irrational if she did come to believe it. Thus, if the closure principle regarding justification is true, then we have a counterexample to the principle that if you are rational and have justification for a belief that you have yet to adopt, then you would be rational in adopting that belief on the basis of that justification. Regardless of what we conclude about Peter's justification for believing that Q, if in his situation he *did* come to believe that Q, his rationality would be undermined (unless we further complicate matters by putting Peter in yet another Kripke puzzle with regard to, for instance, 'philosopher'). That is all I mean by claiming that he is in no position to rationally believe that Q. The fact, if it is a fact, that he has some justification for that belief isn't good enough to put him in a position to rationally have that belief. I fail to see any good reason for thinking that this consequence is problematic.

Not even Millian theories can be used to quarrel with Disbelief. Millians have taught us to be suspicious when a principle, such as Disbelief, tells us to *withhold* belief from an agent. According to these theorists one may believe that Twain is not an author even though one utters in all sincerity 'Twain is an author'. The reason that one may nevertheless believe Twain is not an author is that one also utters in all sincerity 'Clemens is not an author'. But even if these theorists are right about the Twain/Clemens situation, they have no reason to conclude that Peter rationally believes that Minneapolis is home to a philosopher of mathematics. For, unlike the Twain/Clemens case, Peter does not assent to *any* sentence that expresses the truth that Minneapolis is home to a philosopher of mathematics. So Disbelief and (4) are true.

I do not think there are any good grounds for doubting Rationality either.

The only reason to dispute it is that Peter seems to have contradictory beliefs: he believes that Hellman [the pianist] lives in Minneapolis and that Hellman [the philosopher] does not live in Minneapolis. If he does have explicitly, even occurrently held, contradictory beliefs or thoughts, how can he remain rational upon reflection on those thoughts? I will consider this question in detail below, but for now we just need to observe that no matter how we characterize his beliefs he *must* come out rational in the end. Even though Peter *may* have contradictory beliefs, the beliefs that P and that it's not the case that P, we all recognize that *it's not his fault*; he is *blameless*; he has done nothing to deserve his wretched position. His odd situation is due to circumstances *beyond his control*; the unfortunate contingencies that led to his odd situation did not occur internal to his cognitive apparatus, so to speak. He has not failed to live up to some standard of using all his introspective abilities to determine whether he has contradictory beliefs.

Thus, since the first three premises are unproblematic, in order to retain the epistemic closure principles we must reject Disquotation. In effect, in order to reject the counterexample we must say, at the least, that Peter neither believes that if Hellman lives in Minneapolis, then Minneapolis is home to a philosopher of mathematics (fails to believe that if R then Q), nor believes that Hellman lives in Minneapolis (also fails to believe that R). (One cannot reasonably defend the idea that he has just one of these two beliefs.)

I think that there is no good reason to suppose he fails to have these two beliefs R and if R then Q. If I am right, then the thought experiment supplies a counterexample to the closure principles. But before hasty conclusions are drawn, one must reflect on the fact noted above that in the thought experiment Peter has what appear to be contradictory beliefs: he seems to believe that Hellman [the pianist] lives in Minneapolis and that Hellman [the philosopher] does not live in Minneapolis. And more to the point, despite his full rationality he is in no position to discover this alleged explicit contradiction without further linguistic/empirical inquiry. Many find this consequence intolerable: surely if Peter really had explicitly contradictory, consciously held beliefs he would be able to discover the contradiction upon reflection alone. If one finds this response attractive, that is, if one thinks that Peter does not really have these contradictory beliefs, then one rejects Disquotation, the crucial premise in my argument. Call this theorist *the Detractor of Disquotation*.[8] The Detractor's motivation, given above, might be the attraction of the principle *Consistency* that if one is as rational as one can realistically get, then one does not reflectively (and occurrently) believe that P and that it's not the case that P.

However, there is a more promising way to object to my counterexample, an approach that may be fairly characterized as Cartesian. I take one of the closure principles to be the following.

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[8] For example, Marcus, 1981, 1983; Over, 1983; McMichael, 1987; Forbes, 1990, 1994.

> If S is as rational as one can realistically get, knows that P, knows that P entails Q, and reflectively entertains the thought that these two pieces of knowledge give her reason to believe that Q, then either S is in a position to rationally believe that Q or she does not (rationally and) reflectively believe that it's not the case that Q.

The Cartesian may object that my formulations of this and other closure principles are off the mark. Instead of formulating closure principles in terms of which 'that'-clauses are true of an agent, as I have implicitly done, one should formulate these principles in terms of the inner, mental, psychologically relevant, perhaps Fregean, thoughts the agent expresses via her use of those 'that'-clauses (cf. Loar, 1987 and 1988). It may then be argued that the properly formulated closure principles are not refuted by my counterexample. Thus, on this second approach one *concedes* that the Peter–Hellman story supplies a counterexample to some epistemic closure principles, but one dismisses those principles as weak reflections of the ones we are really interested in; namely, those that make explicit appeal to the mental contents of our beliefs.

I will further articulate and then evaluate the Cartesian response in section 4. In the following section, I take on the Detractor of Disquotation who claims that strictly speaking Peter does not have the beliefs I attribute to him. I do not have a conclusive argument for Disquotation, but I will argue for it by indicating some (but certainly not all) of the untoward consequences of rejecting it. In the final two sections, I will address the a priori version of epistemic closure and offer some epistemic principles that may avoid my counterexamples.

3. The Demise of the Detractor of Disquotation

I think that Disquotation can be defended for the types of beliefs at hand and that Peter has contradictory beliefs. Thus, I conclude that Consistency is false. As indicated at the end of the previous section, some theorists, those I called Cartesians, agree with these claims; they think Peter has the two contradictory beliefs but that the beliefs' inner, *mental* contents are not contradictory. These theorists hold that even though it is correct to say that Peter believes both that P and that it's not the case that P, these two beliefs are contradictory only in some innocent and superficial linguistic sense—the real contents of his two beliefs, their psychologically relevant *mental* contents, are perfectly consistent. So these Cartesians have a nice resolution to the puzzle: although Peter has contradictory beliefs in one sense, he does not in another sense. Attractive as this view is—and it really is quite attractive—I do not think there are two kinds of content here, so I cannot appeal to them in order to refute some of the intuitions that motivate the Detractor of Disquotation. In what follows I will give a battery of arguments for Disquotation that do not rely on the notion that there is any kind of content besides the

so-called linguistic one given by 'that'-clauses. So *even if one eschews the dual view of content* one should still give up Consistency and retain Disquotation. I will evaluate the dual content or Cartesian theorists' approach to Peter's situation in section 4.

I first want to point out how counterintuitive the Detractor's position is, independently of its motivation. I suspect that no philosopher would object to the idea that Peter has two conceptions of Hellman—as a pianist and as a philosopher. But if he has these conceptions of Hellman, then surely he must have *some* beliefs about Hellman! But if we reject Disquotation then we must say that after forming these two conceptions of Hellman, Peter has *no* first-order *de dicto* Hellman beliefs—since it is agreed that if we're going to deny that Peter holds the beliefs that R and that if R then Q, then by symmetry we must deny that he holds any such perfectly ordinary Hellman belief.[9] Of course we could say that Peter has *de re* beliefs about Hellman, but this is insufficient. For one thing, there need not be a referent of the problematic term. For example, Peter might obtain two conceptions of Atlantis or Bigfoot or some person we thought existed but really never did. One can still have contradictory beliefs: one thinks that Bigfoot (the mammal talked about in bad TV programmes) does not exist even though Bigfoot (the mammal discussed by Uncle Joe) exists. Since *de re* beliefs (as traditionally understood) admit of existential generalization (i.e. if S's belief that *a* is F is *de re* with respect to *a*, then *a* exists) whereas Peter's Bigfoot beliefs do not (assuming Bigfoot does not exist), the appeal to *de re* beliefs gets us nowhere.

Suppose that in 1970 when he was a young boy living in Hellman's neighbourhood Peter learned of Hellman as a philosopher; and suppose he learned of Hellman as a pianist in 1998 upon attending a recital at which he fails to recognize his former neighbour. If one is going to deny Peter his Hellman beliefs, thereby claiming that some instantiations of Disquotation are false, then one *must* accept one of the following: either (1) during those 28 years in which he was under no Hellman confusion whatsoever, Peter had virtually no *de dicto* Hellman beliefs, or (2) Peter suddenly gave up his Hellman beliefs in 1998 upon hearing about the pianist—even though Peter is adamant that he retains all his beliefs about the philosopher. However, to accept either is to fly in the face of ordinary usage for the sake of some implausible philosophical point. Suppose I wrote an article about Donald Davidson—but you mistake it as being about someone other than the philosopher with whom you are already familiar. Thus, you come to think, wrongly, that these are two philosophers; you end up in a Kripke puzzle. Now what about your professed long-held belief that Davidson is a top philosopher of language? On the first option you *never* believed it; on the

[9] By this I mean that if he does not have the beliefs that R and that if R then Q, then he does not have the beliefs that Hellman is a philosopher, Hellman resides in Minnesota, Hellman was a neighbour during Peter's childhood, Hellman vacationed often, etc.

second you ceased believing it upon reading my article. Surely this is highly implausible either way.

If the Detractor insists that after Peter forms both Hellman conceptions he has no Hellman beliefs, then she seems forced to admit Peter does not even *say* anything about Hellman. The reason for this is that if Peter can *say that* Hellman lives in Minneapolis, then he can believe it too. So the Detractor must reject (A), which is a bad thing in my book.

> (A) If S is as rational as one realistically gets and honestly utters 'P', then S said that P.

And how is the Detractor to characterize Peter's 'opinions' about his 'opinions' regarding Hellman? Does Peter at least *think* that he believes that Hellman is a pianist—even if he is wrong? Suppose the Detractor's answer is affirmative; Peter has the second-order belief but lacks the first-order one. This strikes me as an unstable position for two reasons. First, if he has the second-order belief about his perhaps occurrent first-order belief or thought, then how could he possibly be mistaken? Philosophers may have gone overboard with claims about 'introspective access', but principle (B) seems as certain as anything gets in philosophy.

> (B) If S is as rational as one realistically gets and reflectively believes that she believes that P, then S believes that P.

If (B) is correct, then if Peter has second-order beliefs about Hellman, he has first-order beliefs about Hellman—thereby refuting the Detractor's position that Peter has second-order but no first-order Hellman beliefs. So the Detractor who allows Peter to have second-order Hellman beliefs must reject (B). I have never seen a plausible line of reasoning that casts doubt on (B) suitably qualified for the type of ordinary situation under discussion. Due to the nature of the thought experiment at hand we can ignore any potential counterexamples to this and the other principles considered above that turn on indexical puzzles involving people who are rational but do not know who they are (e.g. sufficiently confused amnesiacs). That is, we can ignore those puzzles about indexicals that John Perry, Robert Stalnaker, and others have investigated. In addition, beliefs about one's innermost desires, 'subconscious attitudes', self-deception, and the like are topics obviously not relevant to Peter's situation. Neither is introspection at issue here, for that concept suggests the outcome of some kind of deliberation or investigation or perception of one's attitudes. Beliefs that are the result of such mental activity are not under consideration in Peter's case; instead we are considering only immediate judgements initially made without any kind of introspection at all and that one would retain upon reflection; e.g. 'I'm quite positive that my opinion is that Chopin was a great pianist'. Neither need we focus on beliefs, for which privileged or introspective access is sometimes quite underprivileged. Instead, we can focus on conscious, occurrent

thoughts. The point is that all the situations that supply counterexamples to knowledge of one's own propositional attitudes are quite different from, and do not suggest any problems with, Peter's situation.

The second reason for rejecting the position that Peter has second- but not first-order beliefs about Hellman is that if we grant that Peter has the second-order belief that he believes that Hellman is a pianist, then we must also admit that Peter has the second-order belief that he believes that Hellman *is not* a pianist—since he seems to repeatedly say just that when he is thinking of Hellman as a philosopher. There is clearly no basis for claiming that Peter has just one of these second-order beliefs. Thus, the Detractor who allows Peter second-order beliefs must allow Peter both of these second-order beliefs. But if the spectre of rationally held contradictory first-order beliefs makes the Detractor accept Consistency and give up Disquotation, then I think she should accept Consistency* as well.

> *Consistency**: If S is as rational as one can realistically get, then S does not reflectively (and occurrently) believe both (i) that S believes that P and (ii) that S does not believe that P.

But accepting Consistency* forces one to refuse Peter one of the second-order beliefs. Therefore, the Detractor of Disquotation who allows that Peter has second-order beliefs about Hellman must find a rationale for accepting Consistency while rejecting Consistency*. I do not see how this can be done for the beliefs at issue.

So for all these reasons the Detractor must reject the claim that Peter has *any* (first-order, second-order, etc.) *de dicto* Hellman beliefs. Thus, the Detractor of Disquotation must deny the claim that Peter even *thinks* he believes that Hellman is a pianist. So she must reject Disquotation*, which is even more intuitive than Disquotation.

> *Disquotation**: If S is as rational as one can realistically get, then if S honestly assents to 'I think I believe that P; in fact I'm absolutely certain that I believe that P, no matter what anyone says!', then S thinks that she believes that P.

This is too much; Disquotation* is unassailable for the situations under consideration. In addition, if Disquotation and Disquotation* are false, as the Detractor of Disquotation must hold, then it is difficult to even say where Peter goes wrong, assuming he's on my side. Peter utters 'Listen you philosophers, I believe that Hellman is a pianist; I may not *know* anything about Hellman, but that is what I believe!' Presumably the Detractor of Disquotation has to say that Peter is wrong *somehow*—but how can she do this? The most straightforward way is to say that Peter has a false second-order belief about himself: he falsely believes that he believes that Hellman is a pianist. However, this is unacceptable for the Detractor of Disquotation since she must, as we just proved, deny that Peter has this second-order belief. So

where does Peter go wrong? The appeal to *solely* metalinguistic mistakes, e.g. 'Peter's mistake is that he thinks that the sentence 'Peter believes that Hellman is a pianist' is true', is not plausible since there is every reason to think he is talking about his beliefs.

An altogether different tack that the Detractor might take is to claim that Disquotation cannot be applied to Peter's situation in a truth-determinate manner. That is, the Detractor may insist that the demand for straightforward yes-or-no answers to questions such as 'Did Peter believe that Hellman was a pianist?' is misguided. This view might be motivated in any of several manners. For instance, some philosophers' writing invokes a strongly realist stance toward propositional attitude attributions. It is as if 'S believes that P' is true just in case S has, in her head, a rock with a certain mass, the mass (content) that P. Having thoughts is just an objective matter of having certain rocks in your head. But according to the Detractor it is not like this at all. Rather, psychological ascriptions are more like ascriptions such as 'Sue is your typical ruthless investment banker workaholic, living and breathing deals 365 days a year'. Such attributions put someone with certain capacities and dispositions in a social and physical environment; they are far from ascribing a property to a neural state. Straightforward propositional attitude attributions must occur against a background of normalcy; but in the Kripke cases this background is not present: Peter's situation is hardly normal! Therefore, this Detractor concludes, given the oddity of the situation one must use an elaborate descriptive psychological gloss to characterize Peter's psychological makeup vis-à-vis Hellman.

I sympathize with the theory involved in the objection—the points about a normal background, the use of glosses, the revolt against the (uncharitably characterized) rocks-in-the-head picture of belief—but I know of no good reason to think it applies to *this* case in such a way as to undermine the attribution of apparently contradictory beliefs. One cannot just cite the perfectly reasonable points about psychological ascription like a mantra and then turn the page. If the application of the theory to Peter's situation were appropriate, then what are we to say about Peter's affirmative answer to the question, put to him in 1984 by his sister, 'Do you remember Mr Hellman who lived a few doors down from us when we were growing up? Wasn't he a philosopher?' Surely he responds affirmatively because he believes that Geoffrey Hellman was a philosopher living a few doors down from him and his sister when they were growing up—a belief that he has had for years and will continue to have for many more years. End of story. In some contexts only a descriptive psychological gloss will do for explanatory purposes; however, in an enormous number of contexts glosses are unnecessary and straightforward belief ascriptions are not only called for but true. Such is the case for the Peter–Hellman story.[10]

[10] Furthermore, the arguments given above against the Detractor who claims that some instances of Disquotation are false (not truth-indeterminate) also apply in a similar form to this theorist.

A Fregean's reaction to Peter's case might be to claim that Peter has two proper names in his idiolect for Hellman, even though they are spelled and sound exactly the same and have the same referent.[11] He associates two senses Hellman_1 and Hellman_2 with the string 'Hellman', so that on different occasions of use 'Hellman lives in Minneapolis' expresses different propositions depending on whether its first term expresses Hellman_1 or Hellman_2. These two senses distinguish his two proper names for Hellman. Under this view there would be no such thing as the single name 'Hellman'. Of course, this does not mean there are only two proper names 'Hellman'; if other people (or Peter, for that matter) have additional conceptions of Hellman, then we will end up with who knows how many 'Hellman' names.

In developing this view one must remember that Frege claimed that there is a store of thoughts that is passed from generation to generation, e.g. the thought one has when thinking (not: thinking of) the Pythagorean theorem.[12] We have to recognize that there is the thought that the sum of the squares of the sides of a right triangle equals the square of the hypotenuse. Here it doesn't seem to matter to Frege whether people have multiple and separate conceptions of triangularity, for instance; there is the single theorem and you either believe it or you don't. It is a mistake, he tells us, to think that we might have different Pythagorean theorems, mine and yours. Although it is difficult to interpret confidently Frege on this matter, he may be claiming that there is the thought known as the Pythagorean theorem, which is the content *common* to everyone's belief that the sum of the squares of the sides of a right triangle equals the square of the hypotenuse.[13] The peculiarities, if any, of our conceptions connected with the theorem do not ruin the identity of the contents of our beliefs. So even if one is in a Kripke puzzle situation with respect to triangularity, with two senses corresponding to 'triangle', that does not mean that there is another kind of content such that your Pythagorean belief has the same content as mine.

It seems to me that we should say the same holds for the idea that Hellman lives in Minneapolis; there is a single thought here and you either believe it or you don't. If you have two separate conceptions of Hellman, so you think there are two when in fact there is just one, then *perhaps* your belief that Hellman lives in Minneapolis has a 'mental content' (or content-like property) different from that of your belief that Hellman doesn't live in Minneapolis (in addition to the difference in negation). Even so, I think we have to admit that there is a kind of content operating here for which the peculiar-

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[11] Thanks to the referee who suggested this interpretation of Frege's views.

[12] For example, Frege, 1997, p. 336 of 'The Thought' and p. 154, and footnote E, p. 156 of 'On Sinn and Bedeutung'.

[13] One reason for being wary here is that there are many ways of expressing the Pythagorean theorem, many of which seem importantly different in some kind of content. For instance, compare the formulation given in the text above with 'the difference of the square of the hypotenuse of a right triangle with the square of one of its sides equals the square of its other side'.

ities of our conceptions do not ruin the identity of our belief contents. I think this is a constraint on theories of thought: there has to be a kind of content common to people's thoughts, so I can believe what you disbelieve. For instance, virtually everyone who reads this article believes that Bill Clinton won the 1992 US presidential election. I believe it, and Nathan Salmon, Kent Bach, and Mark Crimmins also believe *it*. We all believe *it*, the *same thing*, that Bill Clinton won the 1992 US presidential election. I am with Frege in not being able to imagine how this notion of shared, articulated belief could be wrong given how firmly ingrained it is in our talk about belief. It seems to be a datum that in some sense—surely the *ordinary* sense—all of us who believe that Bill Clinton won the 1992 US presidential election believe the same thing, something which turns out to be a belief and a true one at that. Similarly, many people from many countries found out that there are infinitely many primes; this is another thought common to many thinkers.

If this is right, then we can intelligently ask whether Peter believes that Hellman lives in Minneapolis. If one does not like that example, then we can run a Kripke puzzle on Frege's own geometrical example. The upshot is that one can devise a Kripke puzzle around either example and use it to generate a counterexample to the epistemic closure principles. In the next section, I will evaluate the above-mentioned idea that there is an additional kind of content that is more sensitive to the peculiarities of Peter's conceptions.

The lesson seems to be that we should not reject Disquotation; we are to reject Consistency and conclude that Peter believes that P and that it's not the case that P. Thus, the correct principle of the connection between rationality and contradictory beliefs must be different from what the advocates of Consistency thought it was. Although a part of my diatribe against the Detractor of Disquotation is inspired by Kripke's article, Kripke himself seems to lean toward accepting Consistency and rejecting Disquotation (although it is clear that in 1979 he had no 'official' stand on the matter). Kripke implies that Peter 'is in no position to see, by logic alone, that at least one of his [apparently contradictory] beliefs must be false. He lacks *information*, not logical acumen' (Kripke, 1979, reprinted in Salmon and Soames, 1988, p. 122; my emphasis). I think Kripke has put his finger on why Peter can be rational while holding these contradictory beliefs: what Peter needs in order to discover that his beliefs are about the same person (and contradictory) is not logical acumen but *information*—information about the world unobtainable via introspection or a priori investigation. He needs to obtain empirical information about his language and world in order to obtain information about the relations among his beliefs and thoughts.

It is at this point that we may have finally stumbled upon what is so surprising about Kripke's puzzle: it helps us see the falsehood of the intuitive *Reflection* principle that one can by reflection alone determine the simple logical relations among one's propositional attitudes. Reflection seems to be the operative principle behind Consistency: since one can by reflection alone determine that one of one's occurrent beliefs is the negation of another of

one's occurrent beliefs (i.e. since Reflection is true), if one is rational then upon reflection one should be able to detect the contradiction and thereby reject at least one of the beliefs. However, the story here is complex. First of all, Reflection is clearly false. I may know that I believe that Einsteinium is an element and know that I believe that Fermium is an element, but I may wonder whether these two beliefs are really just one, partially on account of the possibility that 'Fermium' is just another name for Einsteinium. (Many elements with large atomic numbers have had two names, usually originating from different countries.) The beliefs are distinct according to any plausible view of belief, at least in part since the elements are distinct, but there is nothing in my experiential history that provides me with the conceptual resources necessary to discriminate between the Einsteinium and Fermium thoughts; introspective reflection is inadequate here. Thus, it is false that if thought A is not identical with thought B, then I can know by reflection alone that thought A is not identical with thought B. Similar results hold for other logical relations among thoughts: e.g. it is false that if thought A is not the negation of thought B, then I can know by reflection alone that thought A is not the negation of thought B. Second, even though one can by reflection alone determine that one of one's occurrent *thoughts* is the negation of another of one's occurrent *thoughts*, this fact cannot be used to support Consistency. The reason is this. By reflection alone Peter is in a position to assent to 'The thought that Hellman [the philosopher] does not live in Minneapolis is the negation of the thought that Hellman [the philosopher] does live in Minneapolis'; so he knows by reflection alone that the thought that Hellman does not live in Minneapolis is the negation of the thought that Hellman does live in Minneapolis. Even so, it's not the case that he knows by reflection or anything else that *his belief* that Hellman does not live in Minneapolis is the negation of *his belief* that Hellman does live in Minneapolis. Peter fails to assent to any sentence under any circumstance that means that his belief that Hellman does not live in Minneapolis is the negation of his belief that Hellman does live in Minneapolis. But that is exactly the knowledge he needs in order to realize that he has contradictory beliefs so that he may then reject one of them. Thus, one is not going to be able to appeal to Reflection-like intuitions in order to shore up Consistency. Thus, Disquotation stands and Consistency goes.

4. The Cartesian Response to Kripke's Puzzle

In the Introduction the following formulation of an epistemic closure principle was presented:

> If S is as rational as one can realistically get, knows that P, knows that P entails Q, and reflectively entertains the thought that these two pieces of knowledge give her reason to believe that Q, then

> either S is in a position to rationally believe that Q or she does not (rationally and) reflectively believe that it's not the case that Q.

The Cartesian will bypass this claim in favour of a closure principle that makes explicit appeal to thoughts that are inner, mental contents—not the linguistic contents ascribed by 'that'-clauses. For instance:

> If S is as rational as one can realistically get, knows thought (mental content) P, knows that thought P entails thought Q, and reflectively entertains the thought that these two pieces of knowledge give her reason to believe Q, then either S is in a position to rationally believe Q or she does not (rationally and) reflectively believe the negation of Q. In particular, if Peter is as rational as one realistically gets, knows the thought φ expressed by his honest assents to
>
> 'Hellman [the pianist] lives in Minneapolis and if Hellman [the philosopher] lives in Minneapolis, then Minneapolis is home to a philosopher of mathematics',
>
> knows the thought $\psi \models \chi$ (where '$\models$' is a symbol for entailment between mental contents) expressed by his honest assents to
>
> 'The combination of the putative facts that Hellman [the philosopher] lives in Minneapolis and if Hellman [the philosopher] lives in Minneapolis, then Minneapolis is home to a philosopher of mathematics, entails that Minneapolis is home to a philosopher of mathematics',
>
> and reflectively entertains the thought that these two pieces of knowledge give him reason to believe the thought χ expressed by his uses of (dissents from)
>
> 'Minneapolis is home to a philosopher of mathematics',
>
> then either Peter is in a position to rationally believe χ or he does not (rationally and) reflectively believe χ's negation.

On the Cartesian view Peter does not present a counterexample to the immediately preceding closure principle because Peter utilizes two Fregean senses or mental conceptions or concepts or ways of conceiving (or whatever) corresponding to 'Hellman', senses Hellman_1 and Hellman_2. Thought φ is $(R \,\&\, (S \supset T))$; thought $\psi \models \chi$ is $(S \,\&\, (S \supset T)) \models T$; and thought χ is T. φ is not ψ because R is not S, and R is not S because R involves Hellman_1, say, and S involves Hellman_2. Thus, the Peter–Hellman case does not present a counterexample to the amended closure principle. (Though if Hellman_1 and Hellman_2 *were* identical, then R would be identical with S and ψ would be identical with φ and we would have a counterexample.)

Is the Cartesian right to say this? It is beyond doubt that Peter has two conceptions of Hellman, as a philosopher and as a pianist. However, I do not think that there is a kind of content here besides the linguistic one ascribed by 'that'-clauses, with one mental content expressed by Peter's assents to 'Hellman lives in Minneapolis' and another expressed by his dis-

sents from 'Hellman lives in Minneapolis'. I cannot adequately argue the matter here, but I will offer a few of the reasons I have detailed elsewhere in casting doubt on the dual view of content.[14]

The Cartesian's evaluation of the Peter–Hellman thought experiment leads her to conclude that Peter has two Hellman-lives-in-Minnesota beliefs that have distinct mental contents, which reflect Peter's two ways of conceiving Hellman. When explaining Peter's behaviour with the 'that'-clause 'that Hellman lives in Minnesota' we must appeal to the appropriate mental content in order to differentiate the two beliefs. But we cannot do this, the Cartesian says, by appealing solely to their common linguistic content. And the reason that Peter doesn't draw the obvious modus ponens inference from his beliefs, thereby concluding that Minneapolis is home to a philosopher of mathematics, is that his beliefs' mental contents simply don't have that logical relation. This is part of the Cartesian line.

First of all we must note that even if Peter's beliefs have additional, mental contents, it is doubtful that we generally *appeal* to such contents when people have multiple conceptions of someone or something—and this robs these contents of their supposed important role in ordinary explanation. Obviously if I am unaware of Peter's confusion—the normal case—I won't even be able to appeal to his distinctive mental contents or conceptions. And even if I am cognizant of his confusion, in most cases I will not attempt to pass on in conversation the details of his odd situation since they are irrelevant. So even if there are additional mental contents, in most cases we will not appeal to them in ordinary explanation. Suppose we overhear a conversation in which Peter utters 'Did Hellman perform at that party? Oh! I wish I had been there'. I am aware of Peter's confusion while you are not. You know that earlier on Peter had said he was glad he wasn't at last night's party for the University of Minnesota's philosophy department because philosophers are excruciatingly dull. Now you ask me what is going on with Peter: how can he think philosophers are excruciatingly dull and still wish he had seen Hellman perform at the party? Clearly it won't do for me to say that Peter believes that Hellman is and isn't a philosopher. However, it is hardly obvious that this fact supports the idea that linguistic contents are explanatorily deficient, or what is stronger, that there are additional mental contents! My response will go something like this: 'Peter thinks Hellman the philosopher isn't Hellman the pianist! He's seen Hellman play and he's read one of his articles, but he hasn't made the connection'. Here I have appealed to the linguistic contents of his beliefs and, perhaps, to the fact that he hasn't put together his two conceptions of Hellman. If you ask for more information, then I would either pass on some of the history of his situation or explain that Peter has two conceptions of Hellman. Finally, consider the situation I

[14] The rest of this section is adapted from parts of my 1999. Others have offered different reasons for doubting the dual content view; see Burge, 1986; Owens, 1987, 1990, 1992; and Stalnaker, 1990.

used initially to characterize Peter. He knows that if R then Q (if Hellman lives in Minneapolis, then Minneapolis is home to a philosopher of mathematics); and he knows that R. How would we explain Peter's failure to make the modus ponens inference? Same answer as before: I think we would appeal to his distinct conceptions and history *via his relevant linguistic contents*. Contrary to Brian Loar (1987, 1988), John Biro (1992), Akeel Bilgrami (1988), Sarah Patterson (1990), Derk Pereboom (1995), and others, linguistic contents are not only actually appealed to in cases like these, but along with other non-supervenient facts about history and belief acquisition, they are perfectly adequate for the job. The conclusion these theorists have drawn from Kripke cases is exactly the *opposite* of what it should be. The Kripke cases demonstrate the *strength* of linguistic content, not its commonly supposed weakness: even in these bizarre cases the appeal to linguistic contents and other non-supervenient facts about history and belief acquisition is perfectly sufficient to explain what's going on. Ordinary psychological explanation offers no reason to posit another kind of content. This result is important because dual content theorists have taken reflections on ordinary psychological explanation to be the main premises in their arguments for a kind of content lying behind the linguistic one captured by 'that'-clauses. If the foregoing is correct, these reflections do not show that ordinary 'that'-clause content is in need of any supplementation from another kind of thought content.

Even so, one might think that all my talk of Peter's separate conceptions of Hellman shows that there is some kind of content-like property (tied to this notion of conception) that is indirectly relevant to explanation but isn't a linguistic content. I agree that in a perfectly ordinary sense Peter has two conceptions of Hellman—a pianist one and a philosopher one—formed at different times. However I want briefly to pursue the point that we can account for Peter's situation *sans* an additional, mental content. Peter's two conceptions or views of Hellman are made up of his linguistic propositional attitudes toward Hellman, but not every attitude helps make up each conception. The reason Peter doesn't put together his belief that if R then Q and his other belief that R to draw the modus ponens inference is that these two beliefs don't form a part of the same conception of Hellman. Peter has two conceptions of Hellman and these beliefs fail to form a part of the same one.[15] In contrast, his Hellman-lives-in-Minnesota belief type forms a part of both conceptions; he 'believes it twice over'. Any Hellman propositional attitude of Peter's may form a part of one or both of his pianist and philosopher conceptions. Obviously the attitude types he formed before he heard

[15] Two points. First, this would not preclude our correctly saying that Peter conceives of Hellman in the same way in the two conceptions, provided he believed of Hellman virtually the same things in each conception. (In my story this does not hold.) Second, although I write of belief types 'belonging to' or 'forming a part of' conceptions, the latter are not sets of attitude types. Unlike sets, a conception's identity does not turn on the identity of the things that belong to it.

about Hellman as a pianist help constitute the philosopher conception. This will include his beliefs that Hellman is a philosopher and Hellman lives in Minnesota. The Hellman attitudes he formed upon first hearing about Hellman as a pianist do not belong to his philosopher conception because, among other things, at that time he was disposed to form the belief he would express with (for example) 'I'm not thinking about the person I formed beliefs about when I was introduced to the philosopher Hellman'. Those new pianist beliefs will include the beliefs that Hellman is a pianist and Hellman lives in Minnesota. So the latter belief type helps make up both conceptions. What makes Peter believe 'twice over' that Hellman lives in Minnesota is that that belief type falls into two instead of just one of his conceptions.

I have serious doubts about the existence of attitude *tokens*, but if there are such things, then we can say that with regard to the Hellman-lives-in-Minnesota belief type, Peter has two belief tokens of that type, a pianist token and a philosopher token which were formed at different times. And he has two conceptions of Hellman: his two Hellman-lives-in-Minnesota belief tokens are of identical belief types but form parts of distinct conceptions. The normal situation would be to have two belief tokens of non-identical belief types that form parts of distinct conceptions, such as a belief token about Wittgenstein and one about Russell.[16]

But none of this gives us any reason to think that there is another kind of content here; the postulation of an additional kind of content is superfluous. It appears as though Brian Loar thinks that the theorist who eschews an additional mental content must hold that Peter has just one content-like property associated with his belief that Hellman lives in Minnesota when it's obvious there are two—just as if Jay had two beliefs with distinct linguistic contents: the beliefs that G. Hellman lives in Minnesota and that H. Hellman lives in Minnesota, where G.H. and H.H. are distinct (Loar, 1988, p. 103). Some of Loar's commentators have echoed this claim. But this is overstated; the lover of linguistic content can without appealing to additional mental contents account for the similarity of Peter's situation to Jay's. Jay has many beliefs about both Hellmans; what helps group them into two conceptions is that Jay acts as though and insists that they fall into two groups. The same holds for Peter; that is why his situation is so similar to Jay's. If you like belief tokens, then we can add that Peter has two relatively inferentially isolated belief tokens corresponding to the *single* content Hellman-lives-in-Minnesota—just as Jay has two relatively inferentially isolated tokens corresponding to the *two* contents G. Hellman-lives-in-Minnesota and

[16] This would entail that one can have two belief tokens at the same time with the same linguistic content. Of course they would differ in numerous properties (effects, strengths, times of formation, etc.). I know of no compelling reason to think this odd, provided there are attitude tokens. (Calling them 'tokens' doesn't mean they are individuated by any kind of content.) I offer a partial treatment of this topic in another manuscript.

H. Hellman-lives-in-Minnesota (where G.H. isn't H.H.). Once again, there doesn't seem to be any reason for an additional kind of content.

5. A Counterexample to the A Priori Closure Principle?

Surprisingly, there may be counterexamples to an a priori closure principle even more intuitive than those discussed above.

> If S is as rational as one can realistically get, knows a priori that P, knows a priori that P entails Q, and reflectively entertains the thought that these two pieces of knowledge give her reason to believe that Q, then either S is in a position to rationally believe that Q or she does not (rationally and) reflectively believe that it's not the case that Q.

In the presumptive counterexample to this principle Peter is a beginning student of set theory who has been exposed to several versions of the axiom of choice. Unless I am mistaken, set theorists consider there to be one such axiom that comes in what may seem to some to be a bewildering variety of forms. Whether or not this is in accord with various theories about mathematical propositions is not quite to the point; mathematicians consider there to be one such axiom, *the* axiom of choice, which may be expressed in many ways—but of course not in just any logically equivalent way.[17] Suppose Peter reads parts of one book that has the axiom of choice in form F and comes to know a priori that the axiom of choice entails proposition P; he honestly assents to 'The axiom of choice entails proposition P'. Peter understands the axiom pretty well in form F but due to some sophistical philosophical arguments comes to believe, upon reflection, that the axiom of choice is false; he honestly assents to 'The axiom of choice is false'. In addition, he thinks the same considerations that told against the axiom rule out P as well. So he thinks both the axiom of choice—in form F—and P are false. He then reads in another book that something called 'the axiom of choice' has various properties. In this book the axiom comes in a different dress, form G. The latter book also has a very different approach from that of the first book. Peter comes to think that the axiom of choice in dress G is true; he honestly assents to 'The axiom of choice is true'. Peter concludes that these two books are using the same name for two different theorems. As a result of these unfortunate contingencies, Peter knows a priori C (the axiom of choice in form G), he knows a priori that C entails P (the axiom of choice in form F entails P), and he has reflectively entertained the thought that these two

[17] Even if I am wrong about this, we can imagine mathematicians or logicians thinking this way with perhaps some other theorem. I once had a competent student think the compactness theorem for first-order logic was false under one guise but true under another.

pieces of knowledge give him reason to believe that P. Still, he is not in a position to rationally believe that P and he does (rationally and) reflectively believe that it's not the case that P.

I realize that one can question this argument in many ways not applicable to the Peter–Hellman case. For instance, given his confusion it is questionable whether Peter has any relevant a priori knowledge concerning the axiom. And one might want to press the point that regardless of what mathematicians say, strictly speaking the different versions of the axiom amount to distinct propositions believed. I find these criticisms suspect. But I will set aside the issue. One possibility is that there might not be any straightforward answer to the question of what Peter believes or knows (or, more plausibly, knows a priori) regarding the axiom of choice and P.

6. Correct Epistemic Principles?

Omitting consideration of possible counterexamples similar to the zoo one given earlier in the Introduction, the following *may* be correct formulations of some of the epistemic principles alluded to above.

> *Closure:* If S (for simplicity, an English speaker) is as rational as one can realistically get, knows that P, knows that P entails Q, reflectively entertains the thought that these two pieces of knowledge give her reason to believe that Q, and is disposed to form the belief she would express with 'The first part of my belief that P entails Q is the same as my belief that P', then S is in a position to know that Q.
> *Contradiction:* If S (for simplicity, an English speaker) is as rational as one can realistically get, then if S reflectively believes that P and that it's not the case that P, then S is disposed to form the belief she would express with 'My beliefs that P and that it's not the case that P are neither contradictory nor in any conflict'.

Unfortunately, there is reason to think there are counterexamples to even these and similar truistic-sounding reformulations. Suppose our hero Peter is in fact a confused student of introductory logic who gives the following soliloquy.

> My belief that: Hellman [the pianist] lives in Minneapolis and if Hellman [the philosopher] lives in Minneapolis, then Minneapolis is home to a philosopher of mathematics, entails that Minneapolis is home to a philosopher of mathematics. After all, my belief has the form [R & (R ⊃ Q)], and Q is entailed by that belief. I'm perfectly aware that the two occurrences of 'R' deal with different Hellmans, but that's irrelevant. When it comes to entailment, what counts is sameness of sentences. That's what I learned in class; all we did was

> examine the relations among sentences, not subjective stuff like our conceptions of people. So I am perfectly aware that I disbelieve something entailed by one of my beliefs. Furthermore, my belief that Hellman [the pianist] lives in Minneapolis and Hellman [the philosopher] does not live in Minneapolis are contradictory. The fact that I think they're about different people just does not matter. Strictly speaking, I'm inconsistent. And I guess that means that I'm irrational. This just proves what I knew all along!

If we take Peter's self-assessment at face value, then he presents a counterexample to both Closure and Contradiction. Of course, one feels compelled to protest that he has not *really* obtained the concepts of entailment and contradiction yet. Or that he does not know, even implicitly, what a belief is. Or, finally, perhaps he really is irrational here. My *suspicion* is that some of Tyler Burge's (1979) and my own (1999) remarks on concept mastery block these objections and so Peter counts as a counterexample to both Closure and Contradiction. Very roughly, the fact that in a perfectly ordinary sense Peter has not quite got the concept of entailment does not mean there is not another sense in which he has learned *enough* to be able to have conceptually confused *de dicto* beliefs about entailment; talk of having concepts is cheap. In addition, it seems perverse to insist that Peter's mistake regarding entailment is purely *de re* or metalinguistic. I cannot defend these remarks here. The point I want to suggest now is that altering the Closure and Contradiction principles to make them invulnerable to Kripke-style counterexamples might not be as easy as one might think—unless one holds that the principles are true except in some Kripke-style situations. Even then, however, not all Kripke-style situations lead to difficulties; on the contrary, *some version of epistemic closure should and seems to apply in such cases* (one that isn't affected by his confusion regarding Hellman). This difficulty is more evident when we further complicate matters by supposing Peter has several conceptions of Minnesota, being a philosopher, etc.

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