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How to Believe the Impossible

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I

Can we believe things that could not possibly be true? The world seems full of examples. Mathematicians have "proven" theorems which in fact turn out to be false. People have believed that Hesperus is not Phosphorus, that they themselves are essentially incorporeal, that heat is not molecular motion--all propositions which have been claimed to be not just false, but necessarily false. Some have even seemed to pride themselves on believing the impossible; Hegel thought contradictions could be true, and Kierkegaard seems to have thought that Christianity, in which he fervently believed, was impossible and absurd.

In the face of these examples and many more like them, it may seem evident that we *can* believe the impossible; one might think that it was simply a desideratum on any theory of belief that it find a way to accommodate this fact. I believe that this is, in fact, correct. But Richard Foley[1] has recently provided interesting arguments that we cannot believe the impossible.[2] In this paper I propose to defend a view of belief which explains how we can believe the impossible, and to respond to Foley's criticisms of the mechanisms I propose.[3]

II

I begin by explaining how, in my view, we can believe the impossible. In a nutshell, the account I will defend is this: we believe some propositions in virtue of believing others. In such cases it is our belief in one proposition, together with facts about the situation we find ourselves in, which explains or constitutes our belief in the other proposition. And it sometimes happens that, in virtue of believing a contingent proposition, together with facts external to us, we believe a necessarily false proposition.

I will first discuss the phenomenon of believing one thing in virtue of believing another; later I will apply it to the special case of belief in the impossible. When we believe one thing by virtue of believing another, I say that our belief

in the former is *indirect*. (Of course our belief in the latter may also be indirect, since it may be that it in turn is believed by virtue of our belief in some third thing.) I will also say that our belief in the one proposition is *mediated* by our belief in the other. Let us consider two ways in which one belief may depend on another.

Our first example: Fido, out for a walk, gets loose and runs temporarily away. Susie, out playing in her yard, sees Fido and plays with him for a while. She comes to believe that the dog she is petting, and which is giving her a certain set of visual, tactile, and olfactory sensations, is friendly. Equivalently, she comes to have a certain proposition as an object of her belief, a thing she believes, namely the proposition that the dog she is petting and which is giving her a certain set of sensations is friendly.

(I gloss over at least two problems about the specification of the proposition Susie believes. I have not said, nor could I, *which* sensations. I suppose that the content of Sally's belief involves ostending the relevant sensations. She thinks: the dog giving me *these* sensations is friendly. But I will not consider difficulties about the nature and determinacy of such inner ostension. Second, in specifying the proposition which is the object of Susie's belief I have used the pronouns 'she' and 'her'. One might plausibly hold that specifying the content of Susie's belief *requires* the use of these pronouns, that they are "essential indexicals."[4] If so my describing the object of her belief as a *proposition* is misleading, since the proposition that the dog *she* is petting is friendly is identical with the proposition that the dog *Susie* is petting is friendly, even though the latter description of this proposition does not contain the indexical pronoun 'she'. My view is that there *is* a fuller characterization of Susie's state of mind which is suggested by--I do not say "expressed" or "encoded" by--the description using 'she' and 'her'. Nevertheless, she *does*, also, believe the proposition which can be expressed with either 'she' or 'Susie'.)

So Susie believes a general proposition to the effect that the dog that satisfies a certain description is friendly. But Susie also believes the proposition that Fido is friendly. She does not just believe general propositions which happen to describe Fido, but also singular propositions about Fido. (If you are not persuaded, modify the example a bit. Perhaps she hasn't known Fido long enough? Let Fido stay with her a week, a month, the rest of his life. Perhaps it makes a difference that she doesn't have a name for Fido? Let her name him "Spot." And so on.)

Although Susie believes that the dog she is petting (etc.) is friendly, and believes that Fido is friendly, the intrinsic facts about her in virtue of which she

believes these two propositions are precisely the same. She does not infer that Fido is friendly from her belief that the dog she is petting is friendly. Her acquisition of the belief that Fido is friendly was not a separate event from her acquisition of the belief that the dog she is petting is friendly. Viewed from the inside, so to speak, the two beliefs are exactly the same. Let us call the intrinsic facts about Susie in virtue of which she believes a given proposition her *belief state* with respect to that proposition.[5] Then we may say that ascriptions of these two things she believes are just two ways of describing the same belief state (though the truth of at least one of these descriptions depends on more than *just* the belief state she is in). Nevertheless, although she believes both propositions in virtue of being in the very same belief state, the propositions believed are different. If we individuate beliefs by proposition believed, as we often do, then we may say she has different beliefs in virtue of being in a single belief state.

Moreover, one of these propositions gives a better characterization of her belief state than the other. The truth of the claim that she believes Fido is friendly depends on more than the facts about her mental state: it also depends on the fact that it was Fido and not his identical twin Felix who got away. She might have been in the very same belief state but believed instead that Felix is friendly. But in either case she would believe that the dog she is petting is friendly. Because we can vary circumstances external to Susie (leaving the intrinsic facts about her the same) in such a way that she still believes the dog she is petting is friendly, but does not believe Fido is friendly, and because we *cannot* change the circumstances external to Susie in such a way that she no longer believes that the dog she is petting is friendly but still believes that Fido is friendly,[6] we may say that the proposition that the dog she is petting is friendly gives a better characterization of her intrinsic mental state than the proposition that Fido is friendly.

I want to say that, in this situation, Susie believes that Fido is friendly *in virtue of* believing that the dog she is petting is friendly. She has the former belief *because* she has the latter; it is the latter belief, together with the fact that the dog in question is Fido, that makes it the case that she has the former belief. So Susie believes a singular proposition in virtue of believing a general proposition.

Now consider a second way in which we can believe one thing in virtue of believing another: believing a proposition in virtue of believing that a sentence which expresses it is true. Belief is not, in my view, a fundamentally linguistic phenomenon. Dogs have beliefs but no language, and many of our own beliefs have nothing to do with the languages we speak. Nevertheless, our only access

to many of the propositions we believe is through understanding and using a language. To take a particularly clear case, any mathematical or logical beliefs of any complexity are made possible only by our familiarity with the symbols which express them.[7] How are we to understand this phenomenon? How does possession of a language facilitate this sort of belief? I suggest that we typically believe mathematical propositions in virtue of understanding sentences which express them, and believing that those sentences are true. Thus, I believe that $1,000,000 + 1 = 1,000,001$ in virtue of understanding numerals and mathematical symbols, and believing that the sentence '$1,000,000 + 1 = 1,000,001$' is true. I suspect that language is essentially involved in this way in most or all of our beliefs about abstract matters.

The present example is similar in several respects to Susie's case. My belief that $1,000,000 + 1 = 1,000,001$ is a belief in a different proposition than my belief that '$1,000,000 + 1 = 1,000,001$' is true. Nevertheless, in one sense they are not distinct beliefs: I believe both propositions in virtue of being in the same belief state. And one of these propositions, the proposition that '$1,000,000 + 1 = 1,000,001$' is true, provides a better characterization of my belief state than the other; it is in virtue of believing this proposition that I believe the other.

We have now seen examples of two sorts of indirect belief. Both kinds of case can lead to belief in the impossible. Consider first Susie's case. Perhaps she has seen Fido every day for weeks, as he goes past her house on his daily walk. And perhaps she has come to believe, on the basis of his proud manner and noble bearing, that he is a rather arrogant dog, not friendly at all. The difference in manner between Fido on his walk and Fido being petted is so great that it never occurs to Susie that she is petting the same dog she daily sees stride by. So, as we saw earlier, Susie believes that the dog she is petting and which is giving her sensations S is friendly, and in virtue of this belief she believes, indirectly, that Fido is friendly. But also she believes that the dog she sees daily and which has given her sensations S' is not friendly, and in virtue of this belief she believes, indirectly, that Fido is not friendly. So Susie has contradictory indirect beliefs in virtue of having other, less indirect, consistent beliefs. In addition, since Susie also believes (let us suppose) the conjunction of her relevant general beliefs, she apparently believes, in virtue of this, the contradiction that Fido is friendly and Fido is not friendly.

Now consider the second sort of case. It is surely possible to believe that '$ax^2 + bx + c = 0$' is true (for specific values of a, b, and c) and yet also to believe that '$x = (-b + \text{or} - \text{the square root of } [b^2 - 4ac])$ divided by $2a$' is false, even though one satisfies any normal criterion for understanding the two sentences.

(And of course with more abstruse mathematical equivalences one could devise even clearer cases.) But both sentences express the same proposition, on even a fairly fine-grained individuation of mathematical propositions. So in virtue of believing these sentences true, it seems, one believes both a proposition and its negation. And if the subject also believes the conjunction of the first sentence with the negation of the second to be true, then in virtue of this he or she also believes an impossible proposition.

III

I turn now to Richard Foley, who gives reasons for doubting that either of the kinds of examples I have offered provide genuine cases of contradictory or impossible beliefs. Foley takes himself to be formulating and defending certain principles which will play a role in a "logic of believing." In particular, he defends the principle that it is not possible for an agent to believe p and also to believe not p.

In defending this principle, Foley makes an interesting attempt to explain away examples in which it appears that someone has contradictory beliefs. The two kinds of examples Foley is most concerned with are very closely related to the two sorts of belief in the impossible I have argued for. They are de re beliefs, and beliefs in the truth of contradictory sentences on the part of competent speakers of the language of the sentences in question.

Consider first de re beliefs. Recall the case of Susie and Fido, and cast it for the moment as a case of having contradictory de re beliefs in virtue of having consistent de dicto beliefs. Susie believes (de dicto) that the dog she is petting and which is giving her certain sensations is friendly; she also believes (de dicto) that the dog she sees every morning and which has given her certain other sensations is not friendly. In virtue of these de dicto beliefs, Susie believes (de re) of Fido that he is friendly, and also believes (de re) of Fido that he is not friendly.

Foley's first response to this sort of example is that strictly speaking it is irrelevant to his principle, since the principle concerns belief *in propositions*, while these are de re beliefs, not beliefs in propositions(331).[8] But such a sharp distinction cannot be maintained. We certainly can attribute the beliefs in question de re: we may say that Susie believes *of Fido* that *he* is friendly, and *of Fido* that *he* is not friendly. But we need to notice two things. First, one can (following Nathan Salmon[9]) argue quite plausibly that the two de re attributions above already attribute to Susie belief in contradictory propositions. It is natural to take what follows 'that' in a belief sentence to express a

proposition which is an object of the agent's belief. In this case what follows 'that' is in the one case 'he is friendly' and in the other 'he is not friendly'. The clause 'he is (not) friendly' expresses, relative to an assignment of a referent for 'he', the proposition that that particular thing is (not) friendly. The assignments of referents for 'he' are given in this case earlier in the belief sentences, and in both cases 'he' is assigned Fido as referent. So these belief sentences certainly appear to ascribe to Susie as objects of her belief two contradictory propositions,the proposition that Fido is friendly and the proposition that Fido is not friendly.[10]

But even if we concede that de re attributions do not ascribe propositions as objects of belief, it seems independently plausible that the corresponding de dicto attributions are true: the very facts about Susie which make it true that she believes of Fido that he is friendly seem also to make it true that she believes *that Fido is friendly*; similarly for her belief of Fido that he is not friendly. Thus it appears again that Susie believes contradictory propositions.

Let us turn, then, to Foley's second response. Foley suggests that apparently contradictory de re beliefs can be "explained away" as beliefs in noncontradictory propositions. This is done by "reducing" the contradictory de re beliefs to noncontradictory de dicto ones. For example, Susie's beliefs of Fido that he is friendly and of Fido that he is not friendly "reduce" to the noncontradictory de dicto beliefs that the dog she is petting is friendly and that the dog she sees every morning is not friendly.

Now, if I am correct that the evidence that someone has a de re belief is also evidence that that person has a de dicto belief in the corresponding singular proposition, then a reduction of contradictory de re tononcontradictory de dicto beliefs will not save Foley's principle. Foley might well respond that beliefs in contradictory singular propositions are similarly reducible to beliefs in noncontradictory general propositions. But now a crucial question emerges. If one's belief that Q reduces to one's belief that P, does it follow that one does not really believe Q? If the answer is "no," then "the belief that Q reduces to the belief that P" means something very like "Q is believed in virtue of believing P," and Foley's view is almost identical with mine. But, in that case, reducing a belief that Q to a belief that P does not falsify the claim that one believes Q, and so Foley's defense of the principle that we cannot have contradictory beliefs collapses. On the other hand, Foley could try to maintain the truth of his principle by claiming that whenever an *apparent* belief that Q reduces to a belief that P, one does not really believe that Q. But this is dramatically implausible; defending this claim would require one to deny that

we have most of the beliefs we ordinarily talk as though we do, including most beliefs about particular objects, about natural kinds, and so on.

I conclude that we can indeed have contradictory beliefs in singular propositions in virtue of consistent beliefs in general propositions. Now let us address Foley's treatment of the other sort of case I have discussed, the sort of case in which, in virtue of believing a sentence to be true, and being a competent user of the sentence, one thereby believes the proposition expressed by the sentence.

Foley's main response to cases like these is that "insofar as it is plausible to think that a person *S* believes one sentence to be true and a second sentence to be false, where both express the same proposition . . . it also is plausible to think that *S* does not understand exactly what proposition is being expressed by one or both of the two sentences" (345). He goes on to suggest that the fact that someone is a competent speaker of the language of a sentence does not establish that the person knows what proposition the sentence expresses: "whatever linguistic competence is . . . it is not a matter of knowing the exact proposition expressed by every sentence in the language in question."

This formulation is potentially misleading, though I don't suppose Foley himself is misled. The danger is that talk of knowing what proposition a sentence expresses will suggest a picture according to which we have access to propositions independently of our competence in the use of sentences, so that, for instance, we might have a sort of mental chart with sentences on one side, propositions on the other, and arrows linking some items on one list with items on the other. Then we would have some sentences linked to the propositions they really express, others linked to the wrong propositions, and in some cases perhaps we might have arrows from a sentence to several different propositions, with question marks to indicate that we aren't quite sure which is the right one.

I presume I do not need to argue that this is hopelessly misguided.
(There *might* be something like a mental mapping from sentences in a public language onto sentences in a language of thought, but that is not a mapping of sentences onto *propositions* until we have a further mapping of sentences in the language of thought onto propositions. And advocates of a language of thought do not think that such a mental chart is the way we know what propositions are expressed by sentences in this language.) The trouble with this sort of picture is that our only access to many propositions is through our competence in the use of a language. Without mathematical notation we would have no way to think or even entertain most mathematical propositions. Without the language of

physics we would have no way to think or even entertain propositions about quarks or leptons. And so on.

But if we give up the idea that we have a special sort of nonlinguistic access to propositions, which we can then link with sentences, it becomes hard to interpret a discussion of whether we do or do not know what proposition a given sentence expresses. If our only access to propositions is via familiarity with sentences that express them, and I am a competent user of a certain sentence, how could I fail to understand what proposition the sentence expresses?

My own view is that in a perfectly legitimate sense, every competent user of a sentence knows what proposition the sentence expresses, and knows it simply in virtue of being a competent user. But the belief that a sentence expresses a particular proposition will typically be *indirect*, mediated by whatever beliefs about the sentence make one a competent user of it. (I suspect that the beliefs about a sentence which make one a competent user will be, aside from purely grammatical beliefs, beliefs about the evidence which would count for or against it.)

Still, there may be a stronger sense of knowing what proposition a sentence expresses in which it means more than just being a competent user of the sentence. What could this "more" be? Here are three suggestions.[11] First: It is a widely held view that the proposition expressed by a sentence must at least determine the "truth conditions" of the sentence, the conditions under which the sentence would be true or false. So knowing what proposition a sentence expresses requires knowing under what conditions the sentence would be true or false. If we take this to require being able to *recognize* under what conditions the sentence is true or false, then knowing what proposition a sentence expresses would be something like being able, when confronted with any possible state of affairs, to say whether it is a state of affairs in which the sentence is true.[12]

Second: Perhaps a necessary condition of knowing what propositions are expressed by two sentences, S and S', is that one know whether or not they express the same proposition.[13] Third: One might suggest that a necessary condition of knowing what proposition is expressed by a given sentence is that it be impossible that one could be in the very same narrow mental state in a situation in which the sentence expressed a different proposition. If the proposition expressed by the sentence could be different without anything about the subject's narrow mental state being different, then the subject's narrow mental state doesn't fix what is meant by the sentence, and it seems

plausible to construe this as the subject's not knowing precisely what proposition the sentence expresses.

I would like to suggest that these suggestions, while too strong as requirements on knowing, in the ordinary sense, what proposition a sentence expresses, are quite appropriate as requirements on *directly*believing that a sentence expresses a proposition. (For more on the notion of direct belief, see the conclusion of this paper and the other pieces cited there.) It is correct, I think, that if one assents to sentences expressing contradictory propositions, one will fail these three conditions; correct, therefore, that if one assents to sentences expressing contradictory propositions, one does not *directly* believe that those sentences express those propositions, and so very likely does not directly believe the propositions in question. This is what I take to be the kernel of truth in Foley's account of the conditions under which one knows what proposition a sentence expresses.

Foley seems to hold that if we assent to a sentence without knowing precisely what proposition it expresses, then we do not believe that proposition (unless we believe it in some other way, e.g. by assenting to *another* sentence which we do know expresses that proposition).[14] The trouble is that this view, coupled with the strong criteria just discussed, will also require us to reject most of our ordinary claims about what people believe. To take a commonplace example: as a child in Montana, I used to pick things called "huckleberries." I could identify huckleberry bushes, and I was intimately familiar with their berries. Later, and further east, I regularly encountered things called "blueberries" in grocery stores. The two berries are very similar, though huckleberries as I remember them are a bit redder and a bit more tart. I was once told that in fact huckleberries just *are* blueberries, the slight difference in color and taste coming perhaps from different soil conditions. I have no idea whether this is true.[15]

Now, do I know what proposition is expressed by the sentence 'There are huckleberries in Montana'? Well, first, I could not tell, for every possible state of affairs, whether the sentence is true in that state of affairs: I am sure I could be easily fooled by imposter bushes. Second, I do not know whether the two sentences 'There are huckleberries in Montana' and 'There are blueberries in Montana' express the same proposition or not. Third, one could easily devise a twin-earth situation in which the term 'huckleberry' refers to a different but similar berry, but in which all my intrinsic properties are the same. So I do not score well on any of the three criteria I have suggested for knowing what proposition a sentence expresses. As a result it looks as though Foley must deny that I believe there are huckleberries in Montana.

Moreover, the considerations here are quite general. It seems that similar considerations would show that a very large number of the belief ascriptions we ordinarily make are false, including most ascriptions that involve either proper names or kind terms.[16] So Foley can reject contradictory beliefs only on principles which also exclude very many of our other beliefs as well. Surely this is too high a price to pay.

Foley anticipates this objection. He concedes that "many of the words and phrases that an ordinary speaker of English uses regularly are words and phrases that he cannot precisely define" (346). He goes on to ask: "Are we then to say . . . that he does not really believe, much less know, what he is saying or reading or hearing . . .?" Now, based on his argument to this point, I would have thought Foley would have to answer "Yes." And in fact I think principles he accepts commit him to this answer. But his next sentence is "No."

Foley offers two grounds for rejecting this seemingly clear counterintuitive consequence of his arguments. First: "Nothing I have said precludes *S* believing *de re* of the precise propositions expressed by the sentences he utters, or hears, or reads, that they are true." I have already questioned whether Foley's appeal to the de re/de dicto distinction is legitimate. But it seems especially dubious here. The distinction as originally introduced has to do with the scope of quantifiers and, by extension, of singular terms. When it is extended to predicates or, as here, entire sentences, it is no longer clear what its significance is. The following sentences all look to me to say exactly the same thing: 'The proposition that Fido is friendly is such that Susie believes that it is true'; 'The proposition that Fido is friendly is such that Susie believes it'; 'Susie believes the proposition that Fido is friendly'; 'Susie believes that Fido is friendly.' So I find it hard to see what the difference between de re and de dicto beliefs in the same proposition could come to.

But suppose we *could* draw a sharp distinction between de re and de dicto beliefs about propositions--between, for instance, believing of the proposition that there are huckleberries in Montana that it is true, and believing that there are huckleberries in Montana. If it really is possible to drive this wedge, then if I say, read, or hear that there are huckleberries in Montana, Foley will still need to say, of me: "he does not really believe, much less know, what he is saying or hearing or reading." For as long as there is a wedge between "de re" and "de dicto" beliefs of or about propositions, my believing *of* a proposition that I assert, read, or hear that *it* is true does not amount to believing what I assert, read, or hear.

The attempt to avert counterintuitive consequences by appealing to the de re/de dicto distinction fails. What of Foley's second means of disaster avoidance? He writes: "Even if we restrict ourselves to *de dicto*beliefs, all that follows from what I have said is that for sentences containing words and phrases for which *S* cannot provide adequate analyses, *S* does not know the *precise* propositions such sentences are expressing. But this is not to say that he is . . .. ignorant of the language . . .. No doubt he does know roughly what propositions are being expressed, and in most situations this is more than enough for successful communication" (347). On the face of it, this does not even address the problem. Probably the intended application is to suggest that although I do not believe (for example) that there are huckleberries in Montana, I nevertheless believe something *similar*. But the counterintuitive consequence that a subject typically "does not really believe . . . what he is saying or reading or hearing" is hardly dissolved by suggesting that *although* one does not believe what he says or reads or hears, he believes things *not too much different* from these.

IV

I have been writing of "indirect" beliefs, and of the "less indirect" or "more direct" beliefs in virtue of which we believe them. Let us now consider two distinct notions both of which are related to the idea of indirect belief. Let us call a belief *extrinsic* just in case the fact that one believes it depends on more than the purely intrinsic facts about one. A good test for whether a belief is extrinsic is whether an atom-for-atom replica of the subject would necessarily share the belief in question. If we can imagine a context (for example, Twin Earth) in which a duplicate of the subject would not have the belief, then the belief is extrinsic.[17] And let us call a belief *mediated* just in case there is another proposition in virtue of believing which the subject believes this one. (The notion of a mediated belief is not fully defined here, since I have indicated only two of the presumably many ways in which having one belief, in a particular context, constitutes having another.[18])

Now, I conjecture that for every extrinsic belief there is a further belief in virtue of which it is believed, or more briefly, that every extrinsic belief is mediated. If so there must be *intrinsic* beliefs (barring an infinite regress). Moreover (barring another infinite regress) there must be *intrinsic unmediated* beliefs. Let us call such a belief a *direct* belief, and let us say that the object of such a belief is an *immediate*object of one's belief. Then an indirect belief is one which is either extrinsic or mediated; if our conjecture is correct we may simply say that a belief is indirect just in case it is mediated.

Of course, our conjecture is very controversial. I cannot defend it here.[19] But I would like to suggest tentatively that *if* there are direct beliefs, there is a very plausible way to understand and see something correct in Foley's strictures against belief in the impossible. For it may well be that all our *direct* beliefs must be beliefs in possibilities, or equivalently that none of the *immediate* objects of our belief can be impossible.[20]

NOTES

1. Richard Foley, "Is It Possible to Have Contradictory Beliefs?" *Midwest Studies in Philosophy* vol. 10 (1986), 327-355. [back]

2. For other interesting objections to belief in the impossible, see Ruth Barcan Marcus, "A Proposed Solution to a Puzzle About Belief," *Midwest Studies in Philosophy* vol. 6 (1981), 501-510, and "Rationality and Believing the Impossible," *Journal of Philosophy* vol. 80 (1983), 321-338; Robert Stalnaker, *Inquiry* (Cambridge: MIT Press/Bradford Books, 1984), chapters 4 and 5. [back]

3. I will assume that the objects of our belief, the things we believe, are propositions; that the sentences 'Joe believes that grass is green,' 'Joe believes the proposition that grass is green,' and 'The proposition that grass is green is an object of Joe's belief' are all synonymous; and that aside from the shiftiness induced by indexicals, tense, and the like, sentences do not express different propositions with respect to different contexts of utterance. These assumptions have been controverted, but each is widely held, and as far as I can tell Foley would not quarrel with them.[back]

4. See John Perry, "The Problem of the Essential Indexical," *Nous* vol. 13 (1979), 3-21, and the papers of Hector-Neri Castaneda cited there. [back]

5. For more on the notion of a belief state, see my "What is a Belief State?" *Midwest Studies in Philosophy* vol. 10 (1986), 357-378. [back]

6. Actually, there is a belief which characterizes Susie's belief state better than *either* of the two we have been considering, namely the proposition that the *thing* giving Susie certain sensations is friendly. In virtue of believing this proposition, together with facts about the *sort* of thing giving her these sensations, Susie believes that the dog she is petting is friendly. *And*, in virtue of the original proposition together with facts about the *particular* thing giving her these sensations, she believes that Fido is friendly. If the relevant facts about the sort of thing Fido is are partly constitutive of the facts about the

particular individual Fido is, then she also believes that Fido is friendly in virtue of believing that the dog she is petting is friendly; if they are not so constitutive, then she simply believes both the proposition about Fido and the proposition about the dog she is petting in virtue of believing the proposition about the thing giving her certain sensations. [back]

7. This requires some clarification. I am tempted by the idea, eloquently defended by Stalnaker, that contents of thought are best understood as sets of possible worlds. *If* so, then anyone with any beliefs at all directly believes the one and only necessary proposition, the proposition true at every world. But one may *also* believe it indirectly, via beliefs about sentences; since the direct belief in the necessary truth is as simple and uncomplicated as can be, my claim that mathematical beliefs "of any complexity" require language would still be true, at least if it is read charitably. [back]

8. All page references to Foley in the text are to "Is it Possible to Have Contradictory Beliefs?" (see note 1). [back]

9. For a fuller development of this line of thought see Nathan Salmon, *Frege's Puzzle* (Cambridge: MIT Press/Bradford Books, 1986), pp. 3-6. [back]

10. I am assuming the correctness of Quine's original insight that the de re/de dicto distinction is essentially a scope distinction (see W. V. Quine, "Quantifiers and Propositional Attitudes," in Leonard Linsky, ed., *Reference and Modality* (London: Oxford University Press, 1971), pp. 101-111, at pp. 101-102), so that 'Susie believes that Fido is friendly' can be read either as 'Susie believes $(\exists x)(x=$Fido $\&$ x is friendly)' or as '$(\exists x)(x=$Fido $\&$ Susie believes x is friendly)'. As Quine pointed out, this assumes that quantification into belief contexts is intelligible. Quine's rejection of this assumption led him to replace the explanation of the distinction in terms of scope with a distinction between diadic belief, which relates a believer to a proposition, and triadic belief, which relates a believer, an object, and a property. (See Quine, pp. 104-106. Quine ultimately abandons propositions and properties for sentences.) This would block the conclusion that a de re ascription simply ascribes to the subject belief in a singular proposition. But David Kaplan has argued compellingly that Quine's reasons for rejecting quantification into belief contexts were illegitimate: see Kaplan, "Opacity," in Lewis Edward Hahn and Paul Arthur Schilpp, eds., *The Philosophy of W. V. Quine* (La Salle, Illinois: Open Court, 1986), pp. 229-289. [back]

11. Foley's own suggestion seems to be that one knows what proposition a sentence expresses if one can completely and accurately *define* the terms it contains (see 346). This strikes me as far too strong even as a requirement on *directly* believing that a sentence expresses a certain proposition--partly because I doubt that most terms have definitions of the requisite sort, and partly because even if they did one might know the meaning of a term implicitly without being able to define the term explicitly. Foley's account would lead to even more radically sceptical consequences than the ones I will mention in the text. [back]

12. For a somewhat fuller discussion of this problematic idea, see "What is a Belief State?" 371-375. [back]

13. This suggestion is related to Foley's account of what makes an object "epistemically transparent" to a subject. If one knows the meaning of an expression only if that meaning is "epistemically transparent" to one, then Foley's definition of epistemic transparency will lead to this necessary condition. Compare also Michael Dummett's mention of a similar principle in *Frege: Philosophy of Language*, Second Edition (Cambridge: Harvard University Press, 1981), p. 95. [back]

14. Foley writes that if a subject does not know precisely what proposition is expressed by either or both of two sentences, then from the fact that the subject assents to the two sentences "it does not follow that he believes the proposition expressed by each sentence" (345). [back]

15. Well, I *didn't*. But I looked it up. It appears that 'huckleberry' is *ambiguous*. In one sense it just means 'blueberry'. In another sense it refers to the berries I remember. But the berries I remember are not blueberries. [back]

16. It should be clear that the first and third suggestions, as well as the view Foley himself hints at (see my note 11), would have such wide-ranging sceptical consequences. The second suggestion rules out believing a proposition in virtue of believing a sentence is true only if there is another sentence which one does not realize expresses the same proposition. But surely acquiring new information or vocabulary cannot cause one to lose a previously held belief without e.g changing one's mind or forgetting it. So the principle should be supplemented to rule out believing a proposition in virtue of accepting a sentence provided one <u>could</u> learn a sentence which one did not realize expressed the same proposition. And this will have the same highly sceptical consequences as the other suggestions. [back]

17. There is a family of related notions with tangled connections here, among them those of a duplicate, an intrinsic property, and supervenience. For a helpful account of the relations between these notions see David Lewis, *On the Plurality of Worlds* (Oxford: Basil Blackwell, 1986), pp. 61-63. [back]

18. A fuller, though still incomplete, account is offered in my "Direct and Indirect Belief," unpublished [at the time of publication of the present essay; since published in *Philosophy and Phenomenological Research* 52 (1992): 289-316]. [back]

19. But see my "What is a Belief State?" and "Direct and Indirect Belief." [back]

20. I would like to gratefully acknowledge helpful comments from Steven Luper-Foy, and the support of a 1988 Summer Stipend from Trinity University. [back]