Frode Bjørdal

ON BELIEFS

1. Introduction

In order to include tacit beliefs in the analysis of belief contexts we need to think of beliefs in dispositional terms. I suggest that we think of a belief in a proposition p as a disposition to assent to a sentence or internal representation which expresses the proposition p. It then follows that a person S believes p, where p is a proposition, if, but not only if (see below), S is disposed to assent to some sentence s which expresses the proposition p. I will refer to this as the Disquotation Principle, abbreviated as DP. For reference:

DP. S believes proposition p if S is disposed to assent to
       some sentence s which expresses p.

I am naturally assuming that S understands the sentence s to which S assents, and I must also assume that S assents to the sentence s as meaning p and not as some code for something else. Note that a person S, given this criterion, may believe a proposition p (e.g. that the Morning Star is identical with the Evening Star) and at the same time not assent to, or even assent to the negation of, one sentence s which expresses p (e.g. the sentence "The Morning Star is identical with the Evening Star") because S is assenting to some other sentence s' (e.g. the sentence "The Morning Star is identical with the Morning Star") which expresses p, provided that the proposition p in question is expressed by both sentences. One might of course dispute that the proviso given in the previous sentence is fulfilled in the case where $s =$ "The Morning Star is identical with the Evening Star" and $s' =$ "The Morning Star is identical with the Morning Star". One may hold that s and s', so defined, are sentences which express different propositions.

Such is Frege's way of dealing with the situation. In this essay I shall defend a Millian approach.

I will take it as uncontroversial that different sentences may express the same proposition. An important consequence of DP and the fact that a person S may assent to one sentence s which expresses a proposition p and at the same time assent to the negation of a sentence s' which also expresses the proposition p is then that S may believe both the proposition p and its negation. S may even believe the contradictory proposition p and not-p. Insofar as one thinks that this is an unacceptable result, one must also think that at least one of the following three principles is unacceptable, viz. (a) DP; (b) the principle that different sentences may express the same proposition; and (c) the principle that propositions are the objects of our beliefs. I take it, as I have already stated, as being uncontroversial that different sentences may express the same proposition, and I will also assume that propositions are the objects of our beliefs. In order to defend principle DP I therefore have to defend the possibility of there being situations where a subject believes a proposition and its negation, since DP, together with the truth of the two other principles mentioned, virtually entails that there are such situations.

2. Epistemic Modalities

Nathan Salmon has, I think, in his book Frege's Puzzle[1], made a strong case for holding that the principle of substitutivity of coreferential terms holds in belief contexts, and that there are such cases as I have pointed out where a person believes a proposition p and its negation because the person is disposed to assent to one sentence s which expresses p and at the same time to assent to a sentence s' which expresses the negation of p. Salmon also considers a situation where S is disposed to assent to one sentence s which expresses the proposition p and at the same time expressly withholding judgment with respect to the *same sentence s*, and his analysis of the situation gives, I think, a quite plausible account of what is going on. The reader is referred to his discussion. In the following I briefly sketch Salmon's analysis. I then make some refinements of his analysis which make it somewhat more transparent why many, in fact most, people have had the intuition that we for example cannot infer that S believes that Tully is an author from the fact that Cicero is Tully and S believes that Cicero is

---

[1]See Salmon (1986).

an author. I also want to suggest that my refinements make it possible to provide a new solution to the problem concerning when we can quantify into belief contexts, and to account for Donnellan's distinction between a referential and an attributive use of definite description. Before suggesting these refinements I give some examples which should make it clear, I hope, that some analysis along the lines suggested by Salmon must be the appropriate kind of analysis. The examples should also provide ample evidence for my principle DP.[2] Salmon suggests the following analysis of the proposition that S believes p, where p is a proposition:

BS. $\qquad (B_S p) = (\exists x)(S \text{ grasps } p \text{ with } x \wedge \text{BEL}(S, p, x))$

Salmon makes notes of three ways in which a negation may alter BS. We first of all have the situation where it is not at all the case that S believes p:

¬BS. $\qquad \neg(B_S p) = \neg(\exists x)(S \text{ grasps } p \text{ with } x \wedge \text{BEL}(S, p, x))$

We also have the situation where S believes not-p:

BS¬. $\qquad (B_S \neg p) = (\exists x)(S \text{ grasps } \neg p \text{ with } x \wedge \text{BEL}(S, \neg p, x))$

There is also, as Salmon points out, a sense in which a person may withhold judgment with respect to a proposition p which does not entail that the person withholds judgment with respect to p in the sense of ¬BS:

<u>BS</u>. $\qquad (\neg B_S p) = (\exists x)(S \text{ grasps } p \text{ with } x \wedge \neg \text{BEL}(S, p, x))$

In this latter case I shall, following Salmon, say that the subject S *withholds belief* from p. My use of parentheses in order to distinguish between the different cases should be self-explanatory.

But note that there is in addition a fourth place which a negation sign can occupy, for <u>BS</u> can be negated too. In that case we get

<u>¬BS</u>. $\qquad \neg(\neg B_S p) = (\forall x)(S \text{ grasps } p \text{ with } x \supset \text{BEL}(S, p, x))$

---

[2]Principle DP is, as the reader should note, weaker than the disquotational principle suggested by Kripke. For Kripke's principle states that a subject S believes that P provided that S, modulo some assumptions, is disposed to assent to the English sentence 'P'. What I have stated is that S believes that P provided that S, modulo some assumptions, is disposed to assent to some sentence s which expresses the proposition that P. Also note that I will make no use of any analogue to Kripke's strengthened disquotation principle, which states that it, given some adequate assumptions, is a *necessary* condition for S to believe that P that S is disposed to assent to the English sentence 'P'.

Note that in certain circumstances, both $\neg(\neg B_S p)$ and $\neg(\neg B_S \neg p)$ can be true. If they are, it signifies that the subject does not even grasp the proposition p. This is one way in which a person may be said to fail to judge whether p which differs from what we ordinarily think of as a suspension of judgment. For when we say that a person suspends judgment as to whether p is the case we usually think of a situation where the subject grasps the proposition p but withholds belief from p and also withholds belief from $\neg p$. We may for example say of a child that it *fails to judge* whether the continuum hypothesis is true simply because the continuum hypothesis is beyond the grasp of, or at least not in fact grasped by, the child, whereas we would say of some mathematicians that they *suspend judgment* as to whether the continuum hypothesis is true without thereby implying that they don't grasp the continuum hypothesis. In the first case we have a situation where $\neg(\neg B_S p)$ and $\neg(\neg B_S \neg p)$ are both true if S denotes the child we are talking about and p denotes the continuum hypothesis. In the second case, i.e. if we take S to denote one of the agnostic mathematicians and p to denote the continuum hypothesis, neither $\neg(\neg B_S p)$ nor $\neg(\neg B_S \neg p)$ is true, but both $(\neg B_S p)$ and $(\neg B_S \neg p)$ would be true.

It is clearly, I think, the case that $B_S p$ implies $(\neg B_S \neg p)$. For if there is an x such that the subject grasps the proposition p with that x and $\mathrm{BEL}(S, p, x)$ holds, i.e. S believes p relative to x, then there must surely be an x such that S grasps the proposition $\neg p$ with that x and it is not the case that $\mathrm{BEL}(S, \neg p, x)$. This is not so because it must be impossible to believe a contradiction. In fact, I don't think that *is* impossible. Rather, I think that the fact that $B_S p$ implies $(\neg B_S \neg p)$ reflects some kind of psychological law.

One should not think that it is an objection to my claim in the previous paragraph to point out such things as that we may have difficulties with grasping a proposition which is expressed by a sentence which begins with a long series of "not"'s, such as "It is not the case that not not not not not not not not not snow is white". In order for such an objection to work one would presuppose the false principle that one must believe the negation of a proposition which one withholds belief from. What I have stated as a principle above is that if a subject does believe a proposition in the ordinary sense then the subject withholds belief from the negation of that proposition in the ordinary sense. The converse principle is false. If we spell out the principle that $B_S p$ implies $(\neg B_S \neg p)$ in terms of the definitions which I have given above, we see that it means the same as to say that the fact that $(\exists x)(S$ grasps p with $x \wedge \mathrm{BEL}(S, p, x))$ implies the fact that $(\exists x)(S$ grasps $\neg p$ with $x \wedge \neg\mathrm{BEL}(S, \neg p, x))$.

We can, on the basis of the observations we have made, distinguish between seven distinct epistemic (or doxastic) attitudes which a subject S may have vis-à-vis a proposition p. We have (1) the case where the proposition p is not even grasped by S and (2) the case where S grasps p but, as Nathan Salmon would say, *actively suspends judgment* as to whether p is the case. We also have (3) the situation where S believes p and (4) the one where S believes $\neg p$, and nothing funny is going on. In addition, we have (5) the Kripke situations, where it is both the case that S believes p and that S believes $\neg p$. And we finally have two types of Salmon situations, viz. in the first situation we both have (6) that S believes p ($B_S p$) and that S withholds belief from p when S grasps the proposition in a different manner ($\neg B_S p$); and in the second situation when (7) the same holds for S relative to $\neg p$. Let me make a table which shows how I think that these seven epistemic attitudes differ in their truth-value ascriptions to the four expressions $B_S p$, $B_S \neg p$, $(\neg B_S p)$ and $(\neg B_S \neg p)$:

	$B_S p$	$B_S \neg p$	$(\neg B_S p)$	$(\neg B_S \neg p)$
(1)	False	False	False	False
(2)	False	False	True	True
(3)	True	False	False	True
(4)	False	True	True	False
(5)	True	True	True	True
(6)	True	False	True	True
(7)	False	True	True	True

It is a pleasant exercise to verify that the following two axioms for belief statements allow for exactly the seven epistemic attitudes which I have discerned. By this I mean that they are the only possible ones iff the following two axioms are true:

A(1) $$(B_S p) \supset (\neg B_S \neg p)$$

A(2) $$(B_S p) \vee (B_S \neg p) \vee ((\neg B_S \neg p) \equiv (\neg B_S p))$$

A(1) may here be understood as saying that if there is a way in which S believes p then there is also a way in which S disbelieves $\neg p$. A(2) can be understood as saying that if there neither is a way in which S believes p nor a way in which S believes $\neg p$, then it is either the case that S actively suspends judgment as to whether p is the case or it is the case that S fails to judge whether p because S does not even

grasp the proposition p. The "or" in the previous sentence must be understood in its exclusive sense.

Of the seven distinct epistemic attitudes which I have discerned, a more orthodox approach would only be able to account for three, or, at the most, four. It is, however, I think, quite a serious defect of orthodox approaches that they have to conflate (1) and (2). For, intuitively, there *is* a difference between a subject who is actively suspending judgment with respect to a proposition that he or she grasps and one who fails to judge whether the proposition is true because he or she doesn't grasp the proposition. But since there is such a difference, the difference should have to be captured by a theory in order for that theory to be thought of as providing an adequate account of belief. One should also, I think, not try to camouflage the peculiarities in the situations described by Kripke and Salmon. The situations described *are* peculiar and different from ordinary situations. The difference between Kripke situations and Salmon situations on the one hand and ordinary situations on the other hand should therefore be captured by an adequate theory. But orthodox theories do not capture this difference, and we therefore ought to conclude that such theories are not adequate.

3. Naming in Belief Contexts

3.1. Exposition of the Problem

Let me try to apply Salmon's analysis to the following Kripkean example. Suppose S at some point met Paderewski while he was performing, so S believes that Paderewski is an accomplished musician. S later gets to know about Paderewski as a statesman without realizing that he is the same as the man who played the piano, and S is not, in this situation, disposed to assent to the sentence "Paderewski is an accomplished musician" if he takes "Paderewski" to refer to the statesman. In fact, he is disposed to assent to the negation of that sentence if he takes "Paderewski" to refer to the statesman. So S is, in the peculiar situation that he finds himself, disposed to assent to the sentence "Paderewski is an accomplished musician" and at the same time to assent to the negation of that sentence. Salmon would here say that S takes the single sentence "Paderewski is an accomplished musician" to be two different sentences.[3] This bars him from thinking of the third relatum of the BEL predicate in the definitions above as some function of subjects, times and sentences in general.[4] For in the Paderewski case both the subject and the time and the sentence are

---

[3]See Salmon (1986, p. 116).
[4]See Salmon (1986, p. 117).

the same, although the subject erroneously takes what is one sentence to be two different sentences. I think that there are additional reasons for not thinking of the third relatum as such a function, but I am now anticipating some of what I am going to say below. The main thing to note at this point is that Salmon leaves us with no general account of the third relatum of the BEL predicate in the definitions above. I will later try to rectify this by providing at least some rough outlines of such an account.

3.2. Contra Fregean Answers to the Puzzle

Let us, however, first take a look at how a Fregean theory would fare when faced with the Paderewski example. What would a Fregean say? He would probably say that the single name "Paderewski" is associated by S with two different senses. But the Fregean cannot, I think, deny that S believes that Paderewski is a musician, nor can he deny that S believes that Paderewski is not a musician. To see this, consider two other people T and U. T was with S at the concert where Paderewski performed, and T and S expressly agreed and assented to the sentence "Paderewski is an accomplished musician". And T never changed his mind. U was another friend of S, and U only knew about Paderewski as a statesman, and S and U expressly agreed and assented to the sentence "Paderewski is not an accomplished musician". But clearly, T believed that Paderewski was an accomplished musician and U believed that Paderewski was not an accomplished musician. If not, no one can ever have believed that Paderewski was an accomplished musician or that he wasn't. So the Fregean must concede both that T believed that Paderewski was an accomplished musician and that U believed that Paderewski was not an accomplished musician. But, if so, he must also concede that S believed that Paderewski was an accomplished musician and that S believed that Paderewski was not an accomplished musician. At least the Fregean must concede this insofar as he is willing to say that S and T at one time, and S and U at another time, believed the same thing. But we have assumed that S and T were in agreement, as were S and U at a later time. So the Fregean should be willing to say, in whatever way he can, that S and T at one time, and S and U at another time, believed the same thing about Paderewski. And it should then follow that S believed that Paderewski was an accomplished musician and that S believed that Paderewski was not an accomplished musician.

All of this goes to show that we *should* say about S in our example that S believes that Paderewski is an accomplished musician and that S believes that Paderewski is not an accomplished musician. And

the Fregean can, insofar as he wants to offer an analysis of propositions expressed by sentences like "T believes that Paderewski is an accomplished musician", not avoid saying that S in our example has two beliefs which contradict each other *if* we, as I think is reasonable, say that two contingent propositions are contradictories iff it is necessarily the case that any fact which makes one of them true (false) will make the other false (true). In particular, the Fregean does not then avoid the fact that S believes propositions which contradict each other by maintaining that a sense$_1$ of "Paderewski" in the true proposition expressed by "S believes that Paderewski is an accomplished musician" is different from a sense$_2$ of "Paderewski" in the true proposition expressed by "S believes that Paderewski is not an accomplished musician". For sense$_1$ and sense$_2$ of "Paderewski" would in this case determine the same referent, viz. Paderewski, so, necessarily, the fact that Paderewski was an accomplished musician makes the one proposition which is believed by S true, and the other false, and if it were a fact that Paderewski was not an accomplished musician, then that fact would make one of the propositions believed by S true and the other false. In short, the two propositions that are believed by S contradict each other, and this remains so even if one thinks of propositions along the lines suggested by Frege.[5]

Note that although the above argument makes an extremely strong case for saying that S in the situation described does have contradictory beliefs, the argument does *not* establish that different coreferential terms are substitutable *salva veritate* in belief contexts. A Fregean or Frege-inspired philosopher may concede that there are such odd situations as the one described where the subject has contradictory beliefs, without thereby giving up his fundamental idea that *different* coreferential names like for example "Cicero" and "Tully" are not substitutable *salva veritate* in belief contexts. This may sound like an odd position, but it clearly is a possible one. I therefore do not think that the above argument suffices to show that different coreferential names

---

[5]Note that my criterion will not make for example the proposition that the man on the stage is an accomplished musician and the proposition that Paderewski is not an accomplished musician into contradictory propositions even if it is the case that Paderewski in fact is the man on the stage. For the fact that Paderewski is an accomplished musician makes the proposition that Paderewski is not an accomplished musician a false one without making the proposition that the man on the stage is an accomplished musician a true one. We need the conjunctive fact that Paderewski is an accomplished musician and that Paderewski is the man on the stage in order to make the proposition that the man on the stage is an accomplished musician a true one, but that conjunctive fact is not the same as the fact that Paderewski is an accomplished musician.

are substitutable *salva veritate* in belief contexts, and I shall for that reason present arguments which I think make a very strong case for holding that such is indeed the case.

It is natural, but I think in a sense unfortunate, that discussions in the field of philosophy of language have primarily, if not exclusively, centered around lingual creatures and their language and access to reality. This is, I think, somewhat unfortunate because we should not forget that we also use our language to make reports about nonlingual creatures. In particular, we use our language to make reports about the inner states of animals and young children. We may for example say of an animal that it is in pain. And it is obvious, or at least it should be, that we can sometimes truly ascribe belief states to animals. Even Quine, who is a sententialist, would concede that much.

Let me try to bring out the relevance of all this by providing the following example. Imagine that we were in a position to observe the behavior of one of Cicero's dogs, assuming he had some. Since we don't know the names of any of his dogs, we might as well call this one "Fido". We observe Fido for some time and make notes about his habits. In particular we notice the fact that Fido salivates when Cicero is preparing food for him. In these situations we may obviously say that Fido believes that it is going to be fed by Cicero. But insofar as we may say that, we may also say that Fido believes that it is going to be fed by Tully. So we clearly have that coreferential names are substitutable *salva veritate* in the belief contexts of nonlingual creatures, and in particular in the case of Fido. And note that this is not something which holds because Fido knows that the names "Cicero" and "Tully" are coreferential or because Fido knows a *Fregean* identity proposition to the effect that Cicero is Tully. The dog may have no beliefs whatsoever concerning the names "Cicero" and "Tully", and it would therefore make no sense to talk about the dog's Fregean senses of "Tully" and "Cicero". But it does make sense to say that Fido believes that Cicero will feed it, as well as to say that Fido believes that Tully will feed it. If I am right, it follows, and at this point probably uncontroversially, that it must be wrong to assume that the fact that a name lacks a sense for an individual should have as a consequence that the name cannot figure within the scope of the belief operator of a sentence which ascribes a belief to the individual.

I take the above argument to provide very strong evidence for the view that coreferential names *are* substitutable in belief contexts. There is, however, at least one type of objection that a Fregean may raise. He might say that the dog *doesn't* believe that it will be fed by Cicero. To say this would either be extremely anthropocentric and

implausible to say, or it would have to rely upon the distinction between *de re* and *de dicto* beliefs. Maybe a Fregean would claim that a nonlingual being has only objectual beliefs. It would therefore strictly speaking be false to say, *de dicto*, that Fido believes that Cicero will feed him. Fido, so one may claim, only has a *de re* belief about Cicero which says that he will feed him.

There are two reasons why I would not be impressed with such a reply. Firstly, I am convinced that *de re* beliefs are reducible to *de dicto* beliefs. For this I will argue below. Secondly, an even stronger case for the view that coreferential names are substitutable can, I think, be made on the basis of beliefs ascribed to human beings. I will first try to make this stronger case, and then try to show how *de re* beliefs are reducible to *de dicto* beliefs and that they are so reducible even in the case of nonlingual beings.

I do not know much about Cicero's personal history, but let us suppose that he was bald and that he had a son whom we call "Antonius". When Antonius was less than one year old, Cicero was already bald. Cicero, so we assume, was a compassionate father who spent much time with his son. Antonius loved to touch Cicero's bald head. He had not yet learned to speak and was not yet familiar with the use of proper names. In particular, Antonius did not know that "Cicero" or "Tully" are names of Cicero. However, in my opinion it would be quite implausible to say that Antonius did not believe that Cicero was bald. Clearly, Antonius must have had a variety of beliefs, and I do not see any reasons why we should not say that Antonius believed that Cicero was bald. I concede that Antonius may not have had a very sophisticated concept of baldness, but then again, most people don't. Of course, the concept of baldness is not essential to my example. Let me be granted, then, at least for the sake of argument, that Antonius believed that Cicero was bald. But clearly, if such was the case, Antonius also believed that Tully was bald. And, as was the case in our example with Fido, the substitution which we are allowed to make within this belief context does *not* rely upon any fact such that Antonius knows "Cicero" and "Tully" to be coreferential names, or that Antonius knows a *Fregean* proposition to the effect that Cicero is Tully. For at this age Antonius was not even aware of the names "Cicero" and "Tully".

So far our example does not differ much from our previous example with Fido and Cicero. But let us consider a new stage in Antonius's development. Now Antonius has learned to speak, and he is quite familiar with the use of the name "Cicero" in order to refer to his father. But Cicero has kept it a secret that he uses "Tully" as a pseudonym, and Antonius is not yet let in on this secret.

As it was agreed above, Antonius believed that Cicero was bald and likewise that Tully was bald. Do we have good reasons to hold that Antonius now no longer believed that Tully was bald but did believe that Cicero was bald? I do not think so. Insofar as we admit that Antonius did believe that Tully was bald before Antonius learned a language, we must also admit that Antonius now that he did speak Latin still believed that Tully was bald. We have no good reason at all to assume that Antonius ever stopped believing that Tully was bald. On the contrary, it would be patently absurd to propound the view that Antonius lost any knowledge about Tully because he learned how to speak Latin and how to use the name "Cicero".[6]

But Antonius, after he learned Latin, was in a situation which in no relevant respect is different from that of a modern day schoolgirl who knows that Cicero is an author but never learned that "Tully" refers to Cicero. If we accept the substitution of "Tully" and "Cicero" in one of these belief contexts, we should accept the substitution in the other belief context too. This shows that coreferential names, contrary to what the tradition has held, indeed *are* substitutable in belief contexts.

3.3. The Third Relatum and Some Applications

In order to make the above result more palatable to the skeptical reader, I now discuss the nature of the third relatum in Salmon's BEL predicate. Clearly, since it is the case that nonlingual beings have beliefs too, it cannot be the case that the third relatum is some sort of function from times, sentences and subjects. Neither the dog Fido nor young Antonius grasps any proposition by means of sentences.

How, then, can we provide a general account of the third relatum? Let us think about what is going on in the simple case when Antonius grasps the proposition that Cicero is bald, where we think of that proposition as being identical with the ordered triple[7] $\langle \lambda\Phi\lambda u.\Phi u, \text{baldness}, \text{Cicero}\rangle$. I suggest that what is going on is that Antonius somehow manages to pick out Cicero by means of a referential device α relative to one of Antonius's mental states m. Let us abbreviate this as $R(\text{Antonius}, \alpha, m, \text{Cicero})$. α may be some mental picture or element of an internal language, whereas m is maybe most useful to think of as a dispositional state of Antonius's mind. Similarly, I suggest that Antonius is somehow able to pick out the property

---

[6]At this point confer Kripke's similar argument, given in connection with his example with Pierre who moves to London, in Kripke (1979).

[7]We are following Alonzo Church's suggestions for modelling propositions with his proposition surrogates. See Church (1989).

baldness by means of some kind of referential or expressional[8] device β relative to a mental state m', or short $\mathrm{R}(\text{Antonius}, \beta, m', \text{baldness})$.

It is reasonable to assume that there is a very intimate connection between the second and the third argument of the R-predicate which I have introduced, i.e. between the referential or expressional device and the mental disposition. The following principle which I stipulate is meant to capture this intimacy:

PI. $(\forall S)(\forall \alpha)(\forall \beta)(\forall m)(\alpha \neq \beta \supset$
        $((\exists x)\mathrm{R}(S, \alpha, m, x) \supset \neg(\exists x)\mathrm{R}(S, \beta, m, x)))$

This principle, which we may call the Principle of Intimacy, or PI, says that each one of a subject's mental states or dispositions can be paired at most with one referential device such that the R-predicate holds of the subject, the referential device, the mental state and some object or property which is being picked out by the subject with the referential device relative to that mental state. The referential devices which a subject has can however be paired with more than one of his or her mental states or dispositions, where the R-predicate holds of the subject, the referential device, the mental state and the referent. This was for example the case in the example above where the subject S picked out Paderewski with "Paderewski" relative to two different mental states. The mental states of a subject, then, can, given PI, be thought of as being more fine grained than the referential devices which are at the subject's disposal, and I shall let the third relatum of the BEL predicate be an n-tuple of such mental states.

By means of my technical vocabulary, I can now state what I take to be the analysis of the proposition that Antonius believes that Cicero is bald. We have:

> Antonius believes that Cicero is bald $=_{\mathrm{Df}} (\exists \alpha)(\exists \beta)(\exists m)(\exists m')$
> $[\mathrm{R}(\text{Antonius}, \alpha, m, \text{Cicero}) \wedge \mathrm{R}(\text{Antonius}, \beta, m', \text{baldness}) \wedge$
> $\mathrm{BEL}(\text{Antonius}, \langle \lambda \Phi \lambda u.\Phi u, \text{baldness}, \text{Cicero}\rangle, \langle m, m'\rangle)]$

Note that, given our story about Antonius, the first of the following two existential instantiations of the definiendum above is true, whereas the second is false:

I1. $(\exists \beta)(\exists m)(\exists m')[\mathrm{R}(\text{Antonius}, \text{``Cicero''}, m, \text{Cicero}) \wedge$
        $\mathrm{R}(\text{Antonius}, \beta, m', \text{baldness}) \wedge$
        $\mathrm{BEL}(\text{Antonius}, \langle \lambda \Phi \lambda u.\Phi u, \text{baldness}, \text{Cicero}\rangle, \langle m, m'\rangle)]$

---

[8]We shall ignore the question as to whether we refer to properties or express them, or both.

I2. $(\exists\beta)(\exists m)(\exists m')[\text{R}(\text{Antonius, "Tullius"}, m, \text{Cicero}) \wedge$
       $\text{R}(\text{Antonius}, \beta, m', \text{baldness}) \wedge$
       $\text{BEL}(\text{Antonius}, \langle\lambda\Phi\lambda u.\Phi u, \text{baldness, Cicero}\rangle, \langle m, m'\rangle)]$

The fact that I1 is true and I2 is false might lead some to think that something like I1 would be the proper analysis of the proposition that Antonius believes that Cicero is bald. But we should resist such suggestions for at least two reasons. Firstly, such a metalinguistic approach would fail because of Alonzo Church's translation argument.[9] Secondly, we would, if such a view were to be adopted, not be able to ascribe beliefs to nonlingual beings like Fido and young Antonius. But I regard it as being extremely implausible to say that animals and young children don't have beliefs.

To some extent, however, the truth of I1 and falsity of I2 make it understandable that people have had the intuition that coreferential names are not substitutable in belief contexts. But we have seen that there is very strong evidence for holding that this traditional view is false.

Because of PI, there should be no danger in letting the third argument of the BEL predicate consist of the ordered pair $\langle m, m'\rangle$, for the mental states are, as we have seen, more fine grained than the referential devices available to a person. In the case of more complex propositions, the third argument will be an n-tuple of mental states, where $n > 2$. It is useful and appropriate to think of the third argument of the BEL predicate as signifying *how* the subject believes the proposition which is the second argument of the BEL predicate. In some discussions about the explanatory force which a person's beliefs may have, for example in explaining the person's behavior, one should, ideally speaking, not only consider *what* a person believes but also *how* the person believes what he or she believes. Needless to say, but it will in general be quite difficult, and perhaps even impossible, to describe how a person believes a proposition. This, however, is a problem in the philosophy of mind, and as such it is a problem with which we are not concerned in this essay.

On the basis of the present analysis we can draw Donnellan's distinction between the attributive and the referential use of definite descriptions. If for example Smith while in mental state m uses the definite description "The man who murdered Jones" referentially in the sentence "The man who murdered Jones is mad", then the definite description functions in much the same way as a name, viz. as a second argument of the R-predicate. We assume that Smith believes the

---

[9]See Church (1950).

proposition which he expresses by using the sentence "The man who murdered Jones is mad". Here the definite description is used referentially. Let us also assume that Smith refers to Anderson, who is the innocent man charged with the murder of Jones, by this referential use of the definite description. We then have:

RBB. $(\exists m, m')[\mathrm{R}(\mathrm{Smith}, \text{"The man who murdered Jones"}, m,$
   $\mathrm{Anderson}) \wedge \mathrm{R}(\mathrm{Smith}, \text{"mad"}, m', \mathrm{madness}) \wedge$
   $\mathrm{BEL}(\mathrm{Smith}, \langle \lambda \Phi \lambda u. \Phi u, \mathrm{madness}, \mathrm{Anderson} \rangle, \langle m, m' \rangle)]$

Note that the belief which RBB ascribes to Smith may be true even if it is not the case that Anderson, the man to whom Smith refers, murdered Jones. For Smith may say something true about the innocent man Anderson who is prosecuted for being the murderer of Jones.

Of course, RBB is not a very natural analysis of the proposition that Smith believes that the murderer of Jones is mad, rather, it more naturally analyses the proposition that Smith believes of Anderson that he is mad. This is so because *we*, knowing, in virtue of our construction of the example, that Anderson didn't commit the murder, would be unwilling to use "The murderer of Jones" referentially in order to pick out Anderson.

Suppose the definite description "The murderer of Jones" is being used attributively by Smith when Smith uses the sentence "The murderer of Jones is mad", i.e. as a statement about the man, whoever he may be, who murdered Jones. The proposition that Smith believes that the murderer of Jones is mad is then to be analyzed as follows: let S be short for "Smith" and M be short for "is the murderer of", I be short for "is mad", j be short for "Jones" and we use T to denote the definite description function:

ABB. $(\exists m, m', m'', m''')[\mathrm{R}(S, \text{"the"}, m, T) \wedge$
   $\mathrm{R}(S, \text{"murderer of"}, m', \lambda xy(Mxy)) \wedge$
   $\mathrm{R}(S, \text{"Jones"}, m'', j) \wedge \mathrm{R}(S, \text{"mad"}, m''', \lambda x(Ix)) \wedge$
   $\mathrm{BEL}(S, \langle \lambda \Phi \lambda X \lambda \Psi \lambda u. \Phi(X(\lambda x \Psi x u)), I, T, M, j \rangle, \langle m, m', m'', m''' \rangle)]$

Note that the man who murdered Jones is not an argument of the R-predicate in ABB, nor is he, assuming the murderer was a man, an element in the proposition which is believed, i.e. in the second argument of the BEL predicate. This is a very important point in connection with the problems we have had with making sense of the relational sense of believing something. The fact that the man who murdered Jones is not an argument of the R-predicate in ABB may be a consequence of

the fact that the man who murdered Jones, i.e. the value of the T-function as applied to the property of being a murderer of Jones, may somehow be outside the subject's area of acquaintance (cf. Russell). The main thing to note is that we cannot in this case on the basis of ABB existentially generalize on an individual in such a way that we get the result that there is someone who Smith believes is mad.

The same cannot be the case in RBB. For the R-predicate cannot hold unless the subject succeeds in referring to an object with the second argument of the R-predicate. But this presupposes that the object under consideration in some nontrivial sense is within the subject's area of acquaintance. My claim, then, is that a *de dicto* belief is a *de re* belief just in case we can existentially generalize as it is the case in RBB. A person S must be in a position to refer to an individual I in order for S to have a *de re* belief about it. In the case of definite descriptions I claim that it is only the referential use which succeeds in referring to the descriptum in such a way that a singular proposition is expressed, and consequently in such a way that the person who uses that description may be said to have a *de re* belief about the descriptum. It is for this reason that we cannot infer that there is someone whom Ralph believes to be a spy from the fact that Ralph believes that the shortest spy is a spy. For, presumably, it would only be when the description "The shortest spy" were to be used attributively that Ralph would assent to the sentence "The shortest spy is a spy".

Note that our present criterion for identifying *de re* beliefs would also classify the beliefs of nonlingual beings as *de re* if, and only if, we can existentially generalize as in RBB. In the case of nonlingual beings the second argument of the BEL predicate will of course be a nonlinguistic referential device, such as a mental picture or an element of an internal mental language. It may therefore be, and probably is, the case that Fido believes *of* Cicero that Cicero will feed it, but only if it is also the case that Fido believes *that* Cicero will feed it. If I am right, one cannot argue against my use of the examples above by saying that nonlingual beings *only* have *de re* beliefs, for what I have argued is that the set of *de re* beliefs which a subject has is a subset of the set of its *de dicto* beliefs. If this is right, it may still be the case that nonlingual beings only have *de re* beliefs, but not in such a way that it for example would be false to say that Fido believes, *de dicto*, that Cicero will feed it. The *de re* beliefs are also de dicto beliefs, and we should not be seduced by the etymology of "de dicto" into believing that nonlingual creatures can have no *de dicto* beliefs.

Note that a metaphysical consequence, or maybe rather a metaphysical presupposition, of our discussion has been that thinking is

prior to language in the sense that thinking can occur without any use of language, whereas no use of language can occur without thinking. For to believe something is to think, so if nonlingual beings may have beliefs, it follows that nonlingual beings may think. So it follows that thinking can occur without any use of language. That no use of language can occur without thinking should be pretty obvious, and I am here naturally assuming that computers don't use a language.[10] It seems, however, that it is less obvious to many people that thinking can occur without the use of language. I am puzzled by such a reluctance to admit what ought to be obvious. For how else can we understand the ontogenesis and phylogenesis of language? The view that no thinking can occur without the use of language leaves the origin of language a complete mystery, and would, it seems, ultimately have to appeal to some kind of implausible divine intervention.

References

Church, Alonzo (1950) On Carnap's analysis of statements of assertion and belief. *Analysis*, 10, no. 5, pp. 97–99.

Church, Alonzo (1989) Intensionality and the paradox of the name relation. In Joseph Almog et al. (eds.), *Themes from Kaplan*, pp. 151–165. Oxford University Press.

Kripke, Saul (1979) A puzzle about belief. In A. Margalit (ed.), *Meaning and Use*, pp. 239–83. Dordrecht Reidel.

Salmon, Nathan (1986) *Frege's Puzzle.* MIT Press.

Department of Philosophy
University of Tromsø
Norway

---

[10]Insofar as we want to say that the language-like sounds made by a parrot are not expressions for something which the parrot thinks, we would not want to say that the parrot has a language.