DE RE AND *DE DICTO* BELIEFS (*)

R. E. JENNINGS and P. K. SCHOTCH

The intensionality of beliefs consists in part in the fact that a statement of one's beliefs is accurate only insofar as it does justice to one's misconceptions. But it does not dictate that one believes everything that one believes that one believes. Thus, although one may believe that Samuel de Champlain founded Stadacona, it does not follow that one believes that he founded Quebec. But although one may believe that one believes that the founded Chibougamau because one thinks that «Chibougamau» is an alternative name for Quebec, one would be wrong. Chibougamau is a dreadful place, far from Quebec and founded in 1950. It isn't that one has a false belief about Chibougamau. We would want to contrast the possibility just mentioned with the possibility that one should know very well that Chibougamau is a dreadful place far from Quebec and nevertheless believe that Samuel de Champlain was its founder. In this case one is mistaken about Chibougamau; in the former one is mistaken about one's beliefs.

In a formal study of belief, infallibility concerning one's own beliefs would be represented by the collapse formula $B_a B_a p \rightarrow B_a p$, where '$B_a\alpha$' is read '$_a$ believes that α'. The claim is that no correct formal account of belief would countenance the collapse formula as representing a necessary feature of belief. The reason, stated generally, is that in order for one to hold a belief one must have certain background information. It is a point which Professor David Hamlyn has made in another connection.

> «If the belief that *p* involves or presupposes the thought that *p*, anyone who believes that *p* must have the concepts that the thought itself implies. In other words,

(*) We are indebted to M. A. Hartley whose remarks prompted the writing of this essay.

> thinking that *S* is *P* involves having the concepts of *S* and *P*, and this in turn involves knowing in some sense what it is for something to be *S* and *P*. It would thus seem that the possibility of believing something already presupposes a certain form of knowledge. It is this that renders impossible a reductive but noncircular analysis of knowledge into belief plus something else» ([1]).

Thinking of belief as a mental state, we will naturally see the failure of the collapse formula as the failure of the principle of infallibility — But thinking of belief as a mental act, we will understand the repudiation of the collapse formula as a rejection of the principle that no mental act is beyond our power. For, here we see a menial mental act, (if ever there was one), in which, under certain circumstances we might suppose ourselves to have been successful when we have failed. On the first view it is our confidence in introspection which is principally undermined; on the second it is to smugness concerning our powers of belief that reason administers its icy douche.

It will be immediately apparent that many purported instances of religious belief must, on this account, not be instances of belief at all. Few people, even few Christians, now suppose that Christ on the day of what is called his ascension actually ascended, at least in the ordinary sense of 'ascend' in which a fish on a line might be said to ascend into the air. Certainly, even if they imagine that he really did ascend, they imagine that he ascended only until he was out of sight — not until he reached Heaven. If he went into heaven, it wasn't through ascending to a sufficient altitude. «Going into Heaven», the young Ryle-nurtured clergyman will, doubtless, tell us, «is more like going into a coma than like going into a closet». He will go on to quote Carl Solomon's recollections of the insulin ward:

> I am reminded of the day I went into a coma free of crab-

([1]) David HAMLYN, *The Theory of Knowledge*, pp. 94-95.

> lice and emerged throughly infested (the sheets are sterilized daily). I had caught the lice in someone else's coma... this was so credited by one of my fellow patients that he refused to submit to the needle the next day out of fear of venturing into one of my old comas and infesting himself (²).

Now it is also the case that entering this state requires the embracing of certain beliefs — one of which is that Christ entered this state under rather extraordinary circumstances. But what of the many millions of the faithful who departed this life without the benefits of modern theological methods, who cherished at great imaginative expense, the belief that Christ reached Heaven after a vertical journey of some unspecified duration ? Their beliefs were false, like those of the Arians and the Albigensians. Nor does it help to remark that their belief contained the required kernel of truth, namely, that Christ entered the presence of God. For doubtless they took *that* altogether too physically as well.

Some slight hesitancy of the spirit is only to be expected under the circumstances. For if salvation depends upon having the correct beliefs, our situation is poignant indeed. Give one's religious beliefs sufficient factual content that one knows what one believes and the beliefs do divine reality an injustice. Rob the doctrines of ordinary factual content and it becomes impossible to tell whether one believes them or not. Not only must one accept the doctrine on faith; one must accept on faith that one has accepted the doctrine.

How then is one to give an account of the historical attitude according to which:

(a) The only religious beliefs which insure salvation are true beliefs.
(b) The beliefs of earlier believers were false.
(c) The beliefs of earlier believers ensured their salvation.

(²) Carl SOLOMON, «Report from the Asylum», reprinted in *The Beat Generation and the Angry Young Men.*

(d) The beliefs of more sophisticated modern believers ensure their salvation.

It is not sufficient to say «They believed that Christ ascended into Heaven and whatever they meant by that, it was sufficient». For if someone meant by that that his dog had psoriasis, the Inquisition at least would not have taken it lightly. Yet when we look for the common ground between the naive physicalistic beliefs of earlier believers and the sophisticated beliefs of modern believers all that presents itself is the form of words in which the belief is expressed. But there is more to be found. For what the earlier and later believers disagree about is what it is that some religious authority has said. They share the belief that what the religious authority has said (whatever that may be) is true. This belief, however, is not a belief *de re* at all; rather it is a belief *de dicto,* a belief, not about Christ, but about a proposition. The theology, simplistic or sophisticated, can be viewed as a subsidiary attempt to say what the proposition is. But it is possible to hold the *de dicto* belief without theologizing at all. It may not commend itself to the intellectually fastidious, but it is at least possible. It is not essentially different from believing that whatever Jones has said in some unopened letter is true. We may normally speak about propositions by nominalizing sentences which express them, as in «The proposition that all men are moral is false», but we can also refer to them by description: «The proposition that is expressed by the first complete sentence on the previous page is true» or «What Matthew said to Hilda is bound to be false». This is not to say that reference by description is surefire. It may turn out that the first complete sentence on the previous page expresses no proposition, that Matthew said nothing to Hilda. How we treat such sentences whose definite descriptions purport to refer to propositions but fail to do so will depend upon the general theory of definite descriptions we adopt. But in the case of *de dicto* beliefs whose propositional descriptions fail of reference, we need only say that they are false or vacuously true or failing in a presupposition, depending upon the dictates of our fa-

vourite theory. For present purposes we need only say that the man who accepts on faith that what some religious authority was saying when he uttered the sentence «Christ ascended into Heaven» is true, also accepts on faith that the religious authority was saying something.

One may feel inclined to grumble that it is sophistical to say that in such a case a believer knows what he believes. For if he does not know what proposition it is that the religious authority's sentence expresses, he does not know what it is that he believes to be true. But even within the realm of *de re* beliefs, we admit the possibility of beliefs which are indefinite in this way. Cyril may believe that the man on the corner has a stoop without knowing the identity of the man. This is different from claiming that Cyril believes that horses are perissodactyl ungulates whilst admitting that Cyril does not know what horses are or perissodactyls or ungulates.

De dicto belief sentences may present difficulties for the formal analyst who is accustomed to thinking of the concept of a proposition as a semantic notion. How then to develop a semantics for a belief logic which tolerates both beliefs *de re* and beliefs *de dicto?* If propositions are regarded as sets of possible worlds, then beliefs *de dicto* are beliefs about sets of possible worlds. This seems unpromising. A more likely approach is one in which *de dicto* beliefs are regarded as beliefs about the meaning and reference of the terms of a sentence. To say that a sentence expresses a true proposition is to say that the meaning and reference of its terms are such that the sentence describes things the way they are. What is needed is a structure sufficiently rich that one can plausibly talk about meanings of formulae at points in it as well as truth and falsity.

Consider the language L of some person, Arthur (we will refer to him in more formal contexts by his initial in lower case italics). Arthur's language L provides the resources for the construction of indefinitely many declarative sentences. But L is a natural language which has evolved to meet a wide range of communicational needs determined by the changing physical and social circumstances of Arthur's tribe. We will expect the

language to be usable even in circumstances which the tribe has never encountered — but not in all such circumstances. We will likely grant the possibility that in a bizarrely altered universe many of the sentences of the language could not be assigned a truth-value. The situation is, of course, only a variant of the situation we are in with some of the religious sentence constructible in English where nothing in our common experience enables us to assign them a truth value — where the universe of our experience would have to be bizarrely altered in order for them to be assigned truth values other than as an act of faith.

A model for such a language will not be all that simple. But we can give a rough picture in the following way: Let U be any non-empty set together with a mapping of the sentences of some more basic language — say those of physics into 2^U. The idea of this is that each element of U together with this assignment can be seen as representing a set of physically possible circumstances. A model for L will be a map V from the sentences of L into 3^U. We may think of the sentences as receiving at each point in U a value from the set $\{1, 0, *\}$. It receives 1 in those circumstances which make it true; 0 where the circumstances make it false and * where the circumstances provide no basis for assigning it one of the other of 1 and 0.

A model $\mathcal{M}$ for L is then, a pair $\langle U, V\rangle$ where U is a non-empty set of physical circumstances (indexed by I) and V is a function from the sentence of L into 3^U. We can say that a model $\mathcal{M}$ makes a sentence α propositional at u if $V(\alpha, u) \in 2^U$ and otherwise not. In addition we want to impose restrictions upon the way in which V evaluates sentences about Arthur's beliefs. Were all the sentences of Arthur's language made propositional at U and his beliefs without exception *de re* beliefs we would associate with Arthur a function $N_{B_a} : U \to 2^{2^U}$. and say that

$$\forall u \in U,\ \forall \alpha \in L,\ V(u, B_a \alpha) = 1 \Leftrightarrow \{w: V(w, \alpha) = 1\} \in N_{B_a}(u)$$

understanding this formally in the following way: $N_{B_\alpha}(u)$ is the set of subsets of U which seem to Arthur to contain u. Ac-

cordingly we would say at u that Arthur believes that α iff u seems to Arthur to be contained in the set of points where α is true. But we have no reason to suppose for a given sentence α that a model of the sort we have envisaged will make α propositional at u, and for reasons outlined in the first section of this paper we will want to say that Arthur deceives himself in supposing that he believes that α under circumstances which make α non-propositional. We will not, however, wish to deny him the corresponding *de dicto* belief. How, in semantic terms, to make this distinction ?

The pair $<U, N_{B_\alpha}>$ might be called a belief frame for α. An enrichment of the semantic resources of this structure may be obtained in the following way: Consider the set I such that $\forall i \in I$, V_i: $At \rightarrow 3^U$ where At is the set of sentences of L which are not belief sentences.

Now from the frame $F = <U, N_{B_\alpha}>$ we construct what will be called the intensification $\mathscr{F}$ of F:

$\mathscr{F} = <U, \mathscr{N}_{B_\alpha}>$ is the intensification of F iff

$$U = U \times I.$$

$$\mathscr{N}_{B_\alpha} \text{ is a function } (U \times I) \rightarrow 2^{2^{(U \times I)}}.$$

u_{ik} denotes the pair consisting of point $u_i \in U$ and the function V_k.

Truth conditions on $\mathscr{F}$ for sentences of L are given as:

$$\overset{\mathscr{M}}{\models}_{u_{ik}} \alpha \leftrightarrow V_k(\alpha, u_i) = 1 \text{ for non-belief sentences.}$$

For belief sentences we distinguish two operators B and B′ of *de re* and *de dicto* belief respectively. Their truth conditions are:

$$\overset{\mathscr{M}}{\models}_{u_{ik}} B_\alpha \alpha \Leftrightarrow \{u_{jk} : \overset{\mathscr{M}}{\underset{u_{jk}}{\models}} \alpha\} \in \mathscr{N}_{B_\alpha}(u) \;\&\; V_k(\alpha, u_i) \neq *$$

and

$$\models_{u_{ik}}^{\mathscr{M}} B'_\alpha \alpha \leftrightarrow \{u_{il}: \models_{u_{il}}^{\mathscr{M}} \alpha\} \in \mathscr{N}_{B_\alpha}(u)$$

Setting the requirement that α must be propositional at u_i in V_k, what the first truth condition amounts to is the truth condition given earlier. If we restrict ourselves to a single model, the distinction between point and model-point pair is idle. a believes that α, if his circumstances seem to be circumstances in which α is true.

It is in the second truth condition that the intensification of F becomes important. This condition requires that the model seem to a to be a model which makes α true at u. The former examines other points in the same model, the latter examines the same point in other models.