Indexicals and Reported Speech

R. M. SAINSBURY

1. A hypothesis about meaning

IF I UNDERSTAND an utterance whereby someone says something, I know what was said, and typically I can express this knowledge: I can report what was said. If meaning is the least that must necessarily be accessed in understanding, then meaning is specified when speech is reported. The aim of this paper is not to argue for this natural hypothesis, but to explore its consequences: the consequences of treating constraints on reporting speech as guides to meaning.

Despite its vagueness, the consequences of the hypothesis are quite rich. To give a preliminary indication: if you, addressing me, utter the words 'You are a fool' I can correctly report you as having said that I am a fool. The hypothesis under discussion is to be interpreted so as to entail that, since your token of 'you' is properly reported by my token of 'I', these tokens have the same meaning. In general, the hypothesis entails that non-synonymous types of expressions may have synonymous tokens. This consequence may occasion somewhat more surprise than the hypothesis from which it flows. The underlying phenomenon is very familiar; the slight surprise is explained by the fact that in the dominant tradition, meaning is linked to expression types rather than to tokens. Tokens like the pair in the example, which the present hypothesis requires us to count as synonymous, are more usually regarded as related merely by sameness of reference. Yet this relation may hold between tokens one of which cannot be used to report a use of the other. For example, if the words you address to me are 'You are a fool', I cannot adequately report you as having said that the Editor of *Mind* is a fool.

Further consequences to be drawn in this paper relate to formal

semantic theories (§2), and to various claims about the special role of indexicals with respect to action, to science, to time, and to the coherence of an omniscient but eternal God (§4). On the way, I find it necessary to raise some general issues about the relationship between indexical and anaphoric uses of pronouns (§3). In the final section of the paper, I raise the question of how the perspective offered relates to Frege's views (§5). In the remainder of the present section, I say a little more about the notion of a fully adequate and explicit report of speech, and thus make the hypothesis to be explored somewhat more precise.

In a simplified case in which we bracket context-dependence, ambiguity and actual or possible differences of language, a reporter could do no better than repeat the original speaker's words after uttering 'So-and-so said that'. Homophony rules. In this situation, our hypothesis, though not an incorrect guide, is uninteresting. It rises little beyond the claim that words mean what they mean. The guide becomes interesting only to the extent that we relax the simplifications. In this paper, the feature to be relaxed, at least in part, is context-dependence. I shall explore the results the guide delivers about reports of, and hence meanings of, indexicals.

The guiding thought is not that we can use intuitions about attributions of any propositional attitudes as guides to meaning. Reported speech has a special claim to be a good guide, since what is reported is essentially a language-related act, with other pressures on the utility of the report, like explanatory adequacy within some belief-desire schema, reduced to a minimum. Some difficulties about deciding whether speech has been correctly reported can be allowed as manifestations of some indeterminacy in meaning. There are also ways in which reports may be less than adequate which I wish to resolve by stipulation.

Someone utters the words 'It rained every day on my holiday'. Perhaps we should not count 'what he said' as false if there was one day which, though misty, strictly speaking lacked rain. Taking what he said strictly, however, it was false. Someone utters the words 'Travelling to Italy will cost you an arm and a leg'. He has said, figuratively, that travelling to Italy will cost you a lot. But speaking literally he has said that travelling to Italy will cost you an arm and a leg. The dean utters the words 'I believed that Professor Z was overpaid'. The dean has just discovered that he is Professor Z, whom, under that anonymous label, he has just placed in the category of overpaid staff. (The example is a variant of one given by Perry 1983, p. 110.) He has said, implicitly, that he believed that he was overpaid, but he has not said this explicitly.

There are other ways in which a report of speech may not be fully explicit. In some contexts, even a correct specification of the actual words uttered may be esteemed defective, either because the audience does not understand the relevant language, or because knowing the words uttered may be insufficient to know what was said. Another kind of example of failure of full explicitness are oblique specifications of what was said; for example: James said the same as Mary.

In what follows, I shall assume that 'said' abbreviates 'strictly, literally and fully explicitly said'. This requirement rules out various kinds of cases which might otherwise make the hypothesis that we can use speech reports as guides to meaning so implausible as not to be worth much exploration. If someone says of you that you are a fool, I can arguably report this to you correctly by saying 'He said that you are a fool'. On the face of it, this does not imply anything about the means he used to refer to you. Yet it would be highly implausible to suppose that the occurrence of 'you' in my mouth was synonymous with the words the original speaker used to refer to you, whatever these words may have been. Such a result would make it miraculous that my report could be understood.

The situation is not remedied by regarding the logical form of such reports as de re, for there will still be an expression which refers to the relevant object, and a subsequent pronoun which also does, for example: 'Referring to you, he said that you are a fool'. The relevant use of such words is one in which the two occurrences of 'you' have the same reference, whether because the second is anaphorically dependent upon the first, or because you are demonstrated in association with each occurrence. On the present approach, we would seem still to get the result that my token 'you are a fool' means the same (assuming my report is accurate) as the speaker's words, whatever words he used to refer to you. Similarly, if I overhear someone uttering the words 'The first speaker at today's conference is a fool' it seems that I can correctly report having overheard someone say that I was a fool (for I am the first speaker, and I know it). But it seems highly implausible to suppose that my token of 'I' has the same meaning as that token of 'the first speaker'. Once again, the supposition would make it miraculous that my report could be understood.

I regard these cases as reports which are not fully explicit. The default position for full explicitness is re-use of the words the speaker used, as in the simplified homophonic case. Reporting indexical speech forces a departure from this default: we cannot improve on the anaphoric

style of report. If the original words were 'He is a fool', said of you, then my report 'He said that you were a fool' does count as maximally explicit; but in this case the consequent identification of the meaning of the tokens of 'he' and 'you' is not implausible. In the other cases, however, those which seemed to reveal a very implausible consequence of our guiding hypothesis, there is more information to impart, which could be imparted in oratio obliqua. Hence the reports which seemed to render that hypothesis not worth exploring are not maximally explicit. It would not be surprising if reports of speech which were not fully explicit failed to coincide in their meaning with what they reported.

Within the simple picture of a single language and no indexicality, one who gave an adequate report could make himself a samesayer with the original speaker merely by uttering the words which follow 'said that' in his report. In the next section, I argue that when we drop the simplification we find that one who can adequately report may not be able to say anything which makes him (save in the context of the report) samesay with the original speaker. I explore a consequence of this for systematic semantic theory.

2.   *Non-detachability and semantic theory*

Here are some examples of utterances which can be adequately reported, but whose content the reporter cannot express by means of a self-standing utterance. On 12 May 1968, the revolutionary leader said that that day marked a new dawn. We can divide the report into two parts: first, the scene is set by the words 'On 12 May 1968, the revolutionary leader said that'; then the content is ascribed by the words 'that day marked a new dawn'. Intuitively, the report passes muster; we tend to imagine that the leader used some word like 'aujourd'hui'. But one cannot simply detach the content-ascribing part from the scene-setting part, since the one depends anaphorically on the other. Without some special contextual background, of the kind supplied by the scene-setting, I cannot make myself a samesayer with the leader by uttering 'That day marked a new dawn'. Indeed, treated as self-standing, that is, as not governed, implicitly or explicitly, by the kind of contextual material found in the scene-setting, I cannot say anything by an utterance of that sentence. Nor will it do to switch either to a context-independent expression, or to one dependent upon my actual context. If I utter '12 May 1968 marked a new dawn', or 'The day 8030 days

before today marked a new dawn' I do not say what the leader said, if he used a word like 'aujourd'hui'. Understanding my words requires knowing what the date was on the day of the reported utterance, or knowing how many days before my report it occurred, whereas understanding the revolutionary leader required no such thing. Hence these proposed words do not mean what the leader's words meant, and they could not be used by me to samesay with him.

Frau Lauben told Dr Lauben to his face that he was wounded. 'To his face' ensures that she treated him as addressee, using a word like 'Du'. But I, in telling you this, cannot address Dr Lauben. If I utter 'Dr Lauben was wounded' I do not make myself a samesayer with Frau Lauben, because I do not capture the feature of her content that corresponds to her use of the second person. Likewise, to report her as having said that Dr Lauben was wounded is not entirely accurate. We must stick to a two-part form, involving scene-setting and anaphorically dependent content ascription, undetached and undetachable; for example: Frau Lauben told Dr Lauben to his face that he was wounded.

We are walking in the woods and you fleetingly glimpse what in fact is a rabbit. I see it too, and know that it is the object to which you refer in uttering 'That was a bear'. I can report the incident later as follows: 'Seeing a rabbit, he said that it was a bear'. But on that later occasion, I cannot detach, in such a way as to utter something which would make us samesayers. I cannot utter 'It was a bear' or 'That was a bear', as my current context would supply either no reference or the wrong one. And attempts like 'The rabbit he saw was a bear' distort your thought. Either way, no detached yet adequate and accurate report seems to be possible.

In many cases, original utterance and report are linked in the following way: a demonstrative pronoun in the original becomes a suitably transformed anaphoric pronoun in the report. (This suggests that there should be both demonstrative and anaphoric uses of 'I', just as there are such pairs of uses of the other personal pronouns. The basis for this view would be that anaphora is at the level of logical form, for then one token of 'I' could be antecedent in such a form and another an anaphoric dependent.) Where the anaphora is essential, the reporter cannot detach the content-ascribing part of the report from the scene-setting part, since this deprives the anaphoric pronoun of its antecedent. But the attempt to use any other kind of referring device in its stead may distort the content of the original utterance.

The guiding hypothesis—that we can use correctness of reported speech as a guide to meaning—raises many issues, some of which will

be taken up later (especially in §3). The matter I wish to discuss now can bracket many of these, for all I ask is that it be granted that content-ascription cannot always be detached from scene-setting; in other words, that the reality of non-detachability be granted. The guiding hypothesis has it that in an adequate report of speech, a reporter specifies the content of the utterance. I shall assume that a theory of meaning for a language should do the same: given a suitable description of an utterance as input, it should deliver a specification of the utterance's content. We can infer that a correct theory of meaning has the analogue of non-detachability. Without prejudice to the correct approach to theories of meaning, let us use truth theories as an example. Non-detachability entails that we cannot derive an interpretative T-sentence for every utterance. Consider, for example, the revolutionary leader's utterance on 12 May 1968, call it u, whatever words he produced thanks to which we can properly report him as having said that that day marked a new dawn. A T-sentence for u has the form

u is true iff p

where p is, by the requirements of the biconditional, a self-standing sentence, one with a truth value in its own right. The previous considerations show that no such sentence is usable in an adequate report of what was said by u; hence, by the proposed methodology of being guided to meaning by how speech is reported, there is no correct T-sentence for u.

This has been widely recognised, though perhaps not for quite these reasons. In response, several authors have proposed that a truth theory should use clauses which are conditional in form: the antecedent specifies an utterance along with features of its context, and the consequent is a biconditional resembling a T-sentence save that its components may contain variables bound by material in the antecedent. I want to show that this approach faces a dilemma: either it delivers results inconsistent with non-detachability, or it makes it impossible for us to bring to bear the specific information we have about an utterance in such a way as to have a chance of extracting an interpretation. Towards the end of the section, I offer a way out of the dilemma.

It will be useful to have a specific conditional truth-theoretic clause for discussion:

If u is an utterance of 'today is July 4' by s, and s refers with the utterance of 'today' therein to δ, then

u is true $\leftrightarrow$ δ is July 4. (Higginbotham 1994, p. 94)

This clause is still too general to supply an interpretation, without feeding it supplementary information. If we know that, for example, Gareth Evans uttered 'today is July 4' on 4 July 1968, we would hope to be able to feed the generalization this specific knowledge in order to derive an interpretation of the specific remark. Using u_1 to refer to Evans's utterance, we may instantiate with respect to the variables u and δ, which are implicitly universally quantified, deriving

> If u_1 is an utterance of 'today is July 4' by Gareth Evans, and Gareth Evans refers with the utterance of 'today' therein to July 4, then
> u_1 is true $\leftrightarrow$ July 4 is July 4.

The antecedent is true; so, whether we want it or not, the theory, together with an appropriate specification of the utterance, entails the consequent (u_1 is true $\leftrightarrow$ July 4 is July 4). So the utterance is being interpreted by the self-standing sentence 'July 4 is July 4'. According to the thesis of non-detachability, interpretations of this kind cannot in general be correct.

The dilemma we face is not special to Higginbotham's theory or to truth theories. It constrains any systematic attempt to provide in a compact (and thus theoretical) form, information sufficient for interpretation (given an appropriate specification of the utterance).

The difficulty I am raising must be distinguished from the complaint that anything which enables us to derive 'u_1 is true $\leftrightarrow$ July 4 is July 4' must be incorrect, since this biconditional associates with u_1 an uninterpretative truth condition. I want no truck with this complaint for two reasons: first, it is local to truth theories, whereas the point about non-detachability extends to any form of semantic theory. Secondly, it is not decisive even against truth theories. It is no better than the objection that from standard truth-theoretic clauses, together with the assumption 'Hesperus is Phosphorus', one can derive not only the interpretative T-sentence

'Hesperus is Phosphorus' is true iff Hesperus is Phosphorus

but also the uninterpretative

'Hesperus is Phosphorus' is true iff Hesperus is Hesperus.

The standard response, whose adequacy I shall not challenge, is that it

should not be surprising that supplementing semantic information with non-semantic information should yield something which cannot itself be classified as semantic information (an 'uninterpretative' T-sentence). Applied specifically to the case of indexicals, it is consistent to claim both that Higginbotham's conditional T-sentence correctly specifies the meaning of utterances, and that consequences of this conditional, derived by applying non-semantic information to effect detachment, do not.

The complaint thus requires as a supplementary premise that the information about specific utterances of the kind we bring to bear in interpretation (e.g. the day on which the utterance was made) is specifically *semantic* information. The dominant tradition has it that it is not semantic information, for semantic information is conceived as the minimum a semantic theory should state. According to this tradition, semantic theory achieves generality by finding semantic types ('expression types') whereby it can speak of all tokens of the type; and these generalizations will not involve any information as specific as that required to derive the contested T-sentence. So the envisaged complaint will, I believe, bog down in a messy and probably inconclusive discussion about what is to count as semantic information.

If I am right, non-detachability poses a problem for any semantic theory. Either the theory does not have a way in which our specific information about utterances, information required for interpretation, can be brought to bear, in which case it fails in its overall aim; or else, bringing the information to bear immediately yields something inconsistent with non-detachability. A possible way through the dilemma is to recognize a special kind of instantiation, which I will call 'anaphora-preserving instantiation'. An example of its form could be written:

From 'All Fs are G' infer 'If a is an F then (that F)$_a$ is G'.

Here the subscript a indicates the anaphoric dependence of the associated occurrence of 'that F' on a previous occurrence of a. Subscript a is not a referring expression. The predicate F, presumed to be sortal, has been carried forward to form part of the anaphorically dependent expression (that F)$_a$. This is not an essential feature of the proposal, and I offer no argument for it. Applying the idea to our particular case yields:

If u_1 is an utterance of 'today is July 4' by Gareth Evans, and Gareth Evans refers with the utterance of 'today' therein to July 4, then
u_1 is true $\leftrightarrow$ (that day)$_{\text{July 4}}$ is July 4.

This is not very idiomatic, but it seems to me to contain essentially the right idea. It approximates the natural report: On 4 July 1968, Gareth Evans said that it was July 4. It faithfully follows the contours of the account of meaning that would result were one to suppose that meaning can be properly identified in terms of the correctness of reported speech. In particular, we have brought our specific knowledge to bear, while not detaching.

I turn in a moment to the question whether any independent motivation could be discovered for recognizing such a species of instantiation. A more immediate worry is whether the proposal, however motivated, is of any help. With certain qualifications, a sentence containing a pronoun in an extensional position whose antecedent is a singular term entails a corresponding sentence in which the pronoun is replaced by its antecedent. (Qualifications are needed so as not to validate, for example, the inference from 'Only Satan loves himself' to 'Only Satan loves Satan'.) The rule invites us to derive, from the clause just displayed,

> If u_1 is an utterance of 'today is July 4' by Gareth Evans, and Gareth Evans refers with the utterance of 'today' therein to July 4, then
> u_1 is true $\leftrightarrow$ July 4 is July 4.

Given our specific information abut u_1, this entails the biconditional with the detachable right hand side, and we seem to be back where we started.

We need to distinguish features local to truth theories from more general considerations. The canvassed rule for pronoun replacement does not apply to a semantic theory whose syntax is non-extensional at the point of delivery of interpretations, that is, at the point corresponding to 'is true iff'. The rule's restriction to extensional positions cannot be simply deleted, if its correctness is to be preserved. For example, there is no sound inference from 'On 12 May 1968, the revolutionary leader said that that day marked a new dawn' to 'On 12 May 1968, the revolutionary leader said that 12 May 1968 marked a new dawn'. So we have not yet been given a reason to fear the unwanted inference in semantic theories in general.

In the setting of truth-theory, the unwanted inference is a manifestation of a familiar phenomenon which the notion of 'canonical proof' is supposed to address. The problem we are confronting is no graver than the fact that a classical truth theory containing the interpretative theorem

'Snow is white' is true iff snow is white

cannot avoid also containing the non-interpretative theorem

'Snow is white' is true iff snow is white and either there are dragons or there are not.

A truth theorist will say that while the first theorem is susceptible of canonical proof, the second is not. If this reply is adequate to the case of the unwanted conjunct, it is adequate to the case of the unwanted detachable theorem; if it is inadequate in the former case, then truth theories are, independently of the concerns of this paper, inadequate as semantic theories.

The question whether there is any independent justification for recognizing anaphora-preserving instantiation is more complicated. In classical formal languages, sameness of reference of tokens is guaranteed by sameness of singular term tokened, where equiform tokens count as tokens of the same term. This simple picture does not apply to natural languages: 'Schnabel is a pianist' and 'Schnabel is not a pianist' may both be true; hence equiform tokens of 'Schnabel' are not guaranteed to have the same reference; hence either equiformity is not enough for being tokens of the same singular term, or being tokens of the same singular term is not enough for co-reference. Anaphora provides a guarantee of co-reference which is immune to this feature of natural language. We would wish every instance of 'All pianists are pianists' to be a truth; yet 'If Schnabel is a pianist then Schnabel is a pianist' is not a truth, if the first occurrence of the name refers to the famous pianist, the second to the famous artist (who is not also a pianist). By contrast, 'If Schnabel is a pianist then he is a pianist' is not subject to these vagaries.

Recognizing anaphora-preservation in logical form thus has a point, even when the anaphoric dependence is upon a singular term, specifically, a proper name. The point may easily disperse, however, when further inferential needs are recognized. If we start with 'All pianists are musical' we want to be able to derive that Schnabel is musical given that Schnabel is a pianist, and this appears to allow room for the vagaries which anaphora prevents. The problem could be put as a dilemma: either we have, for anaphors whose antecedents are singular terms, the pronoun replacement rule canvassed above, in which case, since the anaphoric occurrence entails a non-anaphoric one, the former is inessential and needs no special recognition; or else we do not have

the pronoun replacement rule, in which case recognition of anaphora blocks intuitively correct reasoning.

Neither horn is decisive. Arguably, later occurrences of names may count in appropriate contexts as anaphoric upon earlier ones, so that one would still need to recognize anaphoric dependence at the level of logical form. Moreover, the needed restrictions on the pronoun replacement rule even in some extensional cases suggest that anaphora-preservation is not always otiose. As Geach has stressed (1962, p. 132, 138), if 'himself' is anaphorically dependent upon 'Satan' in 'Only Satan loves himself', it is an example of indispensable anaphora, dependent upon a singular term.

It is often said that bound variables are like anaphoric pronouns. We have in effect uncovered a limitation to this analogy in the classical conception of instantiation, and proposed a way of restoring it to full strength.

3. Indexicality, anaphora and reducibility

We have, I believe, been able to derive some value from our guiding hypothesis, even though it has not been described in much detail. This section aims to describe it more fully.

In using an indexical, one exploits a perspective on the world. One locates an object by reference, ultimately, to one's own position in space or time. In interpreting a use of an indexical, one needs to locate its user's perspective within one's own. Because he was speaking on 12 May 1968, that is the day that would count as 'today' for him; because she was addressing Dr Lauben, that is who would count as 'you' for her; because it was a rabbit he saw and which prompted his remark, that was what counted as 'that' for him. One needs to identify the perspective, not suppress it.

There are systematic transformations: you report a use of 'you' as 'I' if you are the addressee, as 'he' or 'she' otherwise; you report a use of 'I' by using 'he' or 'she' (with optional 'himself' or 'herself'[1]); you report a use of 'today' on the following day by using 'yesterday'. The

[1] Castañeda (1966 and subsequent papers) has argued that some reports require the anaphoric use of 'he himself' and the like in order to do justice to tokens of 'I'. This may well be so, though whether the phenomenon should be classified as semantic or pragmatic is harder to decide. The present paper proceeds on the assumption that it is pragmatic; but adding it as a semantic feature would not affect any of the claims for which I argue.

last example is a case in which detachment is possible. 'Yesterday' has the special role of being substitutable for an expression of the form '(that day)$_x$' where the anaphoric dependence marked by x is on an expression which the reporter of the speech could use to refer to a day which, from his perspective, is yesterday; which in turn requires the presence of at least implicit reference to a day which the reporter could refer to as 'today'. Yesterday is yesterday only from the standpoint of today. This seems like an ad hoc convention, which does not run deep. (A more detailed account of 'yesterday' might well treat the logical form of 'John said that it was fine yesterday' as 'Yesterday, John said that it was fine then'. This would bring the report into line with ones using dates. The ad hoc convention allows replacement of the anaphoric 'then' by self-standing 'yesterday'.) There is nothing odd about not using 'The day before the day before yesterday' to report a 'today' utterance made the day before the day before yesterday. Sometimes the expressions standardly used to report indexicals function genuinely as indexicals (e.g. 'yesterday'); but more often, as in many uses of 'he' and 'it' ('Seeing a rabbit, he said that it was a bear'), they function as anaphoric pronouns. The reference of an indexical is governed by extra-linguistic material, of an anaphor by linguistic material. In reporting utterances of indexicals, indexicality often transmutes to anaphora. Non-detachability reflects the fact that we sometimes have to use linguistic contexts to do for our report what the original utterer could rely upon non-linguistic material to do. If one regards anaphora as other than a species of indexicality, one will think that an indexical token can be properly reported by a non-indexical one. At least some indexicals would, on this view, be in a sense 'reducible'. Indeed, in the next section (§4) I will go further, and claim that all indexicals are in this sense reducible.

This claim presupposes that one can properly distinguish between indexicality and anaphora, a presupposition to be examined later in this section. Before doing this, some further clarification of the guiding hypothesis (the hypothesis that we can use fully explicit reports of speech as guides to meaning) is called for.

The hypothesis falls between two extreme treatments of the meanings of indexicals. At one extreme, the meaning of an indexical token is identified with a complex description; at another, with the object of reference. The present proposal is obviously distinct from the first extreme, since it would be wrong to identify the meaning (as opposed to the reference) of an anaphoric pronoun with that of its antecedent.

We have already seen that to replace the pronoun in the 'said that' context with its antecedent would sometimes turn a truth into a falsehood. It is also distinct from the second, for there are constraints on the form that a maximally explicit report can take: it is not enough merely to refer to the object the original speaker referred to. If you say truly 'That is Hesperus' it is not right to report you as having said that Hesperus is Hesperus.

Another version of the second extreme sees indexical uses of pronouns as requiring de re forms of report. In the example just given, it may be suggested that a proper report is: 'Of Hesperus, he said that it is Hesperus'. Concerning the three examples of non-detachability, it would be claimed that the question whether they are correct is equivalent to the question whether or not their de re counterparts are correct: 'Speaking of 12 May 1968, he said that it marked a new dawn', etc. This does not do justice to the fact that whereas the de dicto report counts as fully explicit, arguably no de re report can be this, since such a report deliberately distances itself from any information about how the speaker referred to the object. Another way to put the contrast is like this: from the supposition that the de dicto report is fully explicit one can infer that the original speaker used a context-dependent indexical mode of referring. No such conclusion is warranted by a corresponding assumption about a de re report.

That one can use anaphoric tokens to report indexical ones does not imply the converse. That is good, since the converse appears to be false. Consider the exchange:

A: I spent two hours talking to Max today.
B: I imagine he talked about Frege.

Suppose that B has no idea who Max is, so that we do best to regard his use of 'he' as anaphoric on A's use of 'Max'. If Max is present on some later occasion, and I demonstrate him, it would be incorrect to report B as having said that he imagined that *that student* had talked about Frege.

In the first two examples in §2, the scene-setting includes reference to a day and to a person, whereas in the third example—'Seeing a rabbit, he said that it was a bear'—there is just an existential quantification. This might prompt the following objection: 'Existential quantification is not reference, so a pronoun anaphoric on an existential quantification cannot be regarded as a genuine referring expression. The utterance reported in the rabbit example involved a demonstrative pronoun: a genuine referring expression. But it is absurd to suppose that

a referring expression could have the same meaning as an expression which is not a referring expression, the "it" in the report.'

One line of reply would be to accept the argument as sound, and say that the report in the rabbit example is not fully explicit, since it has not pinned down what the original speaker referred to. I prefer an alternative approach. Philosophers have been brought up to be highly sensitive to the contrast between quantification and reference; otherwise, for example, they cannot engage in discussions of Russell's theory of descriptions. I do not wish to dispute that a distinction can be drawn which is crucial for some purposes. But it is not obvious that it produces the kind of distinction which can properly be used in the envisaged objection. Many entities are introduced into discourse under existential quantification, and we speak of 'reference' without imputing to interpreters any capacity for unique identification. A historian who begins 'The King had a sister who was a great comfort to him. When times were hard, she . . .' engages in an entirely banal form of speech, yet arguably, regardless of how many sisters the King had, can go on properly to use referring expressions for just one sister, which the novice audience can understand. It would be arbitrary to count the later indisputable referring expressions as such, yet refuse this reading of the first 'she'. Similarly, 'The King had a sister called "Matilda" . . .' arguably puts a novice audience in a position to use 'Matilda'; and this would normally count as a referring expression, even though it is patently introduced on the back of mere existential quantification. By these possibly lax standards, the anaphoric 'it' in the rabbit example counts as a referring expression. The objection of the previous paragraph would need to establish that this token's synonymy with a demonstrative requires it to be a referring expression according to some more demanding standard.

The discussion so far has taken for granted that there is a clear and firm distinction between indexical uses of pronouns, e.g. the use of demonstratives, and anaphoric ones. The standard claim is that indexicality draws on features of the token's non-linguistic context, whereas anaphora draws on features of the token's linguistic context. A further generally recognised distinction is that anaphoric dependence can guarantee co-reference, in a way in which recurrent demonstratives cannot, even if they in fact co-refer. However, from some points of view, perhaps that of the psychological skills needed to engage in linguistic activity, there may seem to be something more like a spectrum. Cases of deferred demonstration are in some respects intermediate. Suppose that

a silent movie camera was running in the Lauben residence just when Frau Lauben was telling Dr Lauben to his face that he was wounded. If, many years later, I arrange for us to watch the movie together, I can say: 'Now she's saying that he's wounded'. Intuitively, my token of 'he' is demonstrative: it refers to Dr Lauben via referring to his image on the screen. It also counts as demonstrative rather than anaphoric by the standard test, since there is no relevant linguistic context. Yet it also seems hard to deny that in some respects it resembles the anaphoric case: the role of the movie is analogous to the role of scene-setting remarks.

From some points of view, an important distinction would be between naturally occurring and deliberately contrived contextual features. The paradigm of the deliberately contrived is language, as in the verbal scene-settings considered in the previous sections; less common cases would be use of images and other traces or icons. What is interesting about the contrived cases is that we take control: we transform the situation in which we find ourselves into one related in a special way to the original speaker's situation, a way which enables us adequately to report what he said.

The non-detachability thesis could be seen as expressing merely the thought that there are cases in which I cannot accurately report without contriving contextual features for the special purpose of giving my words the right reference. This weaker thesis would be strong enough for the purposes of the previous section (§2). But a feature of language is that, if we know what was said, there are words which will effect the appropriate scene-setting, and there are cases in which (in the absence of appropriate images or whatever) only words can do this. With this in mind, a stronger thesis of non-detachability is available: there are situations in which reporters have to engage in verbal scene-setting if they are to report an utterance correctly. In these cases, anaphora is indispensable.

4. Reducibility: action, science, time and God

Reducibility.   In some cases, anaphora is indispensable; but in all cases, it is available as a resource in facilitating reports. This last claim is another way of expressing the thesis that all indexical tokens are reducible: indexical speech can always be reported by words which, in

their content-ascribing role, are not indexical (though they may be anaphoric).

The thesis does not extend to the scene-setting component of a report of speech. For all I know, in order to set scenes we may, sometimes or always, need indexicals either explicitly or implicitly. For example, our dating system is arguably implicitly indexical: it explicitly depends upon the identification of the birth of Christ, and our identification of that event perhaps depends in turn on features of our own position in time which, arguably, we can express only indexically (see Strawson 1959, Ch. 1, §2 and esp. p. 30).

I have no systematic argument for this claim of reducibility. It's just that, considering indexicals case by case ('today', 'you', 'that' are among those mentioned) one can see in each how to transform indexicality into anaphora in reporting speech. The thesis acquires a partial defence by showing that apparently unwanted consequences are either merely apparent or else not unwanted.

Action. The canvassed reducibility is that anything that can be expressed by use of an indexical can also be reported, and so expressed, without using an indexical in the content-ascribing part of the report. This means that no thought essentially requires expression by means of an indexical; which in turn, by some standards, means that there are no indexical thoughts. Is this consistent with the special role of 'indexical thought' in action?

It is unclear that the phenomena which are supposed to motivate the essential involvement of indexicality in action, or explanations thereof, really require that there are indexical thoughts in the envisaged sense. If I know that MS must make a call I may remain inactive if I don't realize that I am MS; whereas one can explain my making the call by attributing to me the thought that I must make a call. One might be tempted to infer that the thought that MS must make a call differs from the thought that I must make a call. Even if this inference is sound (which, in fact, I doubt), it does not connect with the reducibility thesis. That thesis requires, not that my knowledge be detachably expressible, but only that it be somehow non-indexically expressible. It is: MS's action is well explained by the hypothesis that he knows that he must make a call. A detailed example will bring out the point.

> . . . suppose the commander says, 'A hand grenade is thrown (tenseless) into this room on 1 December 1978.' The soldiers will need to be able to judge

whether 1 December 1978 is *today*, or years into the *past* or *future*. For without this information they will not know whether to take any action or to feel any urgency. (Sorabji 1983, p. 134)

The point is relevant to the claim that an indexical utterance has a self-standing non-indexical equivalent. But the present reducibility claim is weaker, and is not touched by Sorabji's point. If the soldiers rush out, we can explain their action by their realization that a grenade was to be thrown into the room *then*, where the 'then' is not indexical, but anaphoric, dependent upon a specification (implicit in the actual sentence I am using here) of the time of the reported realization. A test: were this token of 'then' functioning as a genuine indexical (as other tokens of 'then' may do), it could function without the time-fixing linguistic context; but evidently it could not. The implicit or explicit specification of the time of the soldiers' realization is the token's anaphoric antecedent.

If the kinds of thoughts which can properly be cited in explaining actions are non-indexically expressible, then indexicality cannot be essential to these explanations. The consequent appears correct: MS made the call because he knew he had to. Any plausible thesis of essential indexicality must be consistent with this fact. A weaker, and thus more plausible, thesis is this: a thought fit to explain an action is one which, were it to be expressed by the agent, would be expressed by means of at least one indexical. This is consistent with the thesis of reducibility. Indexicality is seen as a relation between a thinker and a thought, rather than a feature of the thought itself.

I read Perry as affirming only this weaker thesis (Perry 1979, p. 49). However, at earlier stages in his discussion one can discern some overstatements, e.g.

Imagine two lost campers who trust the same guidebook but disagree about where they are. If we were to try to characterize the beliefs of these campers without the use of indexicals, it would seem impossible to bring out the disagreement. (Perry, 1979, p. 35)

Perhaps each camper needs an indexical, or at least would most appropriately use one, to express his belief in a way which makes the dispute clear to his fellow. But *we* do not need to use one. We can say: They stood beside Gilmore Lake. John believed it was Eagle Lake but Bill believed it was Clyde Lake.

For Perry's more finished formulation of the thesis, a distinction is required between a belief state and a belief (or belief content). People

willing to sincerely assert the same sentence, e.g. 'I am making a mess', are thereby in the same belief state, but they may not share a belief. Sam believes that he is making a mess and Sally has the quite different belief that she is making a mess. But only Sam can believe what he believes by being in the state he shares with Sally, and it is this relation between belief state and belief that is essential to action (Perry 1979, p. 48–9). Perry thus concurs with the conclusion which seems forced upon us by reducibility: what matters is a relation between a thinker and a thought, rather than an intrinsic feature of the thought itself. On this approach, a proper recognition of the need for indexicality should have no tendency to promote any doctrines of limited or partial accessibility to thoughts.

When Perry comes to put the matter in a more theoretical perspective, he says that the phenomena he discusses make trouble for the 'doctrine of propositions'. This doctrine sees propositions as objects of belief with fine-grained content and permanent truth value. They cannot be identified through sentence-types containing indexicals, since these have different truth conditions on different occasions of utterance. So 'there is a *missing conceptual ingredient*: a sense for which I am the reference' (Perry 1979, p. 37). Perry supposes that there should be a notion ('conceptual ingredient') capable of explaining how content is related to utterances. For this purpose, a conceptual ingredient would have to be independently identifiable: it could not be merely whatever registers the relation between content and utterance. An alternative approach is to abandon explanatory pretensions at this point, and use a notion, say 'concept' or 'sense', which serves merely to register the phenomena. In these terms, one would conclude from Perry's discussion that an indexical token can express the same concept or sense as an anaphoric one but not as a proper name or a definite description. It is not that sense or concept would explain the phenomena; these notions would get their use from reporting it. Such an approach is discussed in more detail in §5 below.

Science.   Why has it seemed to some that indexicals should be banned from science? Supposedly, the answer is that indexicals introduce a perspective, whereas science is meant to be perspective-free. But if indexicals are reducible, i.e. can properly be reported without indexicality, we have to see the indexicality not as part of the content but as belonging only to how the content is presented. The claim that science must avoid indexicality would be an essentially stylistic recommendation, not touching the content of scientific theories. If a scientist were to

present a theory using an indexical, we could report what he said, and thus the theory, without making use of an indexical. Whether or not to use indexicals would be a trivial dispute, of no philosophical interest.

An utterance of a scientific theory should be perspective-independent, in that the same theory should be available from arbitrary perspectives; but this does not entail that the utterance be perspective-free, made in a way that does not exploit any perspectival features.[2] Freedom from perspective is unmotivated, and probably impossible.

Time.   Without pretending to give anything like a serious exegesis of the complex dialectic involved in McTaggart's argument for the unreality of time (1927), I would like to mention one strand which relates closely to the present discussion.

Let us say that an A-series is a temporal series of events whose temporal features can be fully described in terms of the primitive vocabulary 'past', 'present' and 'future', or expressions explicable in terms of these. We are to think of events as unextended in time. We have to do justice to two features, the unique location of every event and the passage of time. Allowing ourselves provisionally a mixture of the primitive and non-primitive vocabulary (i.e. quantification over moments) we might express these as follows:

(1.0)   *Unique location*: at any one moment, every event is just one of future, present and past.

(2.0)   *Passage*: every event is both at some moment future, at some moment present, and at some moment past.

Striking out the non-primitive vocabulary yields a contradiction:

(1.1)   Every event is just one of future, present and past.

(2.1)   Every event is both future and present and past.

We may try to remove the contradiction by replacing the quantification over moments in (1.0) and (2.0) in terms of the primitive vocabulary. Unique location is not too hard to express (at least in part) as follows: In the present, every event is just one of future, present and past. But with an eye to deriving a contradiction, we could regard the following as an

---

[2] Martin Davies suggested the terminological contrast 'perspective-independent', 'perspective-free', though I cannot vouch that he would accept the point I am here making by means of it. Further development of this line of thought might bear on various other matters, for example Jackson's claim about what Mary knew.

equally good way of expressing uniqueness (perhaps entailed by the first way):

> (1.2)   Every event is just one of: in the present, future, or in the present, present, or in the present, past.

Passage is more tricky. As an intermediate stage, still with some non-primitive vocabulary needing elimination, we might propose

> For every event there is some moment, taken as present, for which the event is future, and some moment, taken as present, for which the event is present, and some moment, taken as present, for which the event is past.

A further round of replacing quantification over moments by the primitive vocabulary might produce

> (2.2)   Every event is, in the present, future, and is, in the present, present, and is, in the present, past.

(1.2) and (2.2) contradict. Within any A-series, the demand of unique location contradicts that of passage. Hence there is no A-series.

I think the proposals under consideration here can make a small contribution to understanding. 'Present' and the rest have, like the personal pronouns, both an indexical and an anaphoric role and the indexical role is reducible. Your utterance of 'Our finest hour lies in the future' exploits what can properly be regarded as indexicality: a non-linguistic feature, the time of your utterance, is required as an index to determine the contribution which 'in the future' makes to its truth conditions. However, if I report this as your having said that our finest hour lies in the future, the same phrase is anaphoric, not indexical: its contribution to truth conditions is not a function of the time of my report, which might occur later than our finest hour, but is determined by the implicit specification of the time of your utterance, effected by my use of the past tense of 'said'. (I gloss over the complications involved in 'sequence of tenses'. For example, if my report occurs after the time of the event you predict, I should use the past tense in the content-specifying part of my report: You said that our finest hour *lay* in the future.) These uses are closely related and complementary, and, I propose, one could not coherently require that these expressions be taken as primitive vocabulary without allowing both their uses. (An argument for the general claim, not applied explicitly to 'future' etc, that demonstrative uses presuppose anaphoric ones is given by

Brandom 1994, e.g. p. 464–5.) But once the inseparability of the uses is acknowledged, one has to acknowledge that some expressions fit to be antecedents to the anaphoric uses must be included within the primitive vocabulary. If one takes tenses, as the most common, then we can state the thesis of passage in such as way that it does not conflict with the thesis of unique location:

> (2.3) Every event is, was or will be future, and is, was or will be present, and is, was or will be past.

The thesis of unique location ensures that each event which satisfies a conjunct will do so in virtue of satisfying just one of the disjunction of tenses. The theses are complementary rather than conflicting.

God. If there are no indexical thoughts (as discussed under the headings 'Reducibility' and 'Action' above), there is no indexical knowledge: no knowledge expressible only by means of an indexical. This gives a quick answer to an ancient argument, which could be phrased as follows: The use of a temporal indexical requires that one be in time. Hence a timeless God cannot have temporally indexical knowledge. Hence there is something a timeless God could not know. If the reducibility thesis is accepted, however, 'indexical knowledge' can be non-indexically expressed, so the argument gives no good reason for supposing it to be unavailable to a timeless God. Following our guide, we will individuate things known by the test of speech reports: if I report you as having said something, and I know the something, then I know what you know ('the same *thing* as you'). If Paul utters 'Now I see the light', a timeless God can report him as having seen the light then, and so can know that he saw the light then, and so, without using an indexical, can know the thing which Paul knew.

This is not the end of the story, for a related argument remains to be addressed. Can an eternal God refer to moments of time, or specific events in time? If he cannot, then he cannot know what his creatures know, for he cannot so much as report what they say when they express their knowledge, since he cannot identify the events of utterance and so cannot produce the scene-setting part of the report. This argument, whatever its merit, goes well beyond anything specially related to indexicality, for it casts doubt quite generally on an eternal being's capacity to identify things in time; so it lies beyond my present purview.

5. The Fregean connection

Although Frege has so far hardly been mentioned, my approach (and examples) are based on some aspects of his approach. But instead of trying to make anything of 'modes of presentation' as a basis for sense, I have tried to make something of the accuracy of reported speech. The justification, in Fregean terms, is that the content-ascribing words in a report of speech ought to match the originals in sense. (Strictly, we should be able to infer only that the customary sense of the content-ascribing words matches the customary sense of the originals, and we cannot go on to infer that the sense they actually have in their indirect context matches that of the originals. But I take for granted Dummett's modification, according to which the sense/reference distinction evaporates in indirect contexts: indirect reference = indirect sense = customary sense.) Let us use 'sense' for Fregean senses as individuated by modes of presentation, in turn regarded as capable of being individuated independently of the needs of semantics; and 'meaning' for something similar to Fregean senses but individuated by a combination of the demands of reported speech and a Fregean test in terms of rational cotenability. The question for this section is how senses and meanings compare for grain; the conclusion is that senses are in some respects finer-grained and in some respects coarser-grained than meanings. In each case, I think meanings have the grain more appropriate to semantic taxonomy, though I do not argue for this.

The project as stated cannot be undertaken with full seriousness, for Frege never tells us how to individuate modes of presentation. I will assume in this part of the discussion that modes of presentation are, at least paradigmatically, perceptual. This assumption is not really justified by Frege's text, though many readers of Frege appear to take the text this way. My discussion will suggest that there is no independent account of modes which provides the right taxonomy for semantics. Fregeans do not have to see this as essentially anti-Fregean (indeed, I do not intend it that way); rather, they might see the claim as a point in favour of allowing modes of presentation either a merely heuristic role, or a dependent one: either functioning as a striking example (in the triangle case, for instance), not to be generalized, or as having a nature which is to be fixed by the demands of semantic theory, rather than being an independent input to such theory.

Just as any two things are similar in some respects and dissimilar in

others, just about any two perceptions of an object can be counted as cases in which the object is presented under a common mode (e.g. the perceptual), and as cases in which it is presented under distinct modes. This means that there would be a glaring gap in Frege's account of sense, if mode of presentation is supposed to play an independent role. The gap would also make it difficult to undertake the task of this section. I circumvent the difficulty as follows: in the first kind of examples to be discussed, which relate to the first person, we have a specific Fregean pronouncement on the individuation of modes of presentation and hence, on the present assumption, of senses. In the second case, in which our considerations require acknowledgement of different meanings, it would be very hard to discern any basis for distinctness of mode of presentation, and hence of sense.

Frege claimed that 'Everyone is presented to himself in a special and primitive way, in which he is presented to no-one else' (1918, p. 359). If an expression's sense is fixed by such a mode of presentation of a person, then it can be grasped only by that person. Readers of Frege often take it that he is claiming that the first person pronoun is such an expression. Although I do not share this reading,[3] it would have the consequence that we have difference of sense yet sameness of meaning. Since, as the example at the start of the paper suggested, I can say by uttering 'I am a fool' what you say when you utter the words 'You are a fool', the present methodology dictates that a token of 'I' can have the same meaning as a token of 'you'. So, granted all the assumptions, senses are finer-grained than meanings, though in a way that is far from counting in their favour.

I stipulate that the meaning of a complete sentence is the thought it expresses, and that a sufficient condition for distinctness of thoughts can be expressed in the Fregean terms of rational cotenability. One version of the criterion is this: thoughts differ if either is rationally cotenable with the negation of the other. The criterion delivers, I

---

[3] It is not clear that Frege himself thought that the sense of any expression is so fixed. Frege's commitment to communicable 'I' thoughts appears not only in explicit form, when he offers the rather hasty suggestion about the sense which can be grasped by others ('he who is speaking to you at this moment', p. 360), but also, more interestingly, in an implicit way, when, having earlier reported Dr Lauben as having uttered the words 'I was wounded', he slips with silken ease into reporting Dr Lauben as having the thought that *he* was wounded (p. 359). If the report is accurate, as indeed it seems, then Frege is committed to there also being a mode of presentation of a subject which others can have, where this mode constitutes the sense of that subject's tokens of the first person pronoun, and is shared by appropriate tokens of the second and third person pronouns in the mouth of others.

believe, that there are cases of indexical tokens *a* and *b*, of the same type and uttered in what by many reasonable standards counts as the same context, for which the thoughts expressed by *Fa* and *Fb* differ, so that the tokens themselves differ in meaning; by our guiding hypothesis, the same will go for their corresponding anaphors in reports. In Perry's famous example (1977), slightly modified, a person seeing a ship out of a window utters the words 'That was built in Japan' and a moment later utters the words 'That was not built in Japan'. As interpreters, the example continues, we must treat the reference of 'that' as the same on each occasion. Yet various things might conspire to make the speaker believe without irrationality that he had referred to different ships, and had expressed two truths. Applying Frege's criterion of difference, we conclude that the thought expressed by the second utterance is not the negation of that expressed by the first, and, given the compositionality of meaning, the only available explanation would appear to lie in different meanings of 'that'. Yet there seems no prospect of identifying a difference of mode of presentation on any independent basis. It is not plausible to say in general that the passage of time, or an influx of information concerning a presented scene, changes its mode of presentation: that would make it impossible to sustain a thought over time and over informational enrichment. One might make a special case for the susceptibility of 'that' to shifting modes of presentation. If so, my general point is best made by considering how, according to the methodology of the paper, a report of the envisaged speaker should be understood.

The report could go: Seeing a ship through a window, he said that it was built in Japan, and seeing the same ship through the same window a moment later, he said that it was not built in Japan. This attribution does not imply irrationality in the sincere speaker whose words are thus reported. (This is consistent with it being more often than not the case that such a speaker is, in fact, irrational.) This means that the occurrences of the anaphoric 'it' must differ in meaning, even if they anaphorically depend upon the same words and the same context. It would be hopeless to try to associate, on independent grounds, distinct modes of presentation with the distinct occurrences of 'it': the reporter may not have perceived the ship, and need not know how it looked to the person whose speech he correctly reports. (This kind of example can be developed as an objection to thinking of demonstrative pronouns as free variables.) In these examples, meanings are finer-grained than senses.

My position is supposed to be Fregean, except for three points: I put tokens at the centre of the subject matter; I remove mode of presentation from a central role in the explication of sense, allowing some of the work it was fashioned for to be performed by constraints on reporting speech; and although these constraints help found an equivalence relation, I find no need to think of senses as entities.[4]

REFERENCES

Brandom, Robert 1994: *Making It Explicit*. Cambridge, Mass: Harvard University Press.

Casteñeda, Hector-Neri 1966: '"He": A study in the logic of self-consciousness.' *Ratio* 8, pp. 130–157.

Ezcurdia, M. 1996: 'Dynamic and Coherent Thoughts'. *European Review of Philosophy* 2.

Frege, Gottlob 1918: 'Der Gedanke. Eine logische Untersuchung.' Translated as 'Thoughts' in Geach, P. T. (ed.), *Logical Investigations, Gottlob Frege*, Oxford: Basil Blackwell, 1977. (Page numbers refer to this version.)

Geach, P. T. 1962: *Reference and Generality*. Ithaca, New York: Cornell University Press.

Higginbotham, James 1994: 'Priorities in the philosophy of thought.' *Supplementary Proceedings of the Aristotelian Society* 68, pp. 85–106.

McTaggart, J. M. E. 1927: *The Nature of Existence*. Vol. 2. Cambridge: Cambridge University Press.

Perry, John 1977: 'Frege on demonstratives'. *Philosophical Review* 86, pp. 474–497; reprinted in Perry 1993, pp. 3–25 (page numbers refer to this printing).

Perry, John 1983: 'Castañeda on *He* and *I*', in Tomberlin, James E. (ed.) *Agent, Language and the Structure of the World*, Indianapolis: Hackett Publishing Company. Reprinted in Perry 1993, pp. 91–119 (page numbers refer to this printing).

Perry, John 1993: *The Problem of the Essential Indexical*. Oxford: Oxford University Press.

Sorabji, Richard 1983: *Time, Creation and the Continuum*. London: Duckworth.

Strawson, P. F. 1959: *Individuals*. London: Methuen.