

THE INDEXICAL CHARACTER OF NAMES*

ABSTRACT. Indexicals are unique among expressions in that they depend for their literal content upon extra-semantic features of the contexts in which they are uttered. Taking this peculiarity of indexicals into account yields solutions to variants of Frege's Puzzle involving objects of attitude-bearing of an indexical nature. If *names* are indexicals, then the classical versions of Frege's Puzzle can be solved in the same way. Taking names to be indexicals also yields solutions to tougher, more recently-discovered puzzles such as Kripke's well-known case involving Paderewski. We argue that names are in fact rigidly designating indexicals. We also argue that fully developed, the direct reference theory's best strategy for solving the puzzles amounts to the adoption of the indexical theory of names – a move that we argue should be thought of as a natural development of the direct reference theory, and not as antagonistic to it.

1. INTRODUCTION

Descriptivism (in its classical forms associated with Frege and Russell) provided the resources to solve a wide range of now familiar semantic puzzles, by taking names to be expressions the meanings of which one could know without knowing their referents. Descriptivism has been widely discredited, though, and research of the past several decades strongly suggests that names are “directly referring” expressions or “rigid designators”. However, it has been a main difficulty with the theory of direct reference that it seems to preclude a solution to the puzzles that descriptivism handled so well. The theory offered here follows descriptivism in taking names to be expressions the meanings of which one can know in ignorance of their referents, but follows direct reference theory by taking names to be rigid designators. Specifically, we accomplish this by taking names to be indexicals.

Our discussion presupposes a familiarity with the notions of extension, content, and character, as well as the distinction between a context of evaluation and a context of utterance. Very briefly, a *character* is a function from contexts of utterance to contents: the character of an expression, e , is a function that assigns to each context of utterance, c , of an expression, e' , of e 's type, the content of e' at c . A *content* is a function from contexts of *evaluation* to extensions: the content of an expression, e , is a function that



assigns to each context of evaluation, v , the extension of e with respect to v . Contexts of evaluation are typically taken to be possible worlds, although it is possible to take them to be “sub-world” entities, such as world-time, or even more fine-grained “situations”. For convenience’s sake, we shall take contexts of evaluation to be possible worlds. Finally, anything can be an extension: the *extension* of a referring expression, e , is the referent of e .

We define the semantic notions of *rigidity* and *indexicality* as follows: a *rigid designator* is an expression with a constant content; i.e., an expression the content of which assigns the same extension to each context of evaluation. An *indexical* is an expression with a *non-constant character*; i.e., an expression the character of which does *not* assign the same content to each context of utterance.¹ In the next section, we defend the view that names are rigidly designating indexicals.²

2. NAMES AS RIGID INDEXICALS: THE THEORY

The general nature of characters depends upon the nature of contexts of utterance, and in particular upon what features of a context of utterance an expression’s content might be sensitive to. In (Kaplan, 1988), the contexts of utterance of an expression are individuated on the basis of four features: utterer, time, spatial position, and possible world. These are the features of a context of utterance of an expression to which its content might be sensitive. ‘I’ is sensitive to the first feature, ‘now’ and ‘yesterday’ to the second, ‘here’ to the third, and ‘actually’ to the last. In order to deal with demonstratives such as ‘he’, ‘you’, and ‘that’, contexts of utterance would have to be fine-grained further, to include such features or “coordinates” as conversationally salient male of the context, salient interlocutor(s) of the context, and ostended object of the context.

However, our interest lies with a different elaboration of Kaplan’s account. This elaboration is motivated by the consideration that the significance of an utterance sometimes depends on contextual factors determined by antecedently-performed speech acts. For example, the introduction of a supposition by a speaker has a bearing on how we should understand certain statements that he (or his interlocutors) subsequently make. Such cases suggest a fifth way (in addition to the four identified by Kaplan) in which one context of utterance may differ from another; this is on the basis of what “dubbings” are “in force” with respect to a context.³ A *dubbing* is a speech-act whereby a name acquires a referent, and a dubbing is *in force* in a given context if in that context the item that was dubbed in that dubbing bears the name it received in that dubbing.

Taking dubbings-in-force as a feature of contexts of utterance results in the assimilation of all expressions that are introduced in dubbings – including all (typical) proper names⁴ – to the class of indexicals. Traditionally, a name like ‘George Bush’ has been taken not to be an indexical. That is, it has been taken to have the same content in every context of utterance – its character has been thought to assign to each context of its utterance the function from possible worlds to George Bush. The fact that there are various people named ‘George Bush’ would typically be dealt with by construing ‘George Bush’ as lexically ambiguous. On this view, the proper way to handle ‘George Bush’ in a formal semantics would be by subscripting the President’s name with one number, his son’s name with another, and so forth (the ambiguity of ‘bank’ is handled in the same way).

But taking dubbings-in-force to be a determinant of context of utterance suggests an alternative approach to the semantics of names. The dynamics of dubbings-in-force can be complex, and we shall not attempt to provide a systematic way to decide which dubbings are in force in a given context. It may be worth noting that what dubbings are in force with respect to a given utterance of ‘George Bush’ will not depend only on who has been dubbed ‘George Bush’ at the time of the utterance, since various people will have been so dubbed, including, no doubt, some whose names will have been long forgotten. Indeed, in a single context of utterance there may be more than one dubbing in force with respect to a single name.⁵ This is what makes it possible for there to be confusion as to what the referent of a given use of a name is, and to ask, e.g., ‘Which George Bush are you talking about?’⁶ When this happens, one of the competing dubbings must be brought to prominence in order to determine a unique referent for the name (in that use). This might be achieved by a variety of mechanisms. One important factor in this raising to prominence might be relevant features of the conversation (if any) of the context of utterance of the name. For example, if in the course of a conversation dealing both with President Bush and his son someone says, ‘George Bush occupied the Oval Office for only one term’, Gricean conversational maxims (and in particular, the maxim of Quality) might contribute to raising the dubbing of the President with ‘George Bush’ to prominence, over that of his son.

The dubbings-situation with a name like ‘Madagascar’ is more straightforward.⁷ ‘Madagascar’ was used initially to refer to the eastern portion of Africa. Later, the dubbing of the eastern portion of Africa with ‘Madagascar’ went out of force, and the currently reigning dubbing of the fourth largest terrestrial island with ‘Madagascar’ came into force. This case is simpler than that of ‘George Bush’, since what dubbing is in force with regard to ‘Madagascar’ varies linearly over time.

Consideration of how the referents of names respond to dubbings-in-force yields a picture of names as occupying one band of the spectrum of indexical expressions. Intuitively, near the beginning of the spectrum lie the ‘high frequency’ indexicals, the contents of which are in continual flux, whereas near the end of the spectrum lie the “low frequency” indexicals, the contents of which vary on a more geologic time scale. Where on this spectrum one locates a given indexical depends on a number of factors. These include (but may not be exhausted by) the feature of contexts of utterance to which the given indexical is sensitive, the “synchronic variability” of that feature across contexts of utterance, and the “diachronic variability” of that feature (over time).

The indexicals ‘I’, ‘here’, ‘now’ and ‘Madagascar’ can be distinguished from one another by the contextual factors to which they are sensitive. ‘I’ is sensitive to the “utterer”-feature of a context of utterance, ‘here’ and ‘now’ to a context’s place and time, and ‘Madagascar’ to the dubbings-in-force of a context. What makes the latter three seem like fruit flies by comparison with the Galapagos Turtle-like ‘Madagascar’ are certain differences between the properties had by the contextual features to which they are sensitive. For example, the feature to which ‘I’ is sensitive – utterer of context – enjoys great *synchronic variability*. At any given time, there are (as a matter of fact) a large number of contexts of utterance that differ with respect to their utterer or “agent” coordinates. Something similar holds for ‘here’, ‘now’, ‘he’, ‘it’, and ‘that’. On the other hand, the contextual feature to which ‘Madagascar’ is sensitive – viz., dubbing(s) in force with respect to ‘Madagascar’ – is at present synchronically invariable. There was a time, however, when it did enjoy some measure of synchronic variability; viz., when ‘Madagascar’ was being used by some speakers to refer to the eastern portion of Africa, and by others to refer to the world’s fourth largest island. There is a whole range of cases intermediate between ‘I’ and ‘Madagascar’, with respect to synchronic variability. ‘That’ and ‘he’ are of somewhat lesser synchronic variability than ‘I’ – at any given time, the number of contexts that differ with respect to utterer-feature is greater than the number of contexts differing with respect to salient male- or ostended object-feature (this practically follows from the fact that every context contains an utterer, but not every context contains a salient male or ostended object). The name ‘George’ is of lesser synchronic variability than ‘that’ and ‘he’; fewer contexts differ from one another on the basis of what dubbings are in force with respect to ‘George’ in them than differ on the basis of, e.g., what salient males they contain (if any). The ballfield honorific ‘Slugger’ presently exhibits even less synchronic variability than

‘George’, and the name ‘George Herman Ruth’ less than ‘Slugger’ – but still no doubt more than ‘Madagascar’.

If we consider the array of contexts that differ with respect to a certain feature at a given time, we can go on to consider how this array varies over time. This yields the notion of *diachronic* variability. The contextual features to which ‘I’, ‘here’, ‘now’, ‘he’, ‘that’ and ‘it’ are sensitive all exhibit a high level of diachronic variability. The feature to which ‘Madagascar’ is sensitive exhibits a very low level of diachronic variability. And here, too, we find intermediate cases with personal names – the kaleidoscope of contents had by ‘John Smith’ does not fluctuate with the rapidity of that had by ‘he’, nor yet at the glacial pace of the content of ‘Madagascar’.

Echoing Kaplan’s insight with respect to the indexical, ‘I’, we say that what a competent English speaker knows, as such, about the word ‘John’ is not its content with regard to some particular occasion of its use. Rather, a competent English speaker with the word ‘John’ in his vocabulary knows the rule which assigns to each context of utterance of ‘John’ a function which assigns to each possible world whatever was dubbed ‘John’ in the dubbing in force governing ‘John’ in that context of utterance. Competent speakers know that the proper use of ‘John’ is – loosely speaking – to refer to something called ‘John’. What someone knows by virtue of knowing this rule is the character of ‘John’, not its content (or, extension) with respect to a given utterance of it. The meaning of a proper name, then, is to be identified with its character.^{8,9}

Before turning to the linguistic evidence in support of taking names to be indexicals, it will be useful to consider one way in which names differ from ‘standard’ indexical expressions, such as ‘I’, ‘here’ and ‘he’. This difference comes out if we compare the rule which gives the meaning (specifies the character) of ‘I’ with that which gives the meaning of, e.g., ‘John’. In the case of ‘I’ the rule is that an utterance of ‘I’ refers to whoever is doing the uttering in the context of that utterance. In the case of ‘John’, the rule is that an utterance of ‘John’ refers to whoever was dubbed ‘John’ in the dubbing-in-force governing ‘John’ in the context of that utterance. Observe that, unlike the rule for ‘I’, the rule for ‘John’ appeals to a speech act (a dubbing) which is itself a conventional entity. The rule for ‘I’, on the other hand, appeals to no such convention, but instead to what might be called a “natural” feature – “utterer” or “agent” – which is exhibited by all contexts of utterance. Although ‘he’ is responsive to a contextual feature that is not had by *all* contexts of utterance, the rule governing ‘he’ (like that governing ‘I’) makes no appeal to any convention, but to another “natural” feature – “salient male” – which a context could have independently of the existence of any special convention. Of course, it is a matter of convention

that ‘I’ is governed by the rule by which it is, in fact, governed. But a name like ‘John’ is conventional in a second way, inasmuch as the rule which, as a matter of convention, governs it *itself* appeals to a convention (in this case, a dubbing). If we wish to register this difference between names and standard indexicals, we may do so by calling names “doubly conventional”, in contrast to “singly conventional” indexicals such as ‘I’, ‘here’, and ‘he’.¹⁰

3. NAMES AS RIGID INDEXICALS: THE EVIDENCE

In this section, we shall argue that there is independent linguistic evidence supporting our contention that names fruitfully can be thought of as a species of indexical expressions. First, we shall draw the reader’s attention to a class of terms which one might call “quasi-names”. We shall then show that these “quasi-names” behave similarly to canonical indexical expressions when placed in multiply embedded intensional contexts. Thus anchored in actual linguistic intuition, our argument will then cantilever out to the position that names proper – and not just “quasi-names” – possess the signature properties of indexicals. The aim of this section is not to elaborate further our indexical theory of names; rather, it is to argue for its truth.

A central tenet of our indexical theory of names is that names and indexicals exist on a continuum of variability – ranging from such ephemeral designators as ‘that’, to such relatively stable proper names as ‘Thomas Jefferson’. A corollary of this thesis is that there are places on this spectrum intermediate between proper names and canonical indexical expressions. One expects to find “missing links” which bear interesting attributes of both proper names and indexical expressions. The value of these terms in an investigation of the indexical qualities of names should be manifest.

Unlike their archeological counterparts, such linguistic entities are not difficult to unearth. In fact, the reader probably uses several such terms daily in casual conversation. Take, for instance, the term ‘Mom’. ‘Mom’ possesses attributes which show affinities both to indexicals like ‘you’, and to proper names like ‘Thomas Jefferson’. Like ‘you’, ‘Mom’ possesses a great deal of variability. There are countless “Moms”. Moreover, the rules determining who is properly called ‘Mom’ by whom depend importantly on such contextual factors as the identity of the utterer and his relationship to the person so-called and to his interlocutors. Like ‘you’, terms like ‘Mom’ cannot be interpreted without knowing key features of the circumstances in which they are uttered. In this way ‘Mom’ behaves very much like a canonical indexical.

However, expressions like ‘Mom’ also have interesting proper name-like properties. To make a superficial but telling observation, the rules of style indicate that one is to capitalize ‘Mom’ when it is used as in a sentence like:

I spoke with Mom on Monday.

(In contrast, ‘mom’ is not capitalized in the sentence, ‘I spoke with my mom on Monday’, since here it is used as a common noun.) To take another whimsical example, many women have items of clothing printed ‘Mom’. In contrast, few (non-philosophers) would think of having a shirt monogrammed ‘I’. Indeed, in the context of a household, ‘Mom’ is used in much the same way as given names are used in small groups where there is no possibility of duplication which otherwise might engender confusion.

It is a distinctive feature of an indexical expression that within the scope of an attitude verb, its content is determined not with respect to the circumstances of evaluation (i.e., the context in which the ascribed attitude was reportedly borne), but with respect to the context of its utterance.¹¹ Consider the following sentence, as uttered on Wednesday, April 23, 1997:

- (1) On Monday, Mary said that tomorrow is her birthday.

What day is Mary’s birthday – Tuesday, April 22, or Thursday, April 24? The answer depends on whether one fixes the content of ‘tomorrow’ with respect to the time of the *utterance* of (1) (Wednesday, April 23; in which case her birthday – if Mary speaks the truth – is April 24) or whether one fixes it with respect to the time of the *circumstances of evaluation* (Monday, April 21; in which case Mary’s birthday – if she speaks the truth – is April 22). In this example, it is clear that Mary’s birthday is on Thursday, April 24. ‘Tomorrow’, as an indexical, is evaluated with respect to the context of utterance of (1), not with respect to the circumstances of evaluation.¹²

These remarks hold true not only for temporal indexicals, but for such indexicals as ‘I’, ‘here’, and ‘actually’ which require one to look to non-temporal aspects of the context of utterance to determine their content. Consider the following sentence, as uttered by John:

- (2) Mary said that I am tall.

Here, ‘I’ denotes John, notwithstanding the fact that in the circumstances of evaluation, Mary is the speaker. The content of indexicals is determined

with respect to the context of the utterance. This feature of indexical expressions persists no matter how deeply one embeds the expression in attitude contexts. Thus in John's utterance:

- (3) Jack said that Mary thought that Frank said that Suzy thought that I was a liar.

one determines the content of 'I' with respect to the context of John's utterance. 'I' here refers to John.

Do "quasi-names" like 'Mom' behave like canonical indexicals in this respect? We think that they do. Imagine the following discussion between Bill and Frank – who are brothers – concerning Mary and John, who are not related to the brothers. Bill says to Frank:

- (4) Mary claimed that John said that Mom was angry with him.

In this case, it appears that one determines the content of 'Mom' with respect to the context of the utterance, not the circumstances of the evaluation of John's statement. The person whose anger is at issue in this sentence is the mother of Bill and Frank, not the mother either of Mary or John.

Let us now consider the proper name 'Madagascar' once again. The content of 'Madagascar' has varied over the course of time. In Marco Polo's day, the content of 'Madagascar' assigned to each possible world the eastern portion of the African mainland. At present, 'Madagascar' picks out the large island off of the eastern coast of Africa. What, then, is the referent of 'Madagascar' in the following sentence (again uttered by Bill, one of our contemporaries)?

- (5) Marco Polo said that Madagascar was once inhabited by elephants.

It is our intuition that one determines the intension of 'Madagascar' in such a case with reference to the context of Bill's utterance, and not with reference to the context of Marco Polo's utterance.¹³ That is to say, it is our belief that this sentence concerns Marco Polo's (putative) statement about the island off the eastern coast of Africa, and not a statement about the eastern portion of the African mainland. If one wanted to indicate that it is with respect to Marco Polo's context of utterance that one needs to evaluate 'Madagascar', one would put 'Madagascar' in scare quotes as follows:

- (6) Marco Polo said that "Madagascar" was once inhabited by elephants.

Here, the scare quotes indicate that 'Madagascar' is to be interpreted in a non-standard way.

Admittedly, intuitions in the Marco Polo case are tentative and can be pulled either way. However, we think that consideration of “quasi-names” like ‘Mom’ provides evidence, albeit indirect, that names exhibit this signature property of indexicals: no matter how deeply a name is embedded in intensional contexts, one determines the content of a name with respect to the context of the utterance and not the circumstance of evaluation.

We now move on from elaboration and defence of our theory to some applications of it in the field of propositional attitudes semantics.

4. NAMES AND PROPOSITIONAL ATTITUDES

At first blush, the view that names are indexicals appears to clear the way for a compositional semantics for attitude ascriptions containing names. A naive approach would yield identical truth-conditions for the following sentences:

- (7) Thales believes that Hesperus is shining.
- (8) Thales believes that Phosphorus is shining.

However, by acknowledging that ‘Hesperus’ and ‘Phosphorus’ – though here identical in content – have different characters, we seem able to differentiate the truth conditions of these two sentences, by requiring equivalent belief reports to contain embedded clauses with identical characters.¹⁴

This approach, however, is subject to serious difficulties. These difficulties can be cast in the form of a dilemma which calls into question the possibility of solving attitudinal puzzles (such as Frege’s Puzzle) by means of a compositional semantics for attitude reports. We begin this section by developing this dilemma, and then go on to offer a solution of the puzzles which does not involve the deployment of a compositional semantics.

The dilemma is as follows: either the character under which an ascriber bears his attitudes to contents matters to the truth of ascriptions to the effect that he bears those attitudes to those contents, or it doesn’t. More precisely: either (i) the character under which an ascriber bears an attitude towards a certain content must be the same as that of the embedded clause of any ascription to the effect that he bears that attitude towards that content, or (ii) the character under which an ascriber bears an attitude towards a certain content need not be the same as that of the embedded clause of any ascription to the effect that he bears that attitude towards that content.¹⁵

Taking the first horn of the dilemma: incorporating the character under which the ascriber bears the relevant attitude to the relevant content will

enable one to distinguish the truth conditions of (7) and (8). However, it will not help to explain the different truth conditions of attitude ascriptions containing embedded clauses which do not contain referring expressions with distinct characters, such as those involved in Kripke's case involving Peter and 'Paderewski'.¹⁶ Moreover, such a move would have the absurd result that many typical attitude ascriptions are necessarily false. Take the following sentence, as uttered by Sally:

- (9) Mary believes that I am tall.

The content of that towards which Mary bears the attitude of belief is that of 'Sally is tall'. However, according to the first horn of our dilemma, the character under which Mary believes that content must somehow incorporate the character of 'I'. But Mary, who is short, would never herself assert 'I am tall', though she might indeed affirm that Sally is tall. So the character under which she bears an attitude towards the proposition with the content of 'Sally is tall' must perforce be something with a character *other* than that had by 'I am tall'. Clearly (9) can be true. Thus, it appears that the character under which an ascriber bears an attitude towards a certain content need not be the same as that of the embedded clause of any ascription to the effect that he bears that attitude towards that content. Otherwise, a sentence like (9) could never be true.

Taking the other horn of the dilemma: if the character under which an ascriber bears an attitude towards a certain content is *not* reflected in a report to the effect that he bears that attitude to that content, then this licenses certain questionable inferences. For example, the sentences 'Clark Kent can fly' and 'Superman can fly' have the same content, albeit (on our theory) different characters. If one denies that differences in character can alter the truth conditions of attitude ascriptions and argues that it is only content which is important, then one would hold that the following two sentences:

- (10) Lois believes that Superman can fly.
 (11) The sentences 'Clark Kent can fly' and 'Superman can fly' have the same content.

entail the following sentence:

- (12) Lois believes that Clark Kent can fly.

Some direct-reference theorists have taken this hard line. Nathan Salmon, for example, believes that such inferences are legitimate, although the wording of (10) might be pragmatically misleading.¹⁷

Apart from its *prima facie* implausibility, this approach towards developing a compositional semantics for attitude ascriptions has the following problems.¹⁸ First, it trivializes all ascriptions of attitudes towards statements of identities. Any two names of the same object, as rigid designators, perforce have the same content. Thus, if the following almost trivial-looking ascription is true:

- (13) Lois believes that Clark Kent = Clark Kent.

then its informative-looking counterpart:

- (14) Lois believes that Clark Kent = Superman.

is also true. To have knowledge of all true identities, one need only consistently apply the rule that all things are self-identical. This would appear to make short work of sleuthing.

This applies not only to ascriptions of attitudes towards sentences containing names, but towards ones which contain other indexical expressions. Consider the following sentence, which attributes an attitude borne under the character of a sentence using the temporal indexical 'now':

- (15) Lois believes that the current time is now.

Under Salmon's proposal, we may infer from (15) that Lois believes that the current time is 6:57 p.m. Again, to have knowledge of the current time, one would simply have to bear in mind that the current time is always "now". This would appear to deprive watch-makers of a livelihood.

Finally, Salmon's approach affixes determinate truth conditions on sentences which don't appear to have such fixed conditions. Consider the following sentence as uttered by Superman:

- (16) Lois believes that I can fly.

According to Salmon this sentence is, strictly speaking, true if and only if there is a sentence which has the same content as 'I can fly' (as uttered by Superman) towards which Lois stands in the belief relation. Lois believes that Superman can fly, the sentences 'Superman can fly' and 'I can fly' (as uttered by Superman) have the same content, therefore 'Lois believes that I can fly' is true. But (16) seems to depend for its truth on the particular character under which Lois holds the belief that Clark Kent/Superman can fly. By using the indexical 'I', Clark Kent/Superman completely obscures this, thus leaving one unsure as to whether or not (16) is true. The fact that Salmon's theory yields sharp truth conditions in this case in which

intuitions are tentative appears to count against its value as a descriptive (as opposed to prescriptive) account of language.

It is obvious that one can be mistaken as to a matter of *fact*; that is, one can falsely believe a certain state of affairs to obtain when, in fact, an alternate state of affairs actually obtains. It is less self-evident that one can also be confused as to *which* facts are determined by the characters of the sentences one uses, given the circumstances of the utterance. Yet this is equally a source of error. This kind of context-error is to be distinguished both from “factual error” and “linguistic error”. Consider the following sentence, as uttered truthfully by John about Paul:

He is hirsute.

One might deny this true sentence due to one of three kinds of error. First, one may simply not have a sufficient knowledge of English, and think that ‘hirsute’ means something like ‘tired’. This is what one might call a “linguistic error”. Second, one might be under the mistaken impression that Paul is bald. A denial based on this kind of mistake is what we have referred to as a “factual error”. Finally, one might be confused about the referent of ‘he’ in John’s utterance of ‘He is hirsute’, mistakenly believing it to refer to Steve, who is bald, instead of Paul, whom the listener knows to be hirsute. This last kind of error is what we have in mind when we speak of a “contextual error”. A contextual error is a mistake as to *which* facts are determined by the characters of the sentences one uses (or, would use), given the circumstances of the utterance.

We believe that when seen in the right light, most of the well-known puzzles of attitudes semantics can be explained as cases involving some contextual error on the part of an attitude ascriber. Some preliminary illumination may be afforded by the observation that a main goal of attitudes semantics is to explain the possibility of *coherent inconsistency*. This is the possibility for a rational individual with complete linguistic competence to bear incompatible attitudes towards the same object of attitude-bearing.¹⁹ Classically, the problem is how to explain the consistency of a statement like this:

- (17) Thales believes that Hesperus is shining and disbelieves that Phosphorus is shining.

with a statement like this:

- (18) Thales is coherent (i.e., is neither irrational nor in any relevant respect linguistically incompetent).

In what remains of this section, we shall first offer an explanation of the possibility of coherent inconsistency for cases involving conjunctions of attitude reports in which one or both of the conjunct's embedded clauses makes use of a (standardly recognized) indexical. Then we shall explain how taking names to be indexicals explains the possibility of coherent inconsistency for an expanded class of cases, including the consistency of (17) and (18), which is a variant of Frege's Puzzle.

It is a peculiar feature of an indexical that its literal content is partly determined by an extra-semantic feature of its context of utterance. We call a feature *extra-semantic* with respect to an expression just in case it need not be mentioned in a satisfactory specification of the literal meaning or character of that expression. For example, the literal content of the present utterance of 'I' depends partly on the fact that Joe Rainsbury uttered it. But this fact need not figure at all in a satisfactory explanation of the meaning of 'I'. Therefore the fact is an extra-semantic feature of the present context of utterance, with respect to 'I'.

In contrast to indexicals, a non-indexical expression like 'excellent' does not depend in any way for its literal content upon extra-semantic features of its context of utterance. Rather, its literal content depends only on *semantic* features, features of the language of which it is a part. In particular, the literal content of 'excellent' depends upon the fact that in English, 'excellent' has been assigned the character that correlates with each context of utterance the function that assigns to each possible world the set of things in that world that are excellent. Unlike an indexical, 'excellent' is such that the literal content of any utterance of it must be mentioned in an accurate specification of its character (meaning).

Some uttered expressions depend for their *non-literal* contents upon extra-semantic features of their contexts, as for example might 'The door is open' if uttered by someone upon my entering his office without shutting the door behind me. But such features need not be mentioned in a satisfactory explanation of the *literal* meaning of 'The door is open'.

A declarative sentence in which an indexical is used is itself an indexical; thus the literal content of such a sentence is partly beholden to extra-semantic features of the context in which it is uttered – features which would not have to be mentioned in an adequate explanation of the literal meaning (character) of that sentence. For example, the character of 'I am elusive' can be specified without mentioning that it assigns to the present context of utterance the function that assigns to each world Truth or Falsity, depending on whether Michael Pelczar is elusive in that world. In fact, the character of 'I am elusive' can be accurately specified without even mentioning that to a context of utterance in which Michael Pelczar

is the utterer, it assigns the aforementioned function: if the specification is accurate it must *imply* this, but it can imply it without mentioning it.

The fact that the literal content of an indexical sentence is partly determined by extra-semantic features of its context of utterance explains a large class of cases of coherent inconsistency. Let us take as our paradigm the following sentences:

- (19) Mary believes that Michael Pelczar is elusive and Mary disbelieves that I am elusive.
 (20) Mary is coherent.

The problem is how to explain the mutual consistency of (19) and (20). The solution, we claim, lies in the fact that Mary can know the meaning of 'I am elusive' without knowing its literal content. Mary can know the meaning of the sentence which she would use to express what she disbelieves without knowing its literal content, since the sentence in question is an indexical. That is, she can disbelieve that whatever the content of 'I am elusive' is, is true,²⁰ without disbelieving that Michael Pelczar is elusive, *having a full command of English*; for having a full command of English does not entail knowing what the content of 'I am elusive' is with respect to a given context of utterance. On the other hand Mary could not, having a full command of English, disbelieve that whatever the content of 'Excellence is elusive' is, is true, without disbelieving that excellence is elusive. For, having a full command of English *does* entail knowing what content 'excellence' has with respect to any context of utterance (since this is entailed by knowing what the character of 'excellence' is).²¹ Thus the indexical character of Mary's disbelief allows (19) to be consistent with the hypothesis of Mary's linguistic competence. Since there seems to be no reason to hold that Mary is irrational, we may conclude that (19) is consistent with (20).

Every case of coherent inconsistency involving a conjunction which like (19) has at least one conjunct with an indexical embedded clause can be explained on the preceding model. But what about the classic cases of coherent inconsistency involving names? Let us revert to (17) and (18) as our paradigm:

- (21) Thales believes that Hesperus is shining and disbelieves that Phosphorus is shining.
 (22) Thales is coherent.

If 'Hesperus' or 'Phosphorus' or both are indexicals, then the mutual consistency of (17) and (18) can be explained in exactly the same way as

that of (19) and (20): a rational Thales can know the meanings of both ‘Hesperus’ and ‘Phosphorus’ – i.e., he can know that ‘Hesperus’ refers to whatever was dubbed in the dubbing-in-force governing ‘Hesperus’ in his context of utterance, and *mutatis mutandis* for ‘Phosphorus’ – without knowing that both names happen (in his context) to refer to the same entity.

Another notoriously stubborn puzzle connected with the possibility of coherent inconsistency is Kripke’s case of Peter and ‘Paderewski’.²² The case is as follows: Peter, like all politically informed Poles, believes that Paderewski is an important statesman. He also believes (on grounds into which we needn’t inquire) that important statesmen are one and all lacking in musical talent. From these considerations, Peter infers and believes that Paderewski lacks musical talent. Now, as it happens, Peter lives right above Paderewski, without, however, believing that the man above whom he lives is the Polish president. Since on numerous occasions Peter has heard his downstairs neighbor deftly coaxing the strains of Chopin or Shostakovich from his piano, he believes that Paderewski has musical talent (we may assume that Peter knows his downstairs neighbor’s name from seeing it on his mailbox in the lobby). So, Peter believes that Paderewski has musical talent, and that Paderewski lacks musical talent.

Clearly, Peter is inconsistent. Moreover, it seems as if the indexical theory of names has little to offer here by way of explanation as to how Peter is, though inconsistent, coherent. For in this case the words by which Peter would express his inconsistent beliefs do not differ in character in the way in which Thales’s did.

However, we believe that the indexical theory can, in fact, handle this case. To see how, first let us consider a parallel case involving the “standard” indexical, ‘him’. Suppose I am shown two photographs. One of them is a photograph of a young man with long hair wearing rainbow-colored sunglasses and a tie-dyed tee-shirt. The other shows a rather bald man wearing a suit and tie, and no glasses. In fact, I readily recognize the man in the second photo as a familiar and respected colleague. The person producing these pictures asks me whether I know the individuals depicted therein, in response to which I say that although I know him (pointing to the photo of the bald man), I do not know him (indicating the picture of the hippie). Since unbeknownst to me, both photos are of the same man, I have involved myself in an inconsistency. Nonetheless, I have not fallen into incoherence. The indexicality of ‘him’ provides for an explanation of this. The rule determining the character of ‘him’ is something like this: an utterance of ‘him’ refers to the salient male of the context of that utterance. But we can assume that I know this rule without committing ourselves to the claim that I know that the salient male of the context of my utterance of

'I know him' is the same as the salient male of the context of my utterance of 'I do not know him'.²³ Hence my assertions in the described scenario, though inconsistent, do not entail any linguistic incompetence on my part. Supposing (as we may) that I am rational in that scenario, we may draw the sought-after conclusion that, though inconsistent, I am coherent in this case.

Now, if, like 'excellence', 'Paderewski' were not an indexical (but still rigid), Peter's inconsistency would, we claim, be impossible to square with his coherence. For in that case, Peter would have to fail to know that when he utters 'Paderewski' in his assertion that Paderewski lacks musical talent, he refers to the same individual that he refers to when using that name in his assertion that Paderewski has musical talent, while knowing who is referred to in each of those utterances. While this is not a contradictory implication, it is one concerning which we should entertain serious doubts; we shall go into this further in the next section. For now, we simply wish to observe that if 'Paderewski' is an indexical, then Kripke's puzzle can be treated in just the way that we treated the case of the two photographs. Peter knows the meaning of 'Paderewski'; that is, he knows that an utterance of 'Paderewski' refers to whoever it is that was dubbed in the dubbing-in-force governing 'Paderewski' in the context of that utterance. He can know this without knowing that the individual dubbed in the dubbing-in-force governing 'Paderewski' in the context of his utterance of 'Paderewski lacks musical talent' is the same as the individual dubbed in the dubbing-in-force governing 'Paderewski' in the context of his utterance of 'Paderewski has musical talent'. Granted that Peter is rational, we arrive at the desired conclusion that notwithstanding his inconsistency, Peter is coherent.

The explanations of coherent inconsistency in the cases of Thales and Peter made possible by the indexical theory of names suggest similar explanations for other cases, such as John Perry's, involving a shopper who both believes that he is making a mess, and believes that he is not making a mess.²⁴ Instead of running through these cases, however, we would like now to consider the relation of the indexical theory of names to the popular direct reference theory, and finally to conclude with some remarks of a general methodological nature.

5. NAMES AS INDEXICALS, AND DIRECT REFERENCE

Perhaps it would be putting the cart before the horse to adduce in support of the theory that names are indexicals the potential it offers for a solution of puzzles such as Frege's and Kripke's. Nevertheless, it does the theory no harm to observe that the currently reigning direct reference theory

of names seems, at least in its present form, incapable of explaining the mutual consistency of, e.g., (17) and (18). In fact, the direct reference theorists' best attempt to solve the problem seems to presuppose the indexical theory of names. This is their argument that (17) is consistent with (18) because someone (like Thales) can know what each of two coreferential terms refers to, without knowing that the terms are coreferential.²⁵ But it is not clear how a coherent Thales could know what 'Hesperus' referred to as well as what 'Phosphorus' referred to without knowing that they coreferred, if the meanings of the names are exhausted by their referents. What must Thales's knowledge of what these names refer to consist in, for it to be compossible with his ignorance of their coreference? It is not available to a direct reference theorist to explain this possibility by construing 'Hesperus' and 'Phosphorus' as disguised descriptions, for a direct reference theorist maintains that they are rigid. In fact, when forced to elaborate on the nature of Thales's knowledge of what 'Hesperus' refers to, a direct reference theorist (especially one with a taste for conceptual economy) will tend to fall back on indexicality. For example, he will say that a coherent Thales can know that *that* object (pointing skyward) is the referent of 'Hesperus', and that *that* one (indicating a point in a photograph of another clear night sky) is the referent of 'Phosphorus', without knowing that the referent of 'Hesperus' is the referent of 'Phosphorus'.²⁶ And this is true. But the reason why it is true is that 'that' is an indexical, owing to which Thales can know the literal meaning of 'That object is the referent of "Hesperus"' without knowing its literal content. But on the standard direct reference theory of names, 'Hesperus' is not an indexical. Therefore, on the direct reference theory it must be in principle possible for Thales to know the literal meaning – and therefore (since 'Hesperus' *is* rigid, on the theory) the referent – of 'Hesperus' without having to employ indexical terms or concepts (just as it is possible to know or specify the literal meaning – and thereby the reference – of 'excellence' without recourse to indexicality). But in the face of such a case a direct reference theorist is left without any conceptually parsimonious characterization of what Thales's knowledge of what 'Hesperus' refers to consists in, such that it is possible for Thales coherently to know also what 'Phosphorus' refers to while remaining ignorant of the coreference of the two names. The only sure way to guard against such a case would be by claiming that 'Hesperus' *is* an indexical. For only granted that claim would it not be in principle possible for Thales to know the literal meaning of 'Hesperus' without having to employ indexical terms or concepts.²⁷ Thus, fully developed, the best strategy a direct reference theorist has to explain the mutual consistency of (17) and (18) is to adopt the indexical theory of names.

The tenor of the preceding paragraph was unavoidably polemical. But this belies the congeniality of the indexical theory of names to the direct reference theory. This is not only because the indexical theory preserves the central insight of the direct reference theory, by treating names as rigid designators. In addition, the concept of dubbings-in-force seems required by the direct reference theory in order to account for shifts of name-reference. In fact, the notion of dubbings-in-force was initially designed to provide a theoretical basis for Gareth Evan's forceful suggestions as to the need for direct reference as expounded by Kripke to be supplemented so as to account for the possibility for a name like 'Madagascar' to undergo the changes in reference that it has, in fact, undergone.²⁸ More is at stake here than the need to account for one (perhaps not very widespread) semantic dynamic: without a richer account than Kripke's of how name-reference can be responsive at any given time to the actual ways in which names are used, it remains a live possibility under the direct reference theory that we could be mistaken as to the referents of almost all of the names we use (saving only, perhaps, those which we ourselves introduce). For example, on the unadorned direct reference theory offered by Kripke, for all we know we could be referring by 'Shakespeare' to some sixteenth century indigent, or even to some non-human entity. All that would be required for this to be the case would be for someone in the causal chain by which that name has been handed down to us to have intended to refer to, say, a certain dog by his use of 'Shakespeare'. Dubbings-in-force give us a plausible way of denying this (ostensible) possibility. The idea, roughly, is that just as a *supposition* can lose its force, and perhaps be replaced by a different supposition which comes into force subsequently, so, too, can a dubbing lose force, perhaps in favor of an alternative dubbing. And, just as my supposition that (say) I win the lottery tomorrow can lose force without my explicitly saying something like, 'Now cease to suppose that I win the lottery tomorrow', so too can a dubbing, either through disuse or by some other means, lose its force without having to be as it were explicitly deactivated.

If the notion of a dubbing-in-force is needed by the direct reference theory in order to block the unwanted implications discussed above, then it would seem strange for us not to avail ourselves of that notion to solve the problem of coherent inconsistency in the way we have suggested. The argument that our solution is conceptually promiscuous simply cannot be cogently levelled by the direct reference theorist if, as we have argued, he must factor dubbings-in-force into his conceptual economy anyway.²⁹

6. CONCLUSION

Sometimes it happens that a problem remains intractable partly as a result of failing to be clearly formulated. We believe that this has been the case with many of the well-known puzzles in the field of propositional attitudes semantics. We therefore consider it to be not the least virtue of our approach to these puzzles that it begins with a clear statement of the problem. Should someone object that we have misrepresented the puzzles by construing them as so many variants of what we have called the problem of coherent inconsistency, his objection would be very much to the point. However, we believe that the puzzles *are* instances of that more general problem, and we think that the order that begins to emerge in this field (where puzzles often seem to be a dime-a-dozen) when seen in light of the problem of coherent inconsistency is itself evidence that we are not misrepresenting them.³⁰

In any case, the onus would be on our opponent to provide a superior formulation of the problem; and this brings us to a second qualm which our approach might raise. Nowhere have we offered any account of what are the objects of (so-called) “propositional attitudes”. What allows us to avoid this troublesome task is our formulation of the problem raised by the various puzzles as that of the possibility of coherent inconsistency. All too often, Frege’s puzzle or some related case is brought forward, and the question immediately raised as to what the objects of attitudes must be, such that things can be as they are with Thales (or Peter, or whomever). Can those objects be bare functions (e.g., contents, or characters)? Or must they be somehow “object-involving”? Or, again, must they be complexes incorporating psychological (or perhaps neural) states? Our approach contains an implicit rejection of the assumption that the question raised by the puzzles is one as to the general nature of the objects of attitudes. In fact, it seems likely that the things satisfying the description, ‘object of an attitude’ comprise a much more heterogeneous lot than is typically assumed. Consider the closely-related notion of “what is said”, and how different “what is said” may be in the (correct) opinion of a judge who is trying to establish whether a witness has perjured himself, from what “what is said” may amount to in more typical conversational contexts.³¹ We count it as a further virtue of our approach that it can respect the *prima facie* disunity of the notion of “what is said” and its technical correlate in formal semantics without relying on it for solutions of the semantic puzzles.³²

NOTES

* We would like to thank the members of Mitch Green's Spring 1996 Propositional Attitudes Seminar (held at the Corcoran Department of Philosophy of the University of Virginia) for their input and camaraderie during the writing of this paper. Special thanks go to Mitch Green himself, as well as to the referee for *Synthese* for their helpful criticism and suggestions.

¹ The notions of rigidity and indexicality are independent, inasmuch as an expression can be both rigid and indexical (e.g., 'I'), neither rigid nor indexical ('the tallest mountain'), rigid but not indexical ('redness'), or, finally, indexical but not rigid ('the woman I love' is an item of this fickle sort).

² At least one class of names must be excepted from this generalization from the outset: names introduced explicitly as abbreviations for definite descriptions – what Gareth Evans calls “descriptive names” – are not rigid designators. (See Evans 1982, 31.)

³ We owe this suggestion to Mitch Green.

⁴ Again, we must except descriptive names, as well as “empty” names, such as 'Vulcan', which cannot acquire their referents by means of dubbings, since they fail to acquire referents at all (see Burge 1974). We set empty names aside as raising issues beyond the scope of this paper.

⁵ Note, however, that not every dubbing in force in a context contemporaneous with a context, *c*, is a dubbing in force in *c*.

⁶ The use of locutions of this sort lends *prima facie* support to Tyler Burge's theory that names are common nouns (see Burge 1973). Our own view is that such locutions are elliptical for things such as, 'Which man called 'George Bush' are you talking about?'

⁷ The case of 'Madagascar' first received philosophical attention in Evans 1973; 1990.

⁸ We speak of meaning here in a broadly Strawsonian sense. Strawson writes: 'To give the meaning of an expression . . . is to give *general directions* for its use to refer to or mention particular objects or persons . . . It is not to talk about any particular occasion of the use of the . . . expression. The meaning of an expression cannot be identified with the object it is used, on a particular occasion, to refer to' (Strawson 1990, 321).

⁹ Of course, our theory departs radically from Kaplan's account of names, in that it does not treat 'John' (for example) as ambiguous as borne by one man as opposed to some other man. 'John' is no more ambiguous as between John Smith and John Brown than 'you' is ambiguous as between its uses to refer to John Smith and John Brown, respectively. Kaplan's treatment of 'Aristotle' as ambiguous as between the name of the Stagirite and the shipping magnate (see Kaplan 1989) is less credible when applied to names like 'John' and 'Mom'. Yet there seems to be no reason why names with less currency should receive different treatment semantically from those with more. On the other hand, while Kent Bach's nominal description theory (Bach 1987, 137–38) makes “shared names” like 'John' unambiguous, it does so only at the cost of making most (if not all) uses of them non-literal.

¹⁰ We may wish to identify a third, “normative” level of conventionality pertaining to names, in order to explain the impropriety (and in some countries, illegality) of, e.g., naming one's daughter 'John', or one's cat 'Autoexec.bat'. (François Récanati discusses a level of name conventionality similar to this in his 1993, 136–43.)

¹¹ John Perry makes this point in his (1988, 94–95). In the same place, he points out that the context of utterance and the circumstance of evaluation of a given statement may coincide.

¹² See (Kaplan 1988). In his system, he distinguishes between an indexical temporal operator *Y* (yesterday) and a non-indexical temporal operator *G* (one day ago). Compare

the following axioms (where c = context of utterance, c_T = time of the utterance, f = an assignment function, t = time of evaluation, w = world of evaluation):

- (i) $\models_{cftw} G\phi \iff \models_{cf(t-1)w} \phi$.
- (ii) $\models_{cftw} Y\phi \iff \models_{cf(c_T-1)w} \phi$.

Kaplan emphasizes the important difference between the two in the following remark: ‘ Y (Yesterday) and G (one day ago) superficially resemble one another in view of the fact that $\models (Y\phi \leftrightarrow G\phi)$. But the former is a demonstrative whereas the latter is an iterative temporal operator. ‘One day ago it was the case that one day ago it was the case that one day ago it was the case that John yawned’ means that John yawned the day before yesterday. But ‘Yesterday it was the case that yesterday it was the case that John yawned’ is only a stutter’ (Kaplan 1988, 81). Moreover, no matter how far one embeds Y , its content will be determined by the context of the utterance. ‘One day ago it was the case that one day ago it was the case that one day ago it was the case that Mary said that yesterday was her birthday’ as uttered on April 23 means that Mary said, on April 20, that April 22 was her birthday.

¹³ In Marco Polo’s day, ‘Madagascar’ was used to refer to the eastern portion of the African continent.

¹⁴ The approach we have in mind would begin by making the following additions to David Kaplan’s *Logic of Demonstratives* (see Kaplan 1988, 73):

3. (v) $c_D \in D$ (the dubbings in force of c)

7.5 D is a non-empty set (the set of all sets of dubbings).

Following a suggestion of Mitch Green’s, we let dubbings be ordered-triples $\langle d, \gamma, x \rangle$, where d is the act of dubbing, x the item dubbed, and γ a name with which x is dubbed. We let $c_{D,\gamma}$ be the item dubbed with the name γ by virtue of the dubbing in force with respect to γ in context of utterance, c .

For the sake of simplicity, let us deal only with the attitudinal, ‘to assert’. We adopt the convention of representing different contexts of utterance by means of attaching different superscripts to the letter ‘ c ’, letting an unsuperscripted ‘ c ’ always stand for the context of utterance of the ascription. Let

$[{}_S N \text{ asserts } [{}_S \phi(\text{ind})]]$

be our phrase-marker for assertion-reports such as

Thales asserts that Hesperus is shining.

the embedded clauses of which contain indexicals (for an explanation of the phrase-marking notation used here, see Larson and Segal 1995). (We treat both ‘asserts’ and the predicative component of the embedded clause – here, ‘is shining’ – syncategorematically.) Letting ‘ $K(x)$ ’ stand for the character of x , we give the following phrasal axiom for such reports:

- (i) $\models_{cftw} [{}_S N \text{ asserts } [{}_S \phi(\text{ind})]]$ iff $(\exists \alpha)[K(\alpha) = K([{}_S \phi(\text{ind})]) \ \& \ (\alpha \text{ is true iff } \phi(c_{IND})) \ \& \ \parallel N \parallel_{cftw} \text{ asserts } \alpha]$.

(‘ c_{IND} ’ stands for the referent of the indexical that ‘ind’ stands for relative to c . For example, when ind is ‘ I ’, c_{IND} is c_A ; when ind is ‘here’, c_{IND} is c_P ; and when ind is ‘Hesperus’, c_{IND} is $c_{D, \text{‘Hesperus’}}$.) Roughly speaking, (i) says that for someone to assert that p is just for him to make an assertion which is true just in case p is true, using words with the same meaning (i.e., the same character) as those used in the statement that p .

The character of an expression is a function or rule correlating contexts of utterance of that expression (or, more precisely: of expressions of that expression’s type) with contents. Such a rule can be depicted as a set of ordered pairs. For each context of utterance of whatever expression is in question there is exactly one ordered pair in the set, the first member of which is just that context of utterance, and the second member of which is the content of the expression relative to that context of utterance. Hence, if we take the content of a sentence to be the set of all worlds at which it is true, we can depict the character of a sentence, S , thus:

$$\{(x, y) : x = c^i \ \& \ y = \{w' : \models_{c^i f_{tw'}} S\}\}$$

(An even more perspicuous depiction is possible if we expand the expression for the set, thus: $\{(c^1, \{w' : \models_{c^1 f_{tw'}} S\}), (c^2, \{w' : \models_{c^2 f_{tw'}} S\}), \dots, (c^n, \{w' : \models_{c^n f_{tw'}} S\}), \dots\}$.) We can now rewrite (i) using the notation just introduced as follows:

$$\models_{c_{ftw}} [{}_S N \text{ asserts } [{}_S \phi(\text{ind})]] \text{ iff } (\exists \alpha)[K(\alpha) = \{(x, y) : x = c^i \ \& \ y = \{w' : \models_{c^i f_{tw'}} [{}_S \phi(\text{ind})]\}\} \ \& \ (\alpha \text{ is true iff } \phi(c_{IND})) \ \& \ \|N\|_{c_{ftw}} \text{ asserts } \alpha].$$

Let both the dubbing of Venus with ‘Hesperus’ and the dubbing of Venus with ‘Phosphorus’ be among c_D^1 ; let c_D^2 contain the dubbing of Venus with ‘Hesperus’, but not the dubbing of Venus with ‘Phosphorus’, letting it contain instead the dubbing of Mars with ‘Phosphorus’; and let c_D^3 contain neither the dubbing of Venus with ‘Hesperus’ nor the dubbing of Venus with ‘Phosphorus’, but instead the dubbings of Mars with ‘Hesperus’ and with ‘Phosphorus’. Then

$$\models_{c_{ftw}} \text{Thales asserts that Hesperus is shining iff } (\exists \alpha)[K(\alpha) = K(\text{Hesperus is shining}) \ \& \ (\alpha \text{ is true iff } c_{D, \text{‘Hesperus’}} \text{ is shining}) \ \& \ \|\text{Thales}\|_{c_{ftw}} \text{ asserts } \alpha] \text{ iff}$$

$$(\exists \alpha)[K(\alpha) = \{(x, y) : x = c^i \ \& \ y = \{w' : \models_{c^i f_{tw'}} \text{Hesperus is shining}\}\} \ \& \ (\alpha \text{ is true iff } c_{D, \text{‘Hesperus’}} \text{ is shining}) \ \& \ \text{Thales asserts } \alpha] \text{ iff}$$

$$(\exists \alpha)[K(\alpha) = \{(c^1, \{w' : \models_{c^1 f_{tw'}} \text{Hesperus is shining}\}), (c^2, \{w' : \models_{c^2 f_{tw'}} \text{Hesperus is shining}\}), (c^3, \{w' : \models_{c^3 f_{tw'}} \text{Hesperus is shining}\}), \dots\} \ \& \ (\alpha \text{ is true iff } c_{D, \text{‘Hesperus’}} \text{ is shining}) \ \& \ \text{Thales asserts } \alpha] \text{ iff}$$

$$(\exists \alpha)[K(\alpha) = \{(c^1, \{w' : \text{Venus is shining @ } w'\}), (c^2, \{w' : \text{Venus is shining @ } w'\}), (c^3, \{w' : \text{Mars is shining @ } w'\}), \dots\} \ \& \ (\alpha \text{ is true iff } c_{D, \text{‘Hesperus’}} \text{ is shining}) \ \& \ \text{Thales asserts } \alpha].$$

By contrast, using the same method we can derive the following truth-conditions for ‘Thales asserts that Phosphorus is shining’:

$$\models_{c_{ftw}} \text{Thales asserts that Phosphorus is shining iff } (\exists \alpha)[K(\alpha) = \{(c^1, \text{Venus is shining @ } w'\}), (c^2, \{w' : \text{Mars is shining @ } w'\}), (c^3, \{w' : \text{Mars is shining @ } w'\}), \dots\} \ \& \ (\alpha \text{ is true iff } c_{D, \text{‘Hesperus’}} \text{ is shining}) \ \& \ \text{Thales asserts } \alpha].$$

This yields the result that

Thales asserts that Hesperus is shining.

has different truth-conditions from,

Thales asserts that Phosphorus is shining.

Thus the treatment of proper names as indexicals seems to afford a solution to Frege's Puzzle. Our T-sentence (i) yields the result that

\models_{cftw} Thales asserts that Hesperus is shining.

\models_{cftw} Hesperus = Phosphorus.

$\overline{\models_{cftw}}$ Thales asserts that Phosphorus is shining.

is not a valid inference. (\models_{cftw} Hesperus = Phosphorus if and only if $\|Hesperus\|_{cftw} = \|Phosphorus\|_{cftw}$.) As we argue in the text, however, this apparent solution is only an illusion.

¹⁵ We say that someone, e.g., believes a given content "under a (given) character" just in case he does or would use an expression with that character to express that belief. (It may be possible to characterize "belief under a character" more broadly, so as not to include a special reference to (perhaps counterfactual) language-use. However, we suspect that we have here one of those situations in which the only handle we can get on the non-linguistic case is through the linguistic case. Such situations are what give the philosophy of language its peculiar value in relation to the philosophy of mind.)

¹⁶ We shall return to this case further along in this section.

¹⁷ That is, it might suggest that Lois would assent to the sentence, 'Clark Kent can fly' when, in fact, she would not do so. However, this misleading implication – on Salmon's theory – does not affect the truth-value of the ascription. (See Salmon 1991.)

¹⁸ One serious problem that we shall not consider here is pressed by Mitch Green in his 1996. Green calls into question the cogency of Salmon's approach by arguing that there is available no satisfactory account of how attitude reports generate the implicata that Salmon requires.

¹⁹ We say that a speaker is *inconsistent* just in case he believes (judges, asserts, etc.) both a claim and a claim that is logically incompatible with that claim. We say that a speaker is *incoherent* in believing (judging, asserting, etc.) a certain claim or claims just in case from the fact that he believes (judges, asserts, etc.) that claim or those claims, it follows that he is irrational or in some respect linguistically incompetent.

²⁰ I.e., assigns Truth to her possible world.

²¹ Viz., the function assigning to each context of utterance the content that assigns to each possible world the property of being excellent.

²² Kripke 1988, pp. 130–32.

²³ In the example, these contexts of utterance are distinguished by the distinct pointings that are associated with each; however, the pointings were not necessary to distinguish the contexts.

²⁴ See Perry 1988, p. 83.

²⁵ See, e.g., Salmon 1991, pp. 84–85, 103ff. (Salmon develops this argument by means of his notion of “information guises”. Again, for cogent criticisms of Salmon’s approach, see Green 1996.)

²⁶ This approach is at least suggested by the language of Kripke 1972, 57, 75, 102, 104, 112–14.

²⁷ Or at least, the onus is on the direct reference theorist to show that this is not so.

²⁸ See Evans 1990.

²⁹ In this respect our approach contrasts with currently popular “mode of presentation” theories (see, e.g., Schiffer 1992; and 1995; Récanati 1990; 1993; and 1995, Crimmins 1995; and Forbes 1987). “Modes of presentation” are introduced specifically to enable some form of direct reference theory to handle puzzles of attitude semantics of the sort we have discussed – a point which is brought out clearly by Schiffer in his 1995, 108 (see also Forbes 1987, 30–31). Similar remarks apply to “sense theories” such as Forbes’s 1990, developed using the notion of a “dossier”, and to Mark Richard’s theory involving “Russellian annotated matrixes” (see Richard 1989; and 1990).

³⁰ One *prima facie* different way to characterize the general puzzle is as to how it is possible for someone to *discover* a necessary truth, such as that Hesperus = Phosphorus; this, e.g., is the characterization suggested by Frege in the first paragraph of his (1980). We would capture this statement of the puzzle with the question: How can it be possible for a rational individual who knows the meanings of both ‘Hesperus’ and ‘Phosphorus’ to fail to know that Hesperus = Phosphorus? In light of our treatment of the problem of coherent inconsistency, it should be clear how we would go about answering this question.

³¹ The accused testifies that he told the deceased that the stuff in his glass was poisonous, when what he said was, ‘Arsenic is poisonous’; contrast this with a case in which someone tells a chemically ignorant official conducting an inventory of a warehouse that certain bottles contain poison, and later assures his (chemically informed) boss that he told the official that the arsenic was poisonous.

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