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RIGIDITY AND DIRECT REFERENCE

What is it for a singular term, or for a use of a singular term, to be referential in the strong sense, i.e. "purely" or "directly" referential? This is the question I will try to answer in this paper. The intuitive (and largely metaphorical) notion of referentiality that is current in the philosophical literature emerges from the following set of statements:

A referential term is a term that serves simply to refer. It is devoid of descriptive content, in the sense at least that what it contributes to the proposition expressed by the sentence where it occurs is not a concept, but an object. Such a sentence is used to assert *of* the object referred to that it falls under the concept expressed by the predicate expression in the sentence. Proper names and demonstrative expressions are supposed to be referential in this sense; and although definite descriptions are not intrinsically referential, they have a referential use.

That such a notion exists in contemporary philosophy is beyond question. But many philosophers do not like it. I suspect that there are two reasons why this is so. First, it is thought that the intuitive notion of referentiality is too vague and metaphorical to be of any use; and second, assuming that a definite view does emerge from the set of statements above, it is thought that there are serious objections to this view. I do not share this pessimism. I think that the notion of referentiality can be satisfactorily defined, and that the objections raised to the referentiality theory can be met. In this paper, however, I will be mainly concerned with defining referentiality. Limitations of space will not allow me to present a thorough defense of the doctrine of referentiality.

My starting point will be the related but less disreputable notion of rigidity, introduced by Saul Kripke in the philosophical literature. It is perhaps a bit misleading to speak of "the" notion of rigidity, since I will show that there are, under that name, three different notions on the market, all stemming from Kripke's characterization of a rigid designator as a designator that denotes the same object in all possible worlds. The

three different notions are: rigidity as a matter of scope, rigidity as a matter of truth-conditions, and rigidity as (pure or direct) referentiality. This last notion, which I shall concentrate upon, is the most interesting, but it is especially hard to characterize in non-metaphorical terms. To provide such a characterization is the task of this paper.

RIGIDITY AND SCOPE

Let's start, then, with the first sense of "rigidity". Many people have said that a rigid designator is simply a designator that (always) takes wide scope in modal contexts. Why have they said so? Because Kripke characterizes a rigid designator as a designator that denotes the same object in all possible worlds, this idea being sometimes expressed, in Kripke's writings, by saying that a rigid designator refers to the same thing whether we use it to talk about what is actually the case or about some counterfactual situation (Kripke 1971: 145 and 1972: 289). Now when a designator — say, a definite description — takes wide scope in a modal sentence, i.e. in a sentence used to talk about some possible world, it does refer to the same object as when it occurs in a sentence used to describe the actual world. In sentence (1) below, for example, the description "the president of France", when it is given wide scope, refers to the person who is the president of France in the actual world, even though the sentence as a whole describes a counterfactual situation. So it seems that a description designates rigidly when it takes wide scope. The difference between proper names and definite descriptions, on that view, is simply that, contrary to definite descriptions, proper names *always* take wide scope in modal contexts (see e.g. Brody 1977: 69). This is why, whereas (1) is ambiguous, (2) is not:

(1)   The president of France might have been tall

(2)   Mitterrand might have been tall

(1) means either that France might have had (instead of Mitterrand) a tall man as president, or that Mitterrand himself might have been tall. On this second, "rigid" reading, the individual who satisfies the description in the actual world is said to be tall in some possible world, whereas in the first reading, the property of being tall in some possible

world — say, W — is ascribed to the individual who satisfies the description in W (not in the actual world). Depending on whether the description does or does not fall within the scope of the modal operator, its referent, i.e. the individual satisfying the description, is picked out either in the actual world or in the possible world introduced by the modal operator. There is no such scope ambiguity in the case of (2), which contains a proper name instead of a description.

This view of rigidity, however, is misguided. Kripke has recently shown, in his reply to Dummett (Kripke 1980), that rigidity is not simply, and cannot be reduced to, a matter of scope. You can't say that a designator is rigid if and only if it (always) takes wide scope in modal contexts: this would make the notion of rigidity relevant only to modal contexts, whereas the rigid/non rigid distinction applies to designators in general, even when they occur in simple sentences like (3) and (4):

(3)   Mitterrand is small

(4)   The president of France is small

(3) and (4), no less than (1) and (2), provide good evidence that "Mitterrand", contrary to "the president of France", rigidly designates its referent. To see that, compare the truth-conditions of these two sentences. (3) is true with respect to a world W if and only if, in W, *Mitterrand* is small. In that case, there is a unique individual x such that, for any world W, the sentence is true with respect to W if and only if x is small in W. But there is no single individual such that, for any world W, (4) is true with respect to W if and only if that individual is small in W; in a world where Giscard is the president of France, Giscard's being small makes (4) true, whereas in a world with Chirac as president, the truth of (4) depends on Chirac's being small. No particular individual is involved in the truth-condition of (4): (4) is true with respect to a world if and only if, in that world, there is an individual x such that x is both the president of France and small, but this individual need not be the same with respect to all possible worlds. In the case of (3), on the other hand, the individual whose being small would make the sentence true *is* the same in all possible worlds. We thus find the rigid/non rigid distinction again, this time at the level of simple sentences, where no scope ambiguity can occur. As Kripke puts

it, the rigidity theory "is a doctrine about the truth-conditions, with respect to counterfactual situations, of (the propositions expressed by) *all* sentences, including *simple* sentences" (Kripke 1980: 12).

Here Kripke's reply ends. But it is possible to go further and conclude from what has just been said that the description in (1) designates non-rigidly not only when it takes narrow scope, but *also* when it falls outside the scope of the modal operator. When it does, (1) says that the man who is president of France in the actual world is tall in some other possible world.[1] (From now on, I'll call this reading of (1) "(1a)".) This man, however, is not specified, and it is not necessarily Mitterrand. The sentence, after all, does not tell us *which* world is supposed to play the role of "the actual world": with respect to any world W, "the actual world" will be that very world W.[2] Now suppose a world $W1$ where Giscard has been elected president instead of Mitterrand. With respect to $W1$, (1a) is true if and only if Giscard is tall in some possible world other than $W1$. By the same token, with respect to a world $W2$ where *Chirac* has been elected, (1a) is true if and only if Chirac is tall in some possible world other than $W2$. And, of course, with respect to *our* actual world, where Mitterrand is president, (1a) is true if and only if Mitterrand is tall in some other possible world. So we see that the description in (1) designates non-rigidly even when it takes wide scope; for there is no unique individual x such that, with respect to any world W, (1a) is true if and only if x is tall in some possible world other than W. Of course, (1) presents us with two different worlds, one of them playing the role of the "actual" world; and the description's taking wide scope means that its reference should be picked out in this "actual" world, notwithstanding the fact that the sentence is used to describe another possible world. But this is not enough to make the designation rigid; for every world is the actual world with respect to itself, so that it will still be possible to change the description's reference simply by changing the world with respect to which the sentence is evaluated. It follows that, even if it was stipulated that a certain definite description always takes maximal scope in modal contexts, this description would still not count as a rigid designator.[3]

RIGIDITY AND REFERENTIALITY

On Kripke's view, rigidity is a matter of truth-conditions: to say that a designator is rigid is to say that there is an individual such that, with respect to every counterfactual situation, the truth-condition of any sentence containing the designator involves the individual in question. This view was first explicitly put forward by Christopher Peacocke, who gives the following definition (Peacocke 1975: 110):

> (R) t is a rigid designator (in a language L free of both ambiguity and indexicals) if and only if:
> there is an object x such that for any sentence $G(t)$ in which t occurs, the truth (falsity) condition for $G(t)$ is that $\langle x \rangle$ satisfy (respectively, fail to satisfy) $G(\ )$.[4]

Criterion (R), Peacocke claimed, captures Russell's idea that some-times the reference of a singular term is a constituent of the proposition expressed by the sentence where it occurs. For if a term t denoting an object x is a rigid designator by criterion (R), then any sentence $G(t)$ will be true if and only if x satisfies $G(\ )$. In other words, the object x, along with the property $G(\ )$, is a constituent of the truth-condition of the sentence. What a rigid designator contributes to the truth-condition of the sentence thus is the object itself which it refers to, not an attribute which an object would have to possess in order to be referred to.

Russell's idea is the idea of a purely referential term, a term that serves only to refer. Peacocke, in effect, equates rigidity, in the sense of (R), with referentiality, as the following passage shows:

This criterion of rigid designation can be seen (. . .) as merely a more explicit formula-tion of an idea variously expressed as that of a term's "serving . . . simply to refer to its object" (Quine), "tagging" an individual (Marcus), or in general of an expression's being "used to enable . . . individuals to be made subjects of discourse" (Mill); and the view that proper names are rigid designators in our sense seems a natural elucidation of Miss Anscombe's remark that the proper name contributes "to the meaning of the sentence precisely by standing for its bearer". (Peacocke 1975: 111)

This equation of rigidity with referentiality is consonant with Kripke's insistence on the "Millian" character of proper names, which he takes as paradigm examples of rigid designation. Proper names, Mill says,

"are attached to the objects themselves, and are not dependent on (. . .) any attribute of the object" (Mill 1947: 20). It is the function of proper names, according to Kripke, to refer to an object independently of the properties it may have, so as to enable one to refer to *this object* even with respect to possible worlds where it no longer has them. The link between a name and its reference is, for Kripke, "stipulative" rather than "qualitative".

No less than the wide scope view of rigidity, however, the view which equates rigidity (in the sense of (R)) with Millian referentiality is confused. Referentiality is supposed to distinguish proper names from definite descriptions, at least in their non-referential uses. Now some definite descriptions are rigid and satisfy criterion (R). For example, a mathematical description like "the cube root of 27" denotes 3 in all possible worlds, since "3 is the cube root of 27" is a necessary truth. The rigidity of "the cube root of 27" can be checked, using criterion (R), at the level of truth-conditions: for any sentence S of the form "The cube root of 27 is F" (where "F" stands for a predicate), there is an object x, namely the number 3, such that, with respect to any possible world, S is true if and only if x satisfies the predicate. It is no use saying either that, for S to be true, x must also be the cube root of 27, or that some other number's being both the cube root of 27 and F would verify the sentence as well, for there is no world where 3 is not, or where a number other than 3 is, the cube root of 27.

Like any description, the description "the cube root of 27" denotes the object which has the property it "connotes", viz. the property of being a number x such that $x^3 = 27$. The link between the description and its reference is typically "qualitative" in Kripke's sense. It would be definitely odd to say that the description "is attached to the object itself, and does not depend on any attribute of the object". The reference of the description is a function of the concept it expresses, and this concept is what the description contributes to the proposition expressed by the sentence where it occurs. To dramatize this point, consider an attributive use of the description: "The cube root of 27, whatever it is, is F". The proposition expressed by this sentence is clearly not a "singular proposition" consisting of an object and the property F. Nobody would be willing to say that the description here is referential, even though it is rigid.

The difference between rigidity and referentiality was pointed out by Kripke himself in 'Naming and necessity'. There is, he says, a difference between a rigid definite description and a proper name, even when the description in question is used to "fix the reference" of the name:

> π is supposed to be the ratio of the circumference of a circle to its diameter. Now, it's something that I have nothing but a vague intuitive feeling to argue for: It seems to me that here this Greek letter is not being used as *short for* the phrase 'the ratio of the circumference of a circle to its diameter'. . . It is used as a *name* for a real number . . . Note that here both 'π' and 'the ratio of the circumference of a circle to its diameter' are rigid designators . . . (Kripke 1972: 278)

The intuitive difference Kripke has in mind is that 'π', as a name, is purely referential, while the rigid description 'the ratio of the circumference of a circle to its diameter' is not.

There is, of course, a connection between referentiality and rigidity: referentiality *implies* rigidity. A referential term is rigid *"de jure"*; it is, in Mill's terminology, "attached to the object itself", independently of its properties, and so cannot fail to denote the same object in all possible worlds, since what changes from world to world is not the object itself, its identity, but only its (contingent) properties. By contrast, a mathematical description — or, for that matter, any essential description — is rigid only *"de facto"*: like any description, it denotes the object that falls under a certain concept, but in this case the concept happens to fit the same object in all possible worlds.[5]

The problem is that, whereas rigidity in the sense of (R) is a well-defined notion, referentiality is not. What does it mean to say that a referential term refers to the object "itself"? One way of understanding this is to say that a referential term is a term wholly devoid of descriptive content, a term whose link to its reference is purely stipulative, as Kripke says. But this is far too strong, for not all referential terms are like proper names in this respect: demonstrative expressions like "this table" or pronouns like "I" or "you" clearly have some sort of descriptive content. Rather than wholly devoid of descriptive content, a referential term is such that what it contributes to the proposition expressed is the object it refers to rather than a concept under which this object falls (even if, at some level, the term does express such a concept). But this cannot be explained, as Peacocke thought, in terms of criterion (R): it is true that, when a term is

referential, there is an object such that the truth-condition of any
sentence containing the term involves this object. But this criterion is
too weak, since it characterizes all rigid expressions, including rigid
descriptions, which nobody would want to classify as referential (at
least in their attributive uses).

LOCKWOOD'S CRITERION

An obvious solution to the problem at hand is the following. Let's
distinguish the state of affairs represented by an utterance, i.e. its
truth-condition, and the proposition expressed by the utterance. A rigid
expression is an expression such that the truth-condition of any
sentence containing it involves a certain object, in conformity to
criterion (R). When an expression is referential, there is an object such
that not only the truth-condition but also *the proposition expressed*
involves that object.

Various philosophers have insisted that, to understand the proposi-
tion expressed by an utterance where a referential term occurs, it is
necessary to know which object has been referred to; it is necessary to
identify the reference. (See e.g. Evans 1982.) This gives a sense in
which the proposition expressed includes the very object that is
referred to, rather than simply a concept under which that object falls.
When a term is non-referential, the proposition expressed involves only
a certain concept; if the term is rigid de facto, this concept happens to
fit the same object in all possible worlds, but it is not necessary for
understanding the proposition to identify the object in question. As
Lockwood (1975: 488) puts it:

A hearer may be said fully to grasp what statement is being expressed ⟨by "the cube of
408 has more factors than there are planets"⟩ quite irrespective of whether he knows
what the cube of 408 is, or even if he falsely believes it to be, say, 48,914,012. Yet, in
the case of a term that is functioning referentially, being able correctly to identify its
reference would seem to be a prerequisite of knowing what is being asserted by its aid.

"The cube of 408" being a rigid description, there is an object, viz.
number 67,917,302, such that the truth-condition of any sentence
containing it involves that object: "the cube of 408 is F " is true, with
respect to any possible world, iff 67,917,302 is F. But the number in

question is no part of the proposition expressed by the sentence, in the sense that one can understand what is said by an utterance of this sentence without identifying the number that is referred to — and therefore without knowing that the sentence is true iff that number is F. What is part of the proposition expressed is the concept "cube of 408", not the number that falls under that concept.

The problem is that we don't know exactly, at this stage, what is meant by "the proposition expressed", as opposed to the truth-condition of the utterance. This, however, is not very important. The notion of proposition expressed is essentially tied to that of understanding, and what counts is precisely the connection between referentiality and understanding. "The cube root of 27" rigidly designates the number 3, but we can understand the description even if we don't now what number it designates; a referential term, on the other hand, is such that to understand an utterance where it occurs one has to know which object it designates.

Michael Lockwood has put forward a definition of referentiality in terms of understanding which is intended to capture the connection as well as the difference between referentiality and rigidity. According to (a simplified version of) Lockwood's criterion,[6]

(RR)   A term t is referential if and only if there is an object x such that

(i)   an utterance $S(t)$ is true iff x satisfies $S(\ )$, and

(ii)   to understand the utterance, one must know that it is true iff x satisfies $S(\ )$.

In this framework, a referential term is a rigid designator (this is what clause (i) amounts to), but a rigid designator of a very special sort: it is a rigid designator such that, to understand an utterance where it occurs, one has to know that it designates an object rigidly and which object it so designates (this is what clause (ii) amounts to). More precisely, understanding the utterance involves, according to (RR), *de re* knowledge of the reference: it involves knowing *of* a certain object that the utterance is true if and only if this object satisfies the predicate. (This means that, to understand the utterance, one must form an "information-based thought", in Evans's terminology.)

I wish to retain Lockwood's insight about the basic nature of referentiality. (RR), however, is not satisfactory as it stands. According to (RR), understanding an utterance with a referential term involves identifying the reference of the term, and this implies that the reference actually exists. Indeed, many philosophers think that when the reference of a referential term does not exist, there is nothing to "understand", since no proposition is expressed. This I do not wish to dispute. What I think, however, is that identification of the reference is not a necessary condition of *referentiality*: a term may well be referential, and understood by the hearer as referential, without its reference being identified. To understand the *utterance* "Ralph Banilla is a midget" involves knowing who Ralph Banilla is, but to understand the *sentence* only involves knowing that the term is referential, that there is an individual that must be identified for an utterance of this sentence to be understood. To be sure, (RR) does not imply that the identification of the reference is a necessary condition of referentiality; but it does imply that the existence of the reference, which is a necessary condition for understanding an utterance with a referential term, is also a necessary condition for a term to *be* referential. A term is referential, according to (RR), *only if there is an object* such that to understand the utterance involves identifying this object. But this is wrong: a term can be referential even though there actually is no such object. The term "Ralph Banilla" is referential, and understood as such, even if for some reason it fails to refer — even if Ralph Banilla does not exist. The category "referential term" is not different from the category "proper name" in that respect: "Ralph Banilla" is linguistically a proper name even if, for some reason, it has no bearer. (The very idea that no proposition is expressed when the reference of a referential term does not exist implies that a term can be referential even if its reference does not exist; otherwise, the notion of a referential term without reference would be self-contradictory.)

Something like (RR) was intended by Lockwood as a definition not of referentiality for a term but of referentiality for a use of a term. It may indeed be useful to have a notion of referential use such that a term is "referentially used" only if there is an object it refers to. But if what we are interested in is the semantic distinction between proper names and demonstrative expressions on the one hand, and definite

descriptions on the other, the former being referential and the latter non-referential, we need a notion of referentiality (call it "type-referentiality") that is independent of extra-linguistic matters such as the existence or non-existence of the reference of the term. We must, therefore, modify the definition accordingly.[7]

TYPE-REFERENTIALITY

When the term t in a sentence $S(t)$ is a rigid designator, there is an object such that an utterance of this sentence is true if and only if this object satisfies the predicate $S(\ )$. In such a case, I will say that the truth-condition of the utterance is a *singular truth-condition.* I will also speak of a non-singular truth-condition in the case of an utterance $S(t)$ where t is non-rigid. A truth-condition is singular in the same sense that a proposition is said to be singular (see Kaplan 1977), but of course one must distinguish a singular truth-condition from a singular proposition. This distinction is equivalent to the distinction between rigidity and referentiality.

Although this will perhaps sound paradoxical, I want to define (type-)referentiality in terms of singular truth-conditions. First, however, I must say a few words about sentence-meaning. Type-referentiality is a feature of the linguistic meaning of some expressions — the referential terms — and since the linguistic meaning of an expression is its contribution to the linguistic meaning of the sentences where it occurs, it may help to say a few things about sentence-meaning in general.

From a pragmatic point of view, the meaning of a sentence is essentially its "illocutionary act potential"; it consists in indications concerning the speech act the sentence can be used to perform. A speech act is commonly said to have two components: a type of satisfaction and a set of conditions of satisfaction. The meaning of a sentence, therefore, consists in indications concerning both the type and the conditions of satisfaction of the speech act. (Of course, sentence-meaning is related only to the speech act the speaker is supposed to perform "directly", not to the speech acts that the speaker may perform indirectly.) Needless to say, those sentential indications are insufficient and the "context" supplies further clues about the speech act being

performed. This account is, I admit, oversimplified, but it will do for
our present purposes.

Some parts of the sentence — the so-called indicators of illocutionary
force, for example the imperative mood — indicate the type of satis-
faction of the speech act: they indicate that the utterance is supposed to
be *true* or *obeyed* or whatever. Some other elements contribute to
indicating the satisfaction-conditions of the utterance; they partially
describe a state of affairs such that the utterance is satisfied if and only
if this state of affairs obtains. Now my suggestion is that some terms —
those that are type-referential — specifically indicate that the truth-
condition or, more generally, the satisfaction-condition of the utterance
is singular.[8]

Here is my definition of type-referentiality:

> (TR)   A term is (type-)referential if and only if its linguistic
> meaning includes a feature, call it "REF", by virtue of which
> it indicates that the satisfaction-condition of the utterance
> where it occurs is singular.

The truth-condition of an utterance $S(t)$ is singular if and only if there
is an object x such that the utterance is true if and only if x satisfies
$S(\ )$. If, therefore, the term t is referential, its meaning includes a
feature by virtue of which it indicates that there is an object x such that
an utterance of $S(t)$ is true or more generally satisfied if and only if x
satisfies $S(\ )$.

The feature "REF" does not exhaust the meaning of a referential
term. As I said above, some referential terms are not wholly devoid of
descriptive content; they have what Evans calls a "referential qualifier"
and what Kaplan calls a "character". A referential expression such as
"this table" or the pronoun "you" somehow characterizes the reference
in such a way that it can be identified in context (as a table prominent
in the vicinity, or as the hearer). Recall that, when a term is referential,
understanding the utterance involves identifying the reference of the
term. In his identification of the reference, the hearer is helped by the
meaning of the referential term. In some cases at least, a referential
term indicates not only (via the feature "REF") *that there is* an object
such that the utterance is true if and only if this object has a certain
property; it also indicates *how* this object can be identified. In other
words, a referential term includes as part of its meaning, besides the

feature "REF", a *mode of presentation* of the reference. Owing both to the feature "REF" and to the mode of presentation, a sentence $S(t)$ — where t is a referential term — indicates that:

> there is an object x which is F (= mode of presentation), such that the utterance is satisfied if and only if x satisfies $S(\ )$.

For example, "this table is G" indicates that there is a table prominent in the vicinity, such that the utterance is true if and only if it is G; "you are G" indicates that there is a person to whom the utterance is addressed, such that the utterance is true if and only if this person is G; and so on. In all those cases, the "mode of presentation" associated with the referential term makes a certain object contextually identifiable, and the utterance is presented as satisfied if and only if this object has the property expressed by the predicate in the sentence.[9]

Although it is part of the meaning of the term, and therefore also of the meaning of the sentence where it occurs, the mode of presentation of the reference is no part of the proposition expressed by the utterance. The proposition expressed by the utterance, in my framework, is the satisfaction condition the utterance presents itself as having.[10] Now consider a sentence "t is G", where t is a referential term whose meaning includes a certain mode of presentation of its reference; an utterance of this sentence means that there is an object x, possessing a certain property F (= mode of presentation), such that the utterance is satisfied iff x is G. The utterance therefore expresses the proposition that x is G, a "singular" proposition with the object x (and not the concept F) as a constituent. The mode of presentation helps the hearer to understand which object is such that the utterance is satisfied if and only if it has a certain property, but this object's satisfying the mode of presentation is no part of the conditions of satisfaction the utterance presents itself as having, no part of the proposition expressed — which proposition cannot be grasped unless x is actually identified. In this way, we capture the intuitive notion of (pure or direct) referentiality.

Let me now summarize. Following Peacocke and Kripke, I have defined rigidity (distinguished from the pseudo-rigidity connected with scope) in terms of truth-conditions: a rigid designator is such that the truth-condition of the utterance where it occurs is singular. I have tried to go further and define referentiality as a sort of meta-rigidity — as

rigidity reflected in meaning. A referential term *indicates* that the truth-condition of the utterance is singular; it indicates that there is an object x such that the utterance $S(t)$ where it occurs is true iff x satisfies the predicate $S(\ )$. A referential term, therefore, is a designator that signifies its own rigidity.[11]

NOTES

[1] I say: "in some *other* possible world", because I am assuming that utterances of the type "It might have been the case that P" are counterfactual and entail that it is not the case that P. This assumption is, of course, controversial, but it is not at issue here, and my argument does not rest upon it.

[2] This may seem reminiscent of Lewis' Indexical Theory of Actuality and therefore not very Kripkean. But in fact the claim I am making amounts to nothing more than what Peter van Inwagen, in his paper on the Indexical Theory of Actuality, calls the "Weak Theory", which he says is trivially true (Inwagen 1980: 410—412). On the other hand, I think one cannot reject the claim according to which even wide scope descriptions are non-rigid, without accepting the thesis that a world is a circumstance of utterance, and therefore without accepting something like Lewis' Counterpart Theory (see Inwagen 1980: 416—417). I cannot elaborate this point here.

[3] Stephen Schiffer (1977: 31) makes a similar point. He introduces an operator "*" that transforms a definite description into one that has maximal scope in every sentence in which it occurs, and notes that the proposition expressed by "It might have been the case that the* President of the US in 1976 was a lapsed Quaker" is true in a possible world if and only if *whoever in that world is President of the US in 1976* is such that he or she might have been a lapsed Quaker.

[4] Belief-contexts constitute an obvious objection to criteria such as (R) or (RR) below. Since I cannot discuss the special problems raised by belief-contexts in this paper, I shall set this objection aside and consider only non-intensional contexts.

[5] The distinction between the two sorts — or the two sources — of rigidity can be found in various places in the literature, the *locus classicus* being Kaplan 1977; the terminology "*de facto* vs *de jure*" is Kripke's: see Kripke 1980, footnote 21.

[6] On Lockwood's criterion, see Lockwood 1975: 485. A similar view is put forward in Recanati 1981: 627—628.

[7] The definition, of course, must also be modified so as to take indexicality into account. (TR) below, contrary to (R) and (RR), works for indexical as well as for non-indexical expressions.

[8] When a non-referential expression (e.g. a definite description) is used referentially, the context, not the sentence, indicates that the (intended) satisfaction-condition of the utterance is singular. We may speak, in this case, of "token-referentiality".

[9] The question arises whether all referential terms have an associated mode of presentation, or whether some of them, namely proper names, don't. I think that proper names, like ordinary indexicals, have an associated mode of presentation, by virtue of which a sentence $S(NN)$, where "NN" is a proper name, indicates that

> there is an object x, *called "NN"*, such that the utterance is true iff x
> satisfies $S(\ )$.

This theory of the meaning of proper names has been attacked by Saul Kripke, whose arguments I don't find convincing; but I cannot develop my views here.

   Notice that the notion of "mode of presentation" that is used here is linguistic and not epistemic. The linguistic meaning of a referential term conveys a certain mode of

presentation of the reference, but this mode of presentation is not necessarily identical with the mode of presentation of the object referred to in the *thought* expressed by the utterance. (By "thought", I do not mean the "proposition" expressed — soon to be defined — but the object of the so-called "propositional attitudes". In any theory of Direct Reference, the proposition expressed must be carefully distinguished from the object of the attitudes — here called the thought.) There are, for example, two modes of presentation associated with the pronoun "I": from a linguistic point of view, the reference is presented as "the speaker" (or something like that), but the concept that is relevant to the thought being expressed is the concept of "self" (or something like that). Kaplan and Perry are both guilty of confusing the two sorts of mode of presentation.

[10] In this way, we can distinguish between the propositions expressed by "The cube root of 27 is F" and by "3 is F": both sentences have the same truth-condition — both are true iff 3 is F — but only the second presents itself as true iff 3 is F. Only the second sentence conveys the indication that there is an x such that the sentence is true iff x is F. This is the basis for the distinction between "the cube root of 27", which is rigid, and "3", which is referential.

[11] An ancestor of this paper was read at the first meeting of the Paris Friday Group (fall 1982), the conference 'Recent trends in semantics' (Urbino, July 1983), and elsewhere. I would like to thank Benoît de Cornulier, Pierre Jacob, Dan Sperber, Charles Travis, and especially Mike Harnish, Paul Horwich and Paul Kay, for their comments on the penultimate version of the paper.

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