Frege's Two Senses of 'Is'

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It is widely believed that there are two senses of 'is', the 'is' of identity and the 'is' of predication, and that this distinction was clearly drawn by Frege in "On Concept and Object" [5], although it was anticipated by others, perhaps, e.g., by Plato in the *Sophist*.[1] As opposed to this received view, I will argue that Frege had not successfully distinguished two senses of 'is', indeed that his argument leads to precisely the opposite conclusion; on the other hand, the distinction Plato had supposedly drawn in the *Sophist*, which seems to rest on a semantics Frege was explicitly rejecting, is, given that semantic framework, viable. Frege had introduced this distinction in order to buttress his view that proper names could not serve as genuine predicates: a proper name occupying ostensible predicate position could not be functioning as a predicate because the 'is' in such a statement would have to be the 'is' of identity, not the 'is' of predication. I will argue that Frege had been mistaken on this point as well. More generally, I will argue that Frege's theoretical analysis of language is not, as he had thought, incompatible with proper names being allowed to play a genuinely predicative role.

My remarks are prompted by Michael Lockwood's stimulating article, "On Predicating Proper Names," [8], which contains an extensive and detailed criticism of Frege's position. Lockwood argues that Frege failed to make out the distinction between the two senses of 'is', and that proper names can serve as predicates. I agree with Lockwood on both of these points. But I believe that Lockwood has criticized Frege for the wrong reasons, and that, as a result, he has drawn the wrong conclusions. Lockwood, in rejecting Frege's distinction (which he mistakenly identifies with Plato's), takes himself to have established that 'is' need not be assigned any sense other than the usual 'is' of predication, so that an identity can be regarded as a special sort of predication. He believes that he has thus eliminated the most significant barrier to the development of a coherent nonrelational analysis of identity, and he sketches a theory, based on a (very radical) reconstruction of Mill's well-known treatment of proper names, on which the logic of identity is obtained within a traditional sub-

ject/predicate framework, i.e., some extended version of syllogistic inference. (The logical details of a similarly motivated theory were worked out and presented some years earlier by Sommers [11].) But the question, on the one hand, of whether 'is' has more than one sense, is distinct from questions, on the other hand, about whether identity and predication are different logical relations, or whether one is definable in terms of the other, or whether one is (in some sense) reducible to the other. It is rather easy to conflate these issues: Frege was confused about these matters, and Lockwood has, to a large extent, imported Frege's confusion into his own theory.[2] The logical story about identity is well known: identity is definable in second-order logic, but not in first-order logic.[3] It is highly unlikely that Lockwood and Sommers should come up with a result that challenges any of these low-level logical truths, and even more unlikely that such a result should issue from an analysis of senses of 'is'. Of course, as I will argue, they have established nothing of the sort: that is, setting aside the question of 'is', I will show that the Lockwood/Sommers attempt to dispense with identity is inadequate.

My paper, therefore, deals with two unrelated issues which, because of persistent confusion, have been historically connected. One issue is whether the relational and the nonrelational analyses of sentences of the form $\ulcorner S$ is $P\urcorner$ correspond to distinct senses of 'is', the 'is' of identity and the 'is' of predication. I will argue that they do not. The second issue is whether the logic of identity requires a relational analysis of statements of identity. The standard logic of identity, e.g., the one presented by Quine in *Set Theory and its Logic*, certainly does. But Frege's distinction between the two senses of 'is' engendered a misconception, which both Lockwood and Sommers apparently share, that statements of identity consist only of '=' flanked by constants. So restricted, the logical properties of identity can all be obtained, surprisingly, in monadic first-order logic: indeed, this seems to be precisely the interesting logical result Sommers has obtained, despite his claim that the theory of identity can be derived in traditional logic but not in modern predicate logic. This purely logical result has nothing to do with the two senses of 'is', nor does it turn on any particularly interesting features of the theories of proper names of Frege or Mill. And Lockwood's persistence in focusing on these latter issues, rather than on logic, leads him to fail where Sommers (despite himself) succeeds.

1 Let us begin with the famous passage from "On Concept and Object" in which Frege draws his distinction between the 'is' of identity and the 'is' of predication:

> The concept (as I understand the word) is predicative. On the other hand, a name of an object, a proper name, is quite incapable of being used as a grammatical predicate. This admittedly needs elucidation, otherwise it might appear false. Surely one can just as well assert of a thing that it is Alexander the Great, or is the number four, or is the planet Venus, as that it is green or is a mammal? If anybody thinks this, he is not distinguishing the usages of the word "is." In the last two examples, it serves as a copula, as a mere verbal sign of predication. . . . We are here saying that something falls under a concept, and the grammatical predicate stands for this concept. In the first three examples, on the other hand, "is" is used like the "equals" sign

in arithmetic, to express an equation. In the sentence "The morning star is
Venus," we have two proper names, "morning star" and "Venus," for the
same object. In the sentence "the morning star is a planet," we have a proper
name, "the morning star," and a concept word "planet." So far as language
goes, no more has happened than that "Venus" has been replaced by "a
planet"; but really the relation has become wholly different. An equation is
reversible; an object's falling under a concept is an irreversible relation. In
the sentence "the morning star is Venus," "is" is obviously not the mere cop-
ula; its content is an essential part of the predicate, so that the word "Venus"
does not constitute the whole of the predicate. One might say instead: "the
morning star is no other than Venus"; what was previously implicit in the
single word "is" is here set forth in four separate words, and in "is no other
than" the word "is" now really is the mere copula. What is predicated here
is thus not *Venus* but *no other than Venus.* These words stand for a concept;
admittedly only one object falls under this, but such a concept must still
always be distinguished from the object. [5], pp. 43–44

The apparent ease with which we can replace 'a planet' in ostensible predicate
position by 'Venus' would seem to indicate that both are functioning predica-
tively in that context. Benno Kerry, the contemporary whose criticism Frege was
responding to, apparently thought so, and, according to Lockwood, Mill too
had been struck by the similarity and regarded both proper names and concept
words (to use Frege's terminology) alike as predicative. But Frege appeals to the
readers intuition to distinguish

(1)   The morning star is Venus,

which, he says, expresses an identity, from

(2)   The morning star is a planet,

which, he says, does not. He argues that in (2), we have the 'is' of predication,
and the sentence expresses that an object (the morning star) falls under a con-
cept (the concept *planet*), while in (1), we have the 'is' of identity, and the sen-
tence expresses that one object (the morning star) is the very same thing as
another object (Venus). Hence, although (1) and (2) exhibit the same superfi-
cial grammar, they actually receive very different logical analyses: in particu-
lar, (1) is not a predication, and 'Venus' is serving there, not as a predicate, but
as a name for a given object.

    Frege's argument in this passage is none too clear, although I had not come
to realize how unclear it was until Lockwood's criticism forced me to examine
it carefully. Before I turn to Lockwood, however, I would like to explain my
own view about Frege's distinction.

2   Both '_____ is a planet' and '_____ is Venus' count as concept expressions
for Frege, because we can fill the blank space in each case by an *Eigenname* to
form a sentence that is either true or false.[4] In this sense, then, both (1) and (2)
admit of the same logical analysis: both are atomic sentences of the form *Fa.*
Now Frege, as we all know, eschewed talk of subject and predicate as early as
Begriffsschrift ([3], esp. section 3), and it is somewhat surprising (and disap-
pointing) that he should revert back to it in this context. I cannot see, however,
that Frege's claim that (2) is a predication can come to anything more than that

(2) receives the analysis just given. And, insofar as (1) accepts the very same analysis, it too must be a predication. Moreover, since, by virtue of this analysis, (2) expresses that an object (the morning star) falls under a concept (the concept *planet*), then by the very same token, (1) must express that an object (the morning star) falls under a concept (the concept *Venus*).

To be sure, (1) appears to admit of a finer analysis than (2). Since 'Venus' is an *Eigenname*, (1) can be regarded as having been formed from the binary function-expression '_____ is . . . . .' by filling the blank spaces with 'the morning star' and 'Venus', respectively. We do not appear to be able to do this with (2), because 'a planet', on Frege's view, is not an *Eigenname*. But this does not show that the previous analysis is wrong. And it surely does not lead us to conclude that there are different senses of 'is'. From what has been pointed out so far, there is no more reason to think that there are different senses of 'is' than there is to think that because 'saw' is followed by an *Eigenname* in

(3)   John saw Mary,

and by a concept word in

(4)   John saw a girl,

there must be different senses of 'saw'. In each of (3) and (4), a relation is expressed between John and some particular object: in (3), that object is specified as *Mary*, while in (4), that object is said to be *a girl*. We maintain the univocity of 'saw', and also the intuition that '_____ saw . . . . .' is a binary function-expression, by adopting the following gloss for (4):

(5)   Something is a girl and John saw it.

This is the way we would express (4) in first-order logic. The very same analysis, however, is also available to us for (2). That is, in each of (1) and (2), a relation is expressed between the morning star and some particular object: in (1), that object is specified as *Venus*, while in (2), that object is said to be *a planet*. We can maintain the univocity of 'is', supposing that '_____ is . . . . .' is a binary function-expression in both sentences, and locate the difference between (1) and (2) in the specification of the object the morning star is said to be. (2) would then be glossed as

(6)   Something is a planet and the morning star is it.

There is, then, no basis to the claim that (1) is an identity and (2) not. We saw, first, that (1) and (2) can both be given a nonrelational analysis, and in that sense be treated as predications, and second, that (1) and (2) can both be given a relational analysis, and in that sense be treated as identities. Accordingly, there is no reason to think that 'is' has a different sense in (1) from that which it has in (2).

One might be troubled, however, about (6). For the 'is' in the first part of the sentence does not seem to parse as a binary function-expression in any obvious way. The intuition here is that 'a planet' is not serving in that context to denote anything; 'is a planet' should rather be construed there as an indissoluble whole, 'is-a-planet', or, idiomatically, as a verb, 'planets'. Indeed, one is inclined to suppose that (6), unlike (5), requires first-order logic *with identity*

to capture its logical characteristics. But would this yield two senses of 'is'? I think that it would not. To begin, even if the 'is' in the first half of (6) were different from the 'is' in the second half, there would be no reason to suppose that the 'is' in (1) is different from the 'is' in (2). For the fact that we have two apparently distinct verbs in (5) in no way indicates that 'saw' has a different sense in (3) from that which it has in (4). Second, if the 'is' in 'Something is a planet' is to be regarded as part of an indissoluble unit 'is-a-planet', then 'is' no more occurs as a separable meaning unit there than does 'can' in 'canoe'. Unless there is some reason to think that the 'is' in the second half of (6), namely, 'the morning star is it', is ambiguous, there would seem to be only one sense of 'is' in (6). Of course, one might argue that 'is a planet' does not form an indissoluble meaning unit, and that 'a planet' is replaceable by other concept words. But 'Venus' I have argued, has every right to be counted as a concept word; and if we replaced 'a planet' in (6) by 'Venus', the resulting sentence,

(7)   Something is Venus and the morning star is it,

evokes no intuition that the two occurrences of 'is' must have different senses. To be sure, the intuition here is that in each half, '_____ is . . . . .' has the force of '_____ equals . . . . .'. But (6) can be regarded in the same way: if 'Venus is a planet' can be regarded as expressing an identity, then 'Something is a planet' can also be regarded as expressing an identity.

   We have been modeling our analysis of 'is' on 'saw', treating both as binary function-expressions expressing a relation between an object and an object. Both halves of (6) (as well as (7)) could equally have been regarded as predications: (6), for example, could be understood to express that something falls under the concept *planet* as well as the concept *morning star*. One might treat the sentences differently, but one does not have to treat them differently.

   Still, it might be urged, a difference remains in that, in one case, 'is' expresses a relation between an object and an object, while in the other case, 'is' expresses a relation between an object and a concept. This seems to be what Frege had in mind, for he reads (1) as

(8)   The morning star equals Venus,

and he reads (2) as

(9)   The morning star falls under the concept *planet*.

This would not yield an ambiguity, however. If the word were genuinely ambiguous, we should be able to construct one sentence that can be read in two ways, corresponding to the ambiguity in question. Frege has not supplied us with such a sentence. But, given the way in which we have been interpreting Frege's function/argument analysis, it would seem that (1) itself might be just such a sentence. That is, it would seem that (1) could be read in two ways corresponding to the two relations identified: we could take (8) as our reading, or we could take

(10)   The morning star falls under the concept *Venus*,

as our reading, depending on whether we regard (1) as an identity or as a predication. Frege, however, wants to eliminate (10) as a possible reading of (1), because he says that 'Venus', unlike 'a planet', cannot be predicated of an object.

Insofar, then, as the alleged distinction between the two senses of 'is' is intended to buttress an argument designed to show that proper names are not genuine predicates, Frege's is simply a *petitio*: the claim that (1) must be read as (3) rather than as (10) requires that it had already been established that there is no such thing as the concept *Venus*, whereas this is just what Frege is setting out to demonstrate here. In any event, the possibility of the two readings, by itself, does not yield an ambiguity in 'is'. For, if a word were genuinely ambiguous, we should be able to construct a sentence that can be read in two ways, one true and the other false. At best, we have so far established two readings for (1), namely, (8) and (10), but we do not have a situation in which the sentence comes out true on one reading and false on the other. We do not have a case, then, which literally satisfies the classic criterion for ambiguity. Nor should we expect that if there are two logical analyses for a given sentence, that the sentence is thereby ambiguous: we are all familiar with cases where there is no unique first-order translation for a given indicative sentence, but we have no inclination to conclude that the sentence is thereby ambiguous.

Let us approach the issue from the other side and consider the consequence of regarding 'is' as genuinely ambiguous, sometimes meaning 'equals' and sometimes meaning 'falls under'. Then (1) could be read either as (8), or, presumably, as

(11)   The morning star falls under Venus;

and, while (8) is true, (11) would most likely be regarded as false. It is obvious that this is not the result Frege wanted. That is, in claiming that 'is' has more than one sense, he was certainly not attempting to justify (11) as a reading of (1). To the contrary, it would seem, rather, that it was just such a reading that Frege was seeking to rule out as ill-formed. Frege thought that the problem with (11) was that 'Venus', a proper name for Venus, was occupying a position that had to be filled by a term that stands for a concept, and so he argued that a proper name could not serve as a grammatical predicate, i.e., to stand for a concept. But he failed to recognize that

(12)   The morning star falls under a planet

is equally objectionable, even though 'planet' is, on his view, not a proper name, but a term that could serve as a perfectly appropriate grammatical predicate. What he should have argued, I believe, is that (11) is incoherent because 'is Venus' could be interpreted as 'equals Venus' or as 'falls under the concept *Venus*', but not as 'falls under Venus' or as 'equals the concept *Venus*'. But whatever the merits of this particular proposal, this much has now become clear: not only has Frege failed to establish that there are two senses of 'is', but he was arguing for something that, far from supporting the position he was defending, he should most certainly have rejected.

3   Implicit in the quoted passage are two criteria for distinguishing the 'is' of identity. First, there is the *expansion criterion*, as I shall call it: when $\ulcorner A$ is $B \urcorner$ can be expanded to $\ulcorner A$ is identical with $B \urcorner$ or $\ulcorner A$ is no other than $B \urcorner$ and preserve both grammaticality and truth, we have the 'is' of identity, not the 'is' of predication. Second, with a bit of interpretive license, there is the *reversibility*

criterion (as Lockwood calls it): when we can switch the expressions flanking
'is' and preserve both grammaticality and truth, we have the 'is' of identity, not
the 'is' of predication. Neither of these criteria, I will argue, isolates an 'is' of
identity.

The expansion criterion is easily disposed of. To be sure, (1) is equivalent
to

(13)   The morning star is identical with Venus,

which accords well with Frege's claim that in (1) we have the 'is' of identity. But
(2) is equivalent to

(14)   The morning star is identical with a planet,

even though in (2), according to Frege, we have the 'is' of predication. So, the
expansion criterion is no indicator of an 'is' of identity.

Let us turn, then, to the reversibility criterion. Reversibility is connected
with the fact that identity is a symmetrical relation, while the falling of an object
under a concept (supposing this to be a relation) is not. If we read (1) as

(10)   The morning star falls under the concept *Venus*,

which is true, and reversed it, we would get

(15)   The concept *Venus* falls under the morning star,

which, if it made any sense at all, would be false. On the other hand, if we read
(1) as

(8)   The morning star equals Venus,

and reversed it, we would get

(16)   Venus equals the morning star,

which, like (8), is true. But this has no bearing on whether in (1) we have the
'is' of identity or the 'is' of predication, nor, again, on whether that sentence is
an identity or a predication. Frege's actual statement of the criterion in the quo-
tation is about the relations themselves which, as we have just seen, renders it
useless as a criterion for the 'is' of identity. I have therefore taken the liberty
of rephrasing it so that it directly involves 'is'. But how are we to understand
the criterion? Simply reversing the position of the expressions in a sentence yields
no clue about whether the sentence is an identity or a predication. Let us reverse
'the morning star' and 'Venus' in (1) to get,

(17)   Venus is the morning star.

There is no doubt that (1) and (17) can both be regarded as identities. But both
can also be regarded as predications. We could regard (17) as having been
formed, e.g., by filling the blank space in 'Venus is _____' by 'the morning
star'; (1) and (17) would then be no different from an active sentence and its pas-
sive version, a difference Frege had dismissed in *Begriffsschrift*. Perhaps, then,
what Frege has in mind is not simply reversal of position, but (as Lockwood calls
it) reversal of logical role. If we analyse (1) as an identity, then, since 'the morn-
ing star' and 'Venus' are both serving as *Eigennamen*, reversing logical roles

leaves them both serving as *Eigennamen*. But logical roles can also be reversed in a predication. If we read (1) as (10), then 'the morning star' is serving as an *Eigenname* and 'Venus' is part of the predicate; switching roles makes 'Venus' the *Eigenname* and 'the morning star' part of the predicate. This analysis does not yield (15), but

(18)   Venus falls under the concept *morning star*,

which is true, if and only if, (10) is. One might think that my argument depends upon the particular example (1), which Frege regards as an identity; but the same sort of analysis holds for (2). Let us reverse (2):

(19)   A planet is the morning star.

I argued in the previous section that (2) could be regarded as an identity; that same argument holds for (19). In that case, 'the morning star' and 'a planet' would both be occupying argument positions; reversing roles has them both in argument positions again. I also argued in the previous section that (2) could be regarded as a predication, e.g., as

(9)   The morning star falls under the concept *planet*,

with 'the morning star' the *Eigenname* and 'a planet' part of the predicate. To reverse roles here would be to take 'a planet' in the argument position and 'the morning star' as part of the predicate. This would be like reading (19) as

(20)   A planet falls under the concept *morning star*,

and (20) is true if, and only if, (9) is true.

4   Having applied Frege's own function/argument analysis to the sentences (1) and (2), we have found that there is as much reason for supposing that the concept *Venus* is a concept as there is for supposing that the concept *planet* is a concept, and that there is as much reason for supposing that 'Venus' is acting predicatively in (1) as there is for supposing that 'a planet' is acting predicatively in (2). Frege does not seem to be at all justified in claiming that a proper name, in the ordinary sense, cannot serve as a genuine predicate. And the alleged ambiguity in 'is' is irrelevant to this issue. For the decision to regard 'is' as ambiguous only bears on the well-formedness of (11), so whatever we decide about 'is', (8) and (10) remain equally good readings of (1). Nor does there appear to be any good reason to think that in allowing proper names to serve as grammatical predicates, the concept/object distinction collapses. If we take (1) as an identity, i.e., to express a relation between an object and an object, then 'Venus' is not acting predicatively in that context, but is serving as an *Eigenname*, simply to stand for the planet. But if, on the other hand, (1) is taken as a predication, i.e., to express a relation between an object and a concept, then 'Venus' is acting predicatively in that context, and it is serving as a *Begriffswort* to stand for the concept *Venus*. A proper name, in the ordinary sense, can serve either as an *Eigenname* or as a *Begriffswort* and the concept/object distinction remains intact: just as a planet is distinct from the concept *planet*, so too Venus is distinct from the concept *Venus*.

Frege's attempt to support his *Eigenname/Begriffswort* distinction by appealing to two senses of 'is' seems, then, to be thoroughly misguided. Indeed, Frege seems to have been badly confused about the *Eigenname/Begriffswort* distinction. On the one hand, he takes it to correspond, roughly, to Mill's singular/general distinction, for he includes proper names and definite descriptions within the category of *Eigenname*, and he excludes general terms like 'man' and 'planet': these he relegates to the category of *Begriffswort*. On the other hand, he takes the *Eigenname/Begriffswort* distinction to correspond to the logical role a term plays, roughly speaking, as argument-expression, i.e., to stand for an object, or as function-expression, i.e., to stand for a concept. Taken in this way, the *Eigenname/Begriffswort* distinction does not coincide with the singular/general distinction. For proper names, definite descriptions, and even indefinite descriptions ('a man') can all serve, in a given context, as argument-expressions: they can all serve, then, to stand for objects, and so they can all serve as *Eigennamen*. But all of these sorts of expressions can equally serve, in a given context, as function-expressions: they can all serve to stand for concepts, and so they can all serve as *Begriffswörter*. In the context of the issue we have been discussing here, namely, whether sentences like (1) and (2) are to be regarded as identities or predications, only the latter sense of the distinction is of any relevance. The former distinction has no direct bearing on this issue. The only connection is this: if we were to grant this *Eigenname/Begriffswort* distinction, and if (1) and (2) were both treated as identities (i.e., given a relational analysis), then (1) would be atomic and (2) would be nonatomic. Indeed, this seems to me to be what the difference between (1) and (2) comes to.

I am not clear how Frege had come to conflate these two types of *Eigenname/Begriffswort* distinctions, for he was otherwise in fairly good command of all the necessary distinctions, but I suspect that it is connected with his terrible mishandling of the case of 'the concept *horse*'. Is 'the concept *horse*' an *Eigenname* or a *Begriffswort*? It starts with the definite article, and so appears to be an *Eigenname*: on the other hand, it appears to stand for a concept, the concept *horse*, in which case it would have to be a *Begriffswort*. These are the snares from which Frege was trying to extricate himself for the remainder of "On Concept and Object", without, it is generally conceded, much success. I am not prepared to deal with this problem in detail here, but it is worth noting that the thrust of his argument, whether or not it is successful, is to deny what Geach has called "the two-name theory of the proposition" ([6], pp. 34–36). The interest this has for our present thesis is that, on this traditional semantic interpretation of a sentence, 'is' would turn out to be ambiguous. Plato's example in the *Sophist*,

(21) Change is sameness,

is false when 'is' means 'equals', and true when 'is' means 'partakes of'. So, again, although Frege starts out "On Concept and Object" by distinguishing two senses of 'is', the import of that essay is clearly to be that of upholding the univocity of 'is'.

5 Lockwood's rejection of Frege's distinction is somewhat different from my own. Frege's basic claim in the quoted passage is that (1) is an identity and not

a predication, while (2) is a predication and not an identity. Lockwood accepts
Frege's reading of (2), but he rejects Frege's reading of (1): his view, if I under-
stand it correctly, is that (1) is a predication that is also an identity. Both agree,
then, that (1) is an identity and (2) not, but while Frege attributes this differ-
ence to an ambiguity in 'is'. Lockwood attributes it to a difference in the seman-
tics of the terms following 'is'. Lockwood argues that the reason we regard (1)
as an identity and (2) not is that we find 'is' followed by a singular term, 'Venus',
in (1), and by a general term, 'a planet', in (2). But, he continues, it is part of
the meaning of a singular term, unlike a general term, that it is assured of denot-
ing a single object at most; whatever is Venus is thereby identical with Venus.
So, he concludes, the logical difference between (1) and (2) does not force us
to multiply senses of 'is'; the difference is adequately explained by appealing to
the singular/general distinction. (1) can be regarded as a straightforward predi-
cation, with 'is' the usual 'is' of predication and 'Venus' a genuine predicate; the
fact that it is also an identity stems from the logical properties of the singular
term 'Venus'.

    Lockwood's handling of Frege's expansion criterion provides a good exam-
ple of the sort of analysis he is proposing. Lockwood agrees with Frege that the
sentence,

(22)   Everest is Chomolungma

is equivalent to

(23)   Everest is identical with Chomolungma,

but he denies Frege's interpretation of this equivalence:

> "Everest is Chomolungma" may be read as "Everest is identical with Cho-
> molungma" — not, as one might suppose, because "is" is contextually equiv-
> alent to "is identical with," but because "Chomolungma" is contextually
> equivalent to "identical with Chomolungma." [8], p. 479

That is, unlike Frege, who regarded the expansion from (22) to (23) as evidence
that the 'is' in (22) means 'is identical with', Lockwood argues that the expan-
sion might equally be taken as evidence that 'Chomolungma' in (22) is contex-
tually equivalent to the predicative expression 'identical with Chomolungma'.
As such, the identity statement (22) can be taken as a predication: what is predi-
cated of Everest is the attribute of *being identical with Chomolungma.*

    Lockwood has correctly located the difference between (1) and (2): in (1),
'is' is followed by a singular term, while in (2), 'is' is followed by a general term.
And Lockwood is also correct in holding that (1) can be regarded as a predica-
tion. But he has not drawn the correct inference. Thus, for example, in his han-
dling of Frege's expansion criterion, he fails to demonstrate that (23) can be
regarded as a predication. There is, as I have argued, no doubt that (23) can be
given a nonrelational analysis, and in that sense, be treated as a predication, not-
withstanding the words 'identical with' that we find there. For we can regard (23)
as having been formed by filling the blank space in '_____ is identical with
Chomolungma' by the *Eigenname* 'Everest'. Lockwood, however, takes a dif-
ferent approach. 'Chomolungma' and 'identical with Chomolungma', he says,

are contextually indistinguishable, and since, as I understand him, the latter is predicative, so is the former. But what makes 'identical with Chomolungma' predicative? If the two are contextually indistinguishable, as Lockwood claims, then both could be taken to be *Eigennamen*. As such, we could regard (23) as having been formed by filling the blank spaces in '_____ is . . . . .' by 'Everest' and 'identical with Chomolungma', respectively, yielding a relational analysis of (23). So, far from having established a nonrelational analysis of (23), then, Lockwood's seems rather to be an argument for a different relational analysis from the usual one. No doubt, Lockwood, in regarding 'identical with Chomolungma' as a predicate, is simply following Frege, who claims that 'no other than Venus' is predicative, in sharp contrast with 'Venus', which he claimed to be non-predicative. But that distinction, if there is one—and Lockwood has provided very persuasive evidence that there is none—only bears on whether, if a sentence is to be given a relational analysis, that sentence is to be regarded as atomic or not. So even if we agree that 'identical with Chomolungma' is predicative, Lockwood will not have established a nonrelational analysis for (23).

There are, I have argued, two *Eigenname/Begriffswort* distinctions that Frege had not clearly separated, one corresponding to Mill's singular/general distinction, the other to Frege's argument-expression/function-expression distinction. Lockwood recognizes that these are distinct, for he notes that

> we can say of an individual that he "*is* John Stiles," that he "*is* the mayor," that he "*is* an honest man" and that he "*is* tall." These terms may belong to different grammatical *categories*, but they can all, apparently, serve the grammatical *function* of predicate. [8], p. 473

And, with considerable justification, he criticizes Frege for having mistaken the singular/general distinction with a subject/predicate distinction. But instead of separating the two *Eigenname/Begriffswort* distinctions, as I have done, Lockwood runs them together, believing that the argument-expression/function-expression distinction just is the singular/general distinction. As such, he mistakenly infers that the difference between the relational and the nonrelational analysis is purely a matter of whether we have 'is' followed by a singular term or whether we have 'is' followed by a general term. Lockwood therefore ends up by incorporating Frege's confusion into his own theory: the difference between (1) and (2), which, I have argued, amounts to a distinction between an atomic identity in the former case and a molecular identity in the latter case, gets translated into a distinction between a statement that is an identity and a statement that is not an identity.

The clearest example of the failure of Lockwood's analysis lies in his handling of the famous passage in the *Sophist*. My interest is not in Plato scholarship, but in Lockwood's analysis of the passage, so I shall quote his translation:

> It must be admitted and no difficulty must be made about the fact that change is both the same and not the same. For when we say that it is the same and not the same, we are not speaking in the same way. When we say that it is the same, we say this in virtue of its partaking of the same in relation to itself. But when we say that it is not the same, we say this by reason of its communion with the other. By which it is separated from the same and

becomes not that but the other, so that it is again correct to say that it is not the same. 256A10-B4; [8], p. 480

Ackrill holds that Plato is here distinguishing two senses of 'is', the 'is' of identity and the 'is' of predication. Lockwood finds this interpretation "scarcely compelling", and offers "a far more plausible one" in line with his own doctrine of the univocity of 'is':

> It is my belief that Plato sees himself here not as resolving an ambiguity in *estin*, but rather as distinguishing two uses of *tauton*. For us to be able to say truly of change (*kinesis*) that it is *tauton*, *tauton* must be understood to mean "partaking of (the form of) sameness"; and according to Plato, change does so partake, by virtue of being, like everything else, self-identical. For us to be able to assert of change that it is *not tauton*, on the other hand, *tauton* must be understood, instead, to mean simply "(the form of) sameness," which, without change of denotation, we may expand into "identical with (the form of) sameness"; accordingly, *me tauton* may be read as "not identical with sameness" or "distinct from sameness," which I take to be the force of *apochoridzomene tauton*. This accords perfectly with our own unitary account of the verb "to be." In the one case, *tauton* denotes every object which is the same as itself, and *a fortiori* change: so we can say truly, *kinesis estin tauton*; in the other, *tauton* denotes the attribute (or form) of sameness, and hence does not denote change: so we are entitled to assert *kinesis estin me tauton*. A rough analogy would be the way in which, in English, we can truly assert both "The sky is blue" and "The sky is not blue"; not, if I am right, because of an ambiguity in "is," but because "blue" can function either as an adjective, denoting every blue thing, and in particular the sky, or alternatively, as an abstract noun, denoting the color blue. In the latter sense of "blue" the sky is not blue because it is not a color. [8], p. 480

Ackrill and Lockwood, therefore, both hold that the sentence,

(21)   Change is sameness,

is ambiguous; both hold that it is false on the reading

(24)   Change is identical with sameness,

but true on the reading

(25)   Change is partaking of sameness.

I too have argued that this sentence is ambiguous on the standard semantics Lockwood accepts, in marked contrast with either (1) or (2), which are not, so far as I have been able to determine, ambiguous at all. At any rate, Ackrill, voicing the orthodox view, attributes the ambiguity in (21) to 'is': it could either mean 'is identical with' or it could mean 'is partaking of'. Lockwood, on the other hand, in line with his view about 'is', attributes the ambiguity in (21) to two senses of 'sameness', as abstract noun denoting the form or as general term denoting all self-identical things; 'is' remains unequivocally the copula. That is, whereas Ackrill parses (24) as

(24a)   Change (is identical with) sameness,

Lockwood parses it as

(24b)   Change is (identical with sameness);

and whereas Ackrill parses (25) as

(25a)   Change (is partaking of) sameness,

Lockwood parses it as

(25b)   Change is (partaking of sameness).

Has Lockwood disambiguated (21)? I do not think so. If 'sameness' is ambiguous, in the sense that it can serve either as abstract name or as general term, then it can do so in (24b) and (25b) as well as in (21). That is, if 'sameness' is an abstract name denoting the form, then 'identical with sameness' will also be an abstract name denoting that form; on the other hand, if 'sameness' is a general term denoting each and every self-identical object, then 'identical with sameness' will also be a general term denoting each and every self-identical object. As a result, (24b) is ambiguous, even though we have not let 'is' vary. A similar situation holds with respect to (25b). If 'sameness' is a singular term denoting the form, then 'partaking of sameness' will be a general term denoting each and every object identical with itself. If, on the other hand, 'sameness' is a general term, denoting each and every self-identical object, then 'partaking of sameness' will also be a general term, but one which denotes each and every object which partakes of a self-identical object. Here the sentence comes out true each time, nevertheless the different readings of 'sameness' impose different interpretations on the sentence. So, it is not the singular/general distinction by itself that could disambiguate (21), but only when combined with the proper relation, 'is identical with' or 'is partaking of', and this, of course, is just the complication Lockwood had hoped to eliminate.

6   Lockwood's purpose is not "to bury Frege", as he puts it, but to defend a theory of proper names "gleaned from Mill's *Logic*" [9], on which proper names function as genuine predicates. What is predicated *via* the name 'John Stiles', e.g., is the attribute it connotes, namely, that of *being identical with John Stiles.* An identity statement, on his view, is no different from any other subject/predicate statement of the form ⌜*S* is *P*⌝: to say of an individual that he 'is John Stiles' is to express an identity, not as the received view would have it, because 'is' has the special sense of 'equals'—'is', for Lockwood, is univocally the copula—but because the proper name "connotes identity with a certain individual". Lockwood's position is anchored on two legs. First, he rejects Frege's distinction between the two senses of 'is' that was introduced specifically to deny to singular terms in ostensible predicate position a genuinely predicative role. Second, Lockwood reconstructs the elements of Mill's well-known theory of meaning so that proper names are connotative, but not substantially so (as they

are, e.g., on Russell's view). We have already dealt with Frege, and we have seen that there is no problem about taking proper names as predicates, nor of treating sentences like (1) as predications; as such, Lockwood's proposal, on the surface, at least, seems relatively tame. But his program is actually rather ambitious. His aim is to derive the logic of identity within a traditional subject/predicate framework, i.e., one that yields no relational analysis of sentences: it is in this sense that he holds an identity to be no different from other subject/predicate statements. The algebraic properties of identity, along with Leibniz's Law, are then supposed to drop out of the logical laws governing traditional syllogistic, when restricted to these singular predicates like 'John Stiles' which, by their connotation, are logically assured of denoting a single object at most.

The question of whether 'is' has more than one sense is by and large irrelevant to this other question of whether identity need be introduced as primitive. The two issues are connected by confusion. For Lockwood, this confusion shows up in his belief that $\ulcorner$identical with $X\urcorner$ must be a singular term and that $\ulcorner$*being identical with X*$\urcorner$ must express an attribute that applies to one individual at most. To be sure, if X is singular, then $\ulcorner$identical with $X\urcorner$ will be singular; but if X is not singular, neither will $\ulcorner$identical with $X\urcorner$ be singular. Lockwood's proposed reconstruction of Mill, on which the notion of identity is incorporated into the connotation of singular terms, thereby — so he apparently believes — distinguishing singular from general terms, not only is implausible as a reconstruction of Mill, but fails to ensure singularity of denotation for such predicates as 'John Stiles'. These are the points I will argue for in this section.

Lockwood's apparent repudiation of Mill's distinction between connotative and nonconnotative names, one of the cornerstones of his theory, "really constitutes little more than a suggested shift in terminology, aimed at preserving the main content of Mill's claims" ([8], p. 495). For, Lockwood argues, what Mill attempted to capture by distinguishing connotative from nonconnotative names actually falls under the province of the distinction between the referential and attributive *uses* to which these terms are put:[5] whether a term simply stands for an object or picks it out as whatever has the attributes connoted depends upon its having been used referentially or attributively, not upon its having or lacking connotation. "In conflating the attributive-referential distinction with his own connotative-nonconnotative distinction, he [i.e., Mill] is, in effect, confusing a distinction of function with a distinction between different *types* of terms" ([8], p. 484). Once these uses have been properly identified, Lockwood continues, there remains little reason to deny that proper names, words that are significant and informative, have connotation. Finally, since the attribute connoted by 'John Stiles' — that of *being identical with John Stiles* — is "a direct function of what the name denotes, [it is] perfectly in line with Mill's insistence that a proper name has no significance over and above its denoting the object that it does" ([8], p. 495).

There are three essential claims in this argument that Lockwood must defend: (a) that Mill's connotative/nonconnotative distinction exhibits a confusion with the referential/attributive distinction; (b) that *being identical with John Stiles* is something that Mill would acknowledge to be an attribute; (c) that a proper name connotes such an attribute. I will examine each of these.

(a) Lockwood believes that the fact that definite descriptions can be used either referentially or attributively shows that Mill had been confused in holding that proper names lack connotation. "Mill," Lockwood says, "makes the mistake of assuming that it is only such terms as lack a connotation that are capable of being used referentially" ([8], p. 484). I see no reason to think that Mill made such a mistake. But if he had, I would think he was mistaken about the referential/attributive distinction, not the connotative/nonconnotative distinction. Mill had maintained that definite descriptions are connotative while proper names are not: a definite description denotes an object because it has the attributes connoted by the description while a proper name denotes an object simply because it has been assigned to it. The fact that a definite description can be used referentially or attributively does not, it seems to me, undercut the distinction between connotative and nonconnotative names. First, the referential/attributive distinction applies to the *uses* of terms, and there is no reason to think that this pragmatic distinction reflects any error in the semantics of definite descriptions given by Mill. Second, Lockwood nowhere says that proper names can also be used either referentially or attributively. Indeed, he gives every indication that they cannot, or, more accurately, that they can be used only referentially. So, if we speak anachronistically, like Lockwood, then Mill seems to have made just the right move in supposing that it is only such terms as have connotation that are capable of being used attributively. That is, Mill's semantic distinction between connotative and nonconnotative names, far from exhibiting a confusion with the pragmatic distinction between attributive and referential uses, provides just the sort of underpinning needed to explain the difference in the uses to which these expressions can be put.

(b) There is, to some extent, no difficulty for us today in accepting *being identical with John Stiles* or even just *being John Stiles* as an attribute, for we are familiar with the idea of taking an attribute to be that which is expressed by an open sentence: insofar as '*x* is identical with John Stiles' and '*x* is John Stiles' are open sentences, we have our corresponding attributes. Of course, there are some who, mindful of the paradoxes, question whether every open sentence expresses an attribute, and there are some who question our talk of attributes altogether; but let us set these matters aside. The point I wish to emphasize is that this way of regarding attributes derives in large measure from the modern logical analysis of language which replaced the traditional subject/predicate analysis Mill had employed: it cannot, without argument, be imposed upon Mill, and especially when Mill had explicitly denied that proper names connote attributes.

Now, Lockwood does provide an argument:

> [I]t is (perhaps) plausible to maintain that in applying a proper name to an individual, we are not thereby committing ourselves to its possessing any particular set of attributes; but it is surely false to say here that we are not thereby conveying any information regarding it. Mill himself concedes that when we tell someone that "a city . . . is York" or that "a man . . . is Brown or Smith," we are "enabling him to identify the individuals." And while saying which individual a given individual is may not be to ascribe attributes to it, it is certainly to "give information respecting that individual." If Mill is to preserve his equation of a term's connoting attributes with its conveying information regarding that to which it is applied, then he is committed to

using "attribute" in an extended sense, such that saying anything about an
individual counts as predicating an attribute of it. And, in that sense of
"attribute," being identical with a certain individual, that is, having a cer-
tain identity, would itself count as an attribute. [8], p. 494

Mill had supposed that in an identity statement involving proper names, the
information conveyed was purely verbal; like Frege in *Begriffsschrift*, Mill took
the information conveyed to be about the names themselves, not the object(s)
denoted. The difficulties with this view of identity are legion. One in particu-
lar, which Lockwood exploits in the above passage, is that the information sup-
posedly conveyed about the names appears to be translatable into information
about the object(s) denoted. The moral Lockwood draws is that since an iden-
tity statement involving proper names conveys information regarding the indi-
vidual(s) denoted, then, by "Mill's equation," the information conveyed is to be
identified with the attributes connoted by the names. The moral I draw, on the
other hand, is that the notion of "conveying information about something" is
so broad and unstable that it cannot stand the philosophical weight Lockwood
places on it.

    Since, on Lockwood's view, the attribute connoted by a proper name is a
direct function of what it denotes, distinct names of the same object will con-
note the very same attribute. In particular, 'Cicero' will connote the very same
attribute as 'Tully' — *being identical with Cicero* or *being identical with Tully*,
it doesn't matter what you call it — so that 'Cicero is Cicero' and 'Cicero is Tully'
will not only both be true, but they will also express the very same proposition.
But what of the difference in "cognitive value" Frege had called our attention
to? Ought we not to suppose that these identities must express different propo-
sitions? Lockwood thinks not. No doubt these identities do differ in "cognitive
value," as Frege observed, but Lockwood does not believe that this difference
in "cognitive value" should be cashed in for a difference in the propositions
expressed by the sentences. "Frege," he says, "appears to have mistaken an
epistemological point for a semantic one" ([8], p. 497); and he suggests that "a
solution to Frege's problem of nontrivial identities be sought along epistemic or
pragmatic lines, rather than within semantics, narrowly conceived" (p. 497). I
am not persuaded that Frege did confuse epistemological and semantic matters,
as Lockwood argues; but Frege is not the issue here, Lockwood is. And the iden-
tification of attribute connoted with information conveyed seems to be just the
mistake Lockwood charged Frege with. For, if Lockwood is correct at all in sug-
gesting that "Cicero is Tully" conveys information about Cicero — that it enables
us to identify the individual or tell "which individual a given individual is" —
then, surely, 'Cicero is Cicero' must, if it conveys any information at all about
Cicero, convey different information about him. By preserving "Mill's equation"
of attribute connoted with information conveyed, Lockwood would seem to be
forced to take 'Cicero' and 'Tully' to connote different attributes, contravening
his and Mill's "insistence that a proper name has no significance over and above
its denoting the object that it does".

    (c) Lockwood's claim that his ascription of connotation to proper names
is just a "suggested shift in terminology" is unintelligible to me. That a proper
name has no significance over and above its standing for the object that it does

was precisely Mill's reason for saying that proper names lack connotation altogether. Unlike the term 'man', for example, which applies to an individual *because* he has the attributes connoted, namely, *being rational* and *being an animal*, or again, unlike 'the U.S. President who resigned his office to avoid disgrace', which applies to Richard Nixon *because* he has the attribute connoted by the description, there are no attributes *because* of which a proper name applies to a given object. For Lockwood to say that the proper name 'John Stiles' connotes the attribute of *being identical with John Stiles*, he must hold that 'John Stiles' applies to an individual *because* he has the attribute connoted. In what sense is this a terminological shift? Either there is some attribute *because* of which a proper name applies to an individual or there is none. Lockwood says that there is; Mill says that there isn't. This does not look terminological.

Perhaps Lockwood believes that the attribute he claims to be connoted by a proper name is, in some sense, harmless or idle, a "don't care", as the computer people say. But this cannot be so because Lockwood apparently believes that the attribute connoted by a proper name does the same job as the attribute connoted by a general term:

> [A]lthough it may be true that if we know what a proper name connotes we know what it denotes, it is still, in general, a matter of extralinguistic discovery that a given individual is denoted by the name. For we are required to *identify* an individual, tell which individual it is, if we are to know that it is *the* individual for which a given proper name stands. Here we must assure ourselves that an individual has the identity connoted by the name before we can confidently apply the name to it, just as in the case of any other term we must assure ourselves that an individual has the attributes which are connoted by the term before we are justified in applying it to the individual in question. [8], pp. 495–496

That 'Cicero' denotes Cicero is something of a truism; indeed, every instance of the disquotation schema,

'_____' denotes _____,

where the same name fills both blank spaces, is true (if the name denotes at all). There is a similar disquotation schema for general terms, namely,

'_____' is true of _____.

Since Lockwood follows Mill, however, in supposing general terms to denote the objects which they are true of, the first disquotation schema holds for both singular and general terms. Whether or not we know what a term connotes, then, there is a clear sense in which it is true to say that for any singular or general term, if we are familiar with the general disquotation schema for denoting, we know what the term denotes. Knowing the disquotation schema, however, is not enough to determine whether a term applies to a given object. This job is handled in Mill's theory by the notion of *connotation*. To apply a general term to a given individual, say, the term 'man', we must assure ourselves, as Lockwood says, that the individual has the attributes connoted by the term — *being rational* and *being an animal* — before we are justified in applying it to the indi-

vidual in question. Lockwood says, however, that the same procedure holds true for proper names as well. We must first assure ourselves that an individual has the attribute connoted by 'John Stiles'— *being identical with John Stiles*—before we can justifiably apply the name to him. But how can we? Since 'John Stiles' lacks connotation (on Mill's view), there are no attributes the possession of which entails that the individual in question is identical with John Stiles. And, as for the attribute of *being identical with John Stiles*, it would seem, contrary to what Lockwood says, that our reason for supposing that the individual has the identity connoted is that the name applies to him: there is no way we can assure ourselves that an individual has the attribute connoted *before* we are justified in applying it to him. But it is not my job to defend Mill on this score; it is Lockwood's job to show that Mill is wrong. And if he were to try, and if he were to succeed, then he would be right and Mill wrong. This is not a terminological dispute.

So far as I can tell, Lockwood is proposing a variant of the view that to every name (in Mill's sense) there corresponds an attribute which it connotes. This was not Mill's view, and I see no philosophical virtues in torturing it out of him. The variation Lockwood introduces is to take the attribute connoted by a proper name like 'John Stiles' to be *being identical with John Stiles* rather than just *being John Stiles* or, perhaps, *John-Stilesness*. This *is* a terminological difference, for the attribute of *being identical with John Stiles* applies to an individual if, and only if, the attribute of *being John Stiles* does. Indeed, this holds generally: the attribute of *being identical with an animal* applies to an individual if, and only if, the attribute of *being an animal* does. Lockwood believes that the attribute of *being identical with John Stiles* is logically assured of applying to one individual at most; but this would be so, as we have just seen, if and only if the attribute of *being John Stiles* is logically assured of denoting a single object at most. Now, I suppose that if Lockwood could show that *being John Stiles* had this special characteristic and *being an animal* lacked it, then he would have succeeded in marking the connotative/nonconnotative distinction somewhat differently from Mill: instead of supposing that proper names connote nothing, they would connote these special attributes. And I suppose that Lockwood would regard my criticisms in (b) and (c) above as missing the point of his proposal because those aspects of Mill's theory embody Mill's confusion between the connotative/nonconnotative distinction and the referential/attributive distinction. But, as I have tried to argue in this section, (a) Lockwood has not shown any confusion on Mill's part between the connotative/nonconnotative distinction and the referential/attributive distinction; (b) Lockwood has himself apparently confused epistemic and pragmatic issues with semantic ones; and (c) so he has not addressed himself to the important question Mill poses of whether there is some attribute associated with a proper name *because* of which the name applies to an individual. As such, I see no plausible reconstruction of Mill here.

But the most damaging feature of Lockwood's reconstruction of Mill is that, by taking proper names to connote in the way he does, the singular/general distinction, the central distinction for Lockwood's treatment of identity, collapses. What counts as a singular term for Lockwood? Lockwood, of course, is following Mill, and he refers to Mill's characterization of singular terms several times:

An expression such as "the capital of France" is what Mill calls an "individual name," the defining feature of which is that it "can only be predicated of one object consistently with the meaning of the term." [8], p. 477

Now, to repeat, a definite singular term (or individual name) is logically assured of denoting a single object at most. That such an expression "is applicable only to one individual . . . appears from the meaning of the name without any extrinsic proof." [8], p. 477

Lockwood adds the important clause: "What counts, however, is uniqueness of denotation, not grammatical status per se" ([8], p. 478). Considering the expression 'unique in being a female cosmonaut", for example, Lockwood argues that it "cannot logically denote more than a single individual, yet it obviously has the status of a perfectly genuine, albeit complex predicate in 'Valentina Tereshkova is unique in being a female cosmonaut' " ([8], p. 478). So, Lockwood believes that if a term denotes a single object, and its denoting that object is a result of the meaning of the term, then it counts as a singular term: insofar as 'no other than Venus' is assured of denoting a single object at most in virtue of its meaning, it, like 'Venus', is a singular term. That is, unlike Frege, who regards 'Venus' and 'no other than Venus' as being logically distinct expressions, Lockwood regards them as exhibiting a superficial grammatical difference: there is no more significance to this difference than there is to the difference between an adjective and a common noun, like 'angry' and 'angry person', as we adjust a sentence to fit into standard categorical form.

But what can "logically assured of denoting a single object at most" mean? Take Mill's example of 'the capital of France'. In what sense is this term assured of a unique denotation solely in virtue of the *meaning* of the term? The attribute of *being capital of France* carries no implication of unique attribution: there could certainly be more than one capital of France. Rather, it would seem to be the logical particle 'the' which carries any logical implication of uniqueness. But even here, we have no a priori assurance that 'the capital of France' does denote uniquely: indeed, this is the point of Russell's famous analysis of descriptions. What assures us, then, that 'John Stiles' is a singular term? The fact that it connotes the attribute of *being identical with John Stiles* does not assure it of a single denotation unless, of course, it is a singular term — that is, *being identical with John Stiles* assures us of a single denotation if, and only if, *being John Stiles* does. What is it, then, about the semantics of 'John Stiles' that enables us to say that even though 'man' can apply to more than one object in the same sense, and hence, without ambiguity, 'John Stiles' does not? Mill's answer was that 'John Stiles' connoted no attributes: it could not apply to more than one object in the same sense because it had no sense. This explanation is not available to Lockwood, for he takes proper names to connote. And insofar as there might be more than one John Stiles in this world, each will be John Stiles, and therefore be identical with John Stiles. So, 'John Stiles' will apply to each of these in the very same sense, and so it will be no different from 'man' in this regard.

That is, if a term is singular, then it will denote a single object at most; but its being singular does not seem to be something that is (usually) assured by any connotation that it might have, at least not in the way Mill had employed that

notion. If a term is to be *logically* assured of denoting a single object at most, then that assurance must come from *logic* (to whatever extent logic can assure this); seeking that assurance in connotation, as Lockwood has done, reflects the mistaken belief, fostered by Frege's confused discussion in "On Concept and Object," that the notion of identity is conceptually connected with singular terms and not general terms.

7   Lockwood interprets a sentence like (1) as having the form ⌜Every S is P⌝, where S is the predicate 'the morning star' (or, perhaps, to satisfy the demands of grammar, 'thing identical with the morning star') and P is the predicate 'Venus' (or, perhaps, 'thing identical with Venus'). It is in this sense, apparently, that he regards (1) as being of subject/predicate form. Its being an identity is the result of the fact that S and P are both singular terms. At least this seems to be the import of Lockwood's response to Frege's reversibility criterion:

> Consider any sentence of the form "S is P," where . . . I mean to indicate that the terms flanking "is" are, respectively, logical subject and logical predicate. To avoid irrelevant complications, let us assume that the substituend set for "S" is restricted to definite singular terms. Employing Mill's terminology, we can now say that a given utterance of the form "S is P" will express a true statement just in case what(ever) is denoted by "S" is also denoted by "P." This enables us to argue as follows: From the fact that what(ever) is denoted by "S" is also denoted by "P," it does not in general follow that what(ever) is denoted by "P" is also denoted by "S." But it is clear on reflection that this does follow in the special case where we have some a priori assurance that "P," like "S," denotes but a single object. When "P" is a definite singular term we are provided with just this assurance. . . . I suggest that it is this feature of the phrases occupying ostensible predicate position in [identity statements] — the fact that they are both grammatically assured by their meaning of denoting a single object at most — that accounts for their capacity to trade roles with the corresponding subject terms; not their being linked to the latter by some nonpredicative sense of "is." [8], pp. 476–477

Lockwood seems to have put the cart before the horse. What allows us to switch expressions in an identity is the symmetry of the relation, not the singularity of the expressions flanking 'is'. If we consider sentences of the form ⌜A is the father of B⌝, e.g., it is clear that A and B can trade roles, whether they are singular or general; but we cannot switch the expressions preserving truth because the relation is asymmetric. Whether an expression is singular or general is irrelevant to this algebraic point. But, secondly, Lockwood supposes the symmetry of identity to be assured by noting that

(26)   If every S is P then every P is S,

while not in general true, is true when S and P are singular, in the sense that they are logically assured of denoting a single object at most, as if the logical distinction between singular and general is antecedently determined. As we saw in the previous section, Lockwood was unable to make the distinction between singular and general *via* the notion of connotative; there being no such distinction, the

restriction on (26) is hollow. But if we take (26) as, in effect, the defining logical characteristic of singular terms, then we shall be able to get identity.

Let us introduce lower case 'f', 'g', 'h', etc. as predicate letters in monadic first-order logic for such singular predicates as 'x is the morning star', 'x is Venus', 'x is John Stiles'; etc., and add on the axiom

(27) $(x)(fx \supset gx) \supset (x)(gx \supset fx)$

to assure that these singular predicates denote uniquely. Then (1) could be represented in this logic as

(28) $(x)(fx \supset gx)$,

and so represented, its logical properties as an identity are all forthcoming. (27) expresses the symmetry of identity. Reflexivity is assured by the logical truth

(29) $(x)(fx \supset fx)$.

Transitivity is obtained as a special case of the transitivity of implication:

(30) $(x)(((fx \supset gx).(gx \supset hx)) \supset (fx \supset hx))$.

Leibniz's Law, finally, which would be represented by

(31) $(x)(((fx \supset gx).(gx \supset Hx)) \supset (fx \supset Hx))$,

is readily obtained by combining (27) with the transitivity of implication. So, we could define $\ulcorner a = b \urcorner$ as $\ulcorner (x)(x$ is $a \supset x$ is $b)\urcorner$, with the singular terms treated as singular predicates.

This logical way of conceiving of identity is, essentially, due to Sommers, although the axiom he introduces instead of (27) appears to be, in our terms,

(32) $(\exists x)(fx.Gx) \equiv (x)(fx \supset Gx)$,[6]

which carries existential implications the axiomatization described above lacks. But it is not true, as Sommers claims, that the theory of identity is derivable in traditional logic and not in any first-order theory. What Sommers has derived in traditional logic appears to be derivable in monadic first-order logic, and this is the somewhat more limited logic of '=' when it is flanked by constants. Even here, one might protest that we do not have genuine identity, because the lower case predicates could pick out groups of objects that are indiscernible within the language of the theory. "Still," as Quine has remarked about an analogous situation, "no discrepancies between it and genuine identity can be registered in terms of the vocabulary of the theory itself. Even in the perverse case, thus, the method defines something as good as identity for purposes of the theory concerned" ([10], p. 15).

NOTES

1. *Sophist* 256A10-B4. The widely held view that Plato did distinguish two senses of 'is' is argued for by Ackrill in [1].

2. Lockwood is in good company in this confusion. Thomason ([12], pp. 144–145) and Lemmon ([7], p. 160), the two who specifically draw Lockwood's fire, are clearly guilty of confusing the two issues.

3. For a more complete story, see [10], pp. 12–15.

4. The function/argument analysis is explained thoroughly in [4], pp. 21–41.

5. The referential/attributive distinction is due to Donnellan [2].

6. "More generally, the difference between a general and singular term comes to this: if '*Si*' is a singular term, then '*Si*', 'All *Si*', and 'Some *Si*' are interchangeable salva veritate in every subject position" ([11], p. 502).

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