De Re et De Dicto

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In *Prior Analytics* i, 9 Aristotle makes an interesting observation: "It happens sometimes that the conclusion is necessary when only one premiss is necessary; not, however, either premiss taken at random, but the major premiss." Here Aristotle means to sanction such inferences as

(1) Every human being is necessarily rational
(2) Every animal in this room is a human being

∴ (3) Every animal in this room is necessarily rational.

On the other hand, he means to reject inferences of the following sort:

(4) Every rational creature is in Australia
(5) Every human being is necessarily a rational creature

∴ (6) Every human being is necessarily in Australia.

Aristotle would presumably accept as sound the inference of (3) from (1) and (2) (granted the truth of 2). But if so, then (3) is not to be read as

(3′) It is necessarily true that every animal in this room is rational;

for (3′) is clearly false. Instead, (3) must be construed, if Aristotle is correct, as the claim that each animal in this room has a certain property—the property of being rational—*necessarily* or *essentially*. That is to say, (3) must be taken as an expression of modality *de re* rather than modality *de dicto*. And what this means is that (3) is not the assertion that a certain *dictum* or proposition—*every animal in this room is rational*—is necessarily true, but is instead the assertion that each *res* of a certain kind has a certain property *essentially* or *necessarily*.

In *Summa Contra Gentiles* Thomas considers the question whether God's foreknowledge of human action—a foreknowledge that consists, according to Thomas, in God's simply *seeing* the relevant action taking place—is consistent with human freedom. In this connection he inquires into the truth of

(7) What is seen to be sitting is necessarily sitting.

For suppose God sees at t_1 that Theatetus is sitting at t_2. If (7) is true, then presumably Theatetus is necessarily sitting at t_2, in which case this action cannot be freely performed.

Thomas concludes that (7) is true if taken *de dicto* but false if taken *de re*; that is,

(7′) It is necessarily true that whatever is seen to be sitting is sitting

is true but

(7″) Whatever is seen to be sitting has the property of sitting essentially

is false. The deterministic argument, however, requires the truth of (7″); and hence that argument fails. Like Aristotle, then, Aquinas appears to believe that modal statements are of two kinds. Some predicate a modality of another statement (modality *de dicto*); but others predicate of an object the necessary or essential possession of a property; and these latter express modality *de re*.

But what is it, according to Aristotle and Aquinas, to say that a certain object has a certain property essentially or necessarily? That, presumably, the object in question *couldn't conceivably have lacked* the property in question; that under no possible circumstances could that object have failed to possess that property. I am thinking of the number 17; what I am thinking of, then, is prime; and *being prime*, furthermore, is a property that it couldn't conceivably have lacked. The world could have turned out quite differently; the number 17 could have lacked many properties that in fact it has—the property of having just been mentioned would be an example. But that it should have lacked the property of being prime is quite impossible. And a statement of modality *de re* asserts of some object that it has some property essentially in this sense.

Furthermore, according to Aquinas, where a given statement of modality *de dicto*—(7′), for example—is true, the corresponding statement of modality *de re*—(7″), in this instance—may be false. We might add that in other such pairs the *de dicto* statement is false but the *de re* statement true; if I'm thinking of the number 17, then

(8) What I'm thinking of is essentially prime

is true, but

(9) The proposition *what I am thinking of is prime* is necessarily true

is false.

The distinction between modality *de re* and modality *de dicto* is not confined to ancient and medieval philosophy. In an unduly neglected paper "External and Internal Relations," G. E. Moore discusses the idealistic doctrine of internal relations, concluding that it is false or confused or perhaps both. What is presently interesting is that he takes this doctrine to be the claim that all *relational properties* are internal—which claim, he thinks, is just the proposition that every object has each of its relational properties *essentially* in the above sense. The doctrine of internal relations, he says, "implies, in fact, quite generally, that any term which does in fact have a particular relational property, could not have existed without having that property. And in saying this it obviously flies in the face of common sense. It seems quite obvious that in the case of many relational properties which things have, the fact that they have them is a *mere matter of fact*; that the things in question *might* have existed without having them".[1] Now Moore is prepared to concede that objects *do* have *some* of their relational properties essentially. Like Aristotle and Aquinas, therefore, Moore holds that some objects have some of their properties essentially and others non-essentially or accidently.

One final example: Norman Malcolm believes that the Analogical Argument for other minds requires the assumption that one must learn what, for example, *pain* is "from his own case." But, he

[1] *Philosophical Studies*, p. 289.

says, "if I were to learn what pain is from perceiving my own pain then I should, necessarily, have learned that pain is something that exists only when I feel pain. For the pain that serves as my paradigm of pain (i.e., my own) has the property of existing only when I feel it. That property is essential, not accidental; it is nonsense to suppose that the pain I feel could exist when I did not feel it. So if I obtain my *conception* of pain from pain that I experience, then it will be a part of my conception of pain that I am the only being that can experience it. For me it will be a *contradiction* to speak of *another's* pain."[2]

This argument appears to require something like the following premiss:

> (10) If I acquire my concept of C by experiencing objects and all the objects from which I get this concept have a property P essentially, then my concept of C is such that the proposition *Whatever is an instance of C has P* is necessarily true.

Is (10) true? To find out, we must know more about what it is for an object to have a property essentially. But initially, at least, it looks as if Malcolm means to join Aristotle, Aquinas, and Moore in support of the thesis that objects typically have both essential and accidental properties; apparently he means to embrace the conception of modality *de re*.

A famous and traditional conception, then, the idea of modality *de re* is accepted, explicitly or implicitly, by some contemporary philosophers as well; nevertheless it has come under heavy attack in recent philosophy. In what follows I shall try to defend the conception against some of these attacks. First, however, we must state more explicitly what it is that is to be defended. Suppose we describe the *de re* thesis as the dual claim that (a) certain objects have some of their properties essentially, and (b) where P is a property, *having P essentially* is also a property—or, as we might also put it, where *being F* is a property, so is *being F necessarily*. What is the force of this latter condition? Suppose we define the locution "has sizeability" as follows:

D_1 x has sizeability = def. $\ulcorner x \urcorner$ contains more than six letters.

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[2] "Wittgenstein's *Philosophical Investigations*," *Philosophical Review*, LXIII, 1954. Reprinted in Malcolm's *Knowledge and Certainty*, (Prentice-Hall, 1963). The quoted passage is on p. 105 of the latter volume.

Here the peculiar quotation-like marks around the second occurrence of 'x' indicate that it is to be supplanted by the result of quoting the singular term that supplants its first occurrence. D_1 is a definitional scheme enabling us to eliminate any sentence or phrase of the form "______ has sizeability" (where the blank is filled by a name or definite description) in favor of a synonymous sentence or phrase that does not contain the word 'sizeability'. As such it is unobjectionable; but notice that its range of applicability is severely limited. D_1 gives no hint as to what might be meant by a sentence like "Most of the world's great statesmen have sizeability" or "Your average middle linebacker has sizeability." And accordingly, while it is true that

(11) Pico della Mirandola has sizeability,

it would be a piece of sheer confusion to conclude

(12) Therefore there is at least one thing that has sizeability;

for as yet these words have been given no semblance of sense. This peculiarity of D_1 is connected with another. To find out whether nine has sizeability we are directed to consider whether 'nine' contains more than six letters; since it does not, it is false that nine has sizeability. On the other hand, 'the number nine' contains more than six letters; hence the number nine has sizeability.

What this shows, I take it, is that sizeability is not a property —that is, the context "x has sizeability" does not, under the suggested definition, express a property. The proposition *the number nine has sizeability* is true but does not predicate a property of the number nine. For suppose this context *did* express a property: then the number nine would have it, but nine would lack it, a state of affairs conflicting with

(13) Where P is any property and x and y any individuals, x is identical with y only if x has P if and only if y has P.

Like Caesar's wife, this principle (sometimes called the Indiscernibility of Identicals) is entirely above reproach. (Of course the same cannot be said for

(13′) Singular terms denoting the same object can replace each other in any context *salva veritate*,

a 'principle' that must be carefully distinguished from (13) and one that, for most languages, at least, is clearly false.)

(13), then, lays down a condition of propertyhood; any property is had by anything identical with anything that has it. The second clause of the *de re* thesis asserts that P is a property only if *having P essentially* is; part of the force of this claim, as we now see, is that if an object x has a property P essentially, then so does anything identical with x. The number nine, for example, is essentially composite; so, therefore, is the number of planets, despite the fact that

(14) The number of planets is composite

is not a necessary truth.

Now the *de re* thesis has been treated with a certain lack of warmth by contemporary philosophers. What are the objections to it? According to William Kneale, the view in question is based on the assumption that

> properties may be said to belong to individuals necessarily or contingently, as the case may be, without regard to the ways in which the individuals are selected for attention. It is no doubt true to say that the number 12 is necessarily composite, but it is certainly not correct to say that the number of apostles is necessarily composite, unless the remark is to be understood as an elliptical statement of relative necessity. And again, it is no doubt correct to say that this at which I am pointing is contingently white, but it is certainly not correct to say that the white paper at which I am looking is contingently white.[3]

The conclusion of this argument, pretty clearly, is that an object does not have a property necessarily *in itself* or *just as an object*; it has it necessarily or contingently, as the case may be, *relative to* certain *descriptions of the object.* "Being necessarily composite," on Kneale's view, is elliptical for something like "Being necessarily composite relative to description D." And hence it does not denote a *property*; it denotes, instead, a three termed *relation* among an object, a description of that object, and a property.

Kneale's argument for this point seems to have something like the following structure:

(15) 12 = the number of apostles
(16) The number 12 is necessarily composite

[3] "Modality *De Dicto* and *De Re*," in *Logic, Methodology and Philosophy of Science*, ed. Nagel, Suppes, and Tarski, (Stanford Univ. Press, 1962), p. 629.

(17) If (16), then if *being necessarily composite* is a property, 12 has it.
(18) The number of the apostles is not necessarily composite.
(19) If (18), then if *being necessarily composite* is a property, the number of the apostles lacks it.

∴ (20) *Being necessarily composite* is not a property.

But *being composite* is certainly a property; hence it is false that where *being F* is a property, so is *being F necessarily*; and hence the *de re* thesis is mistaken.

Now clearly Kneale's argument requires as an additional premiss the Indiscernibility of Identicals—a principle the essentialist will be happy to concede. And if we add this premiss then the argument is apparently valid. But why should we accept (18)? Consider an analogous argument for the unwelcome conclusion that *necessary truth* or *being necessarily true* is not a property that a proposition has in itself or just as a proposition, but only relative to certain descriptions of it:

(21) The proposition that $7 + 5 = 12$ is necessarily true
(22) The proposition I'm thinking of is not necessarily true
(23) The proposition that $7 + 5 = 12$ is identical with the proposition I'm thinking of

∴ (24) *Being necessarily true* is not a property.

This argument is feeble and unconvincing. One immediately objects that if (23) is true then (22) is false. How can we decide about the truth of (22) unless we know *which proposition it is* that I'm thinking of? But isn't the very same answer appropriate with respect to (18) and (15)? If (15) is true, then presumably (18) is false. And so the question becomes acute: why *does* Kneale take (18) to be true? The answer, I believe, is that he is thinking of sentences of the form "x has P necessarily" as defined by or short for corresponding sentences of the form "the proposition *x has P* is necessarily true."

Quine offers a similar but subtler argument:

> Now the difficulty . . . recurs when we try to apply existential generalization to modal statements. The apparent consequence:
>
> (Q30) $(\exists x)$ (*x* is necessarily greater than 7)
>
> of

(Q15) 9 is necessarily greater than 7

raises the same question as did (Q29). What is this number which, according to (Q30), is necessarily greater than 7? According to (Q15), from which (Q30) was inferred, it was 9, that is, the number of planets; but to suppose this would conflict with the fact that

(Q18) the number of planets is necessarily greater than 7

is false. In a word, to be necessarily greater than 7 is not a trait of a number but depends on the manner of referring to the number . . . . . Being necessarily or possibly thus and so is in general not a trait of the object concerned, but depends on the manner of referring to the object.[4]

This argument does not wear its structure upon its forehead. But perhaps Quine means to argue (a) that being necessarily greater than 7 is not a trait of a number, and hence (b) that existential generalization is inapplicable to (Q15), so that (Q30) is meaningless or wildly and absurdly false. And presumably we are to construe the argument for (a) as follows:

(25) If *being necessarily greater than* 7 is a trait of a number, then for any numbers n and m, if n is necessarily greater than 7 and $m = n$, then m is necessarily greater than 7
(26) 9 is necessarily greater than 7
(27) It is false that the number of planets is necessarily greater than 7
(28) 9 = the number of planets

∴ (29) Being necessarily greater than 7 is not a trait of a number.

But why does Quine accept (27)? He apparently infers it from the fact that the proposition *the number of planets is greater than* 7 is not necessarily true. This suggests that he takes the context 'x is necessarily greater than 7' to be short for or explained by 'the proposition *x is greater than 7* is necessarily true.' Like Kneale, Quine apparently endorses

D_2 x has P essentially = def. the proposition x *has* P is necessarily true

[4] *From a Logical Point of View*, 2nd edition, (New York: Harper & Row, 1963), p. 148.

as an accurate account of what the partisan of the *de re* thesis means by his characteristic assertions.

Now D_2 is a definitional schema that resembles D_1 in important respects. In particular, its 'x' is a schematic letter or place marker, not a full-fledged individual variable. Thus it enables us to replace a sentence like 'Socrates has rationality essentially' by a synonymous sentence that does not contain the term 'essentially'; but it gives no hint at all as to what that term might mean in such a sentence as 'Every animal in this room is essentially rational'. And what Quine and Kneale show, furthermore, is that a context like 'x has rationality essentially', *read in accordance with* D_2, resembles 'x has sizeability' in that it does not express a property or trait. So if D_2 is an accurate account of modality *de re*, then indeed Quine and Kneale are correct in holding the *de re* thesis incoherent. But why suppose that it *is*? Proposing to look for cases of modality *de re,* Kneale declares that none exist, since 'being necessarily thus and so', he says, expresses a three-termed relation rather than a property of objects. What he offers as argument, however, is that 'being necessarily thus and so' read *de dicto*—read in the way D_2 suggests—does not express a property. But of course from this it by no means follows that Aristotle, Aquinas, *et al.* were mistaken; what follows is that if they were not, then D_2 does not properly define modality *de re.*

But are we not a bit premature? Let us return for a moment to Kneale's argument. Perhaps he does not mean to foist off D_2 on Aristotle and Aquinas; perhaps we are to understand his argument as follows. We have been told that 'x has P essentially' means that it is impossible or inconceivable that x should have lacked P; that there is no conceivable set of circumstances such that, should they have obtained, x would not have had P. Well, consider the number 12 and the number of apostles. Perhaps it is impossible that the number 12 should have lacked the property of being composite; but it is certainly possible that the number of apostles should have lacked it; for clearly the number of apostles could have been 11, in which case it would not have been composite. Hence *being necessarily composite* is not a property and the *de re* thesis fails.

How could Aristotle and his essentialist confreres respond to this objection? The relevant portion of the argument may perhaps be stated as follows:

(30) The number of apostles could have been 11

(31) If the number of apostles had been 11, then the number of apostles would have been prime

Hence

(32) It is possible that the number of apostles should have been prime

and therefore

(33) The number of apostles does not have the property of being composite essentially.

But one who accepts the *de re* thesis has an easy retort. The argument is successful only if (33) is construed as the assertion *de re* that a certain number—12, as it happens—has the property of being composite essentially. Now (32) can be read *de dicto,* in which case we may put it more explicitly as

(32a) The proposition *the number of apostles is prime* is possible;

it may also be read *de re,* that is, as

(32b) The number that numbers the apostles (that is, the number that *as things in fact stand* numbers the apostles) could have been prime.

The latter, of course, entails (33); the former does not. Hence we must take (32) as (32b). Now consider (30). The same *de re-de dicto* ambiguity is once again present. Read *de dicto* it makes the true (if unexciting) assertion that

(30a) The proposition *there are just 11 apostles* is possible.

Read *de re* however, that is, as

(30b) The number that (as things in fact stand) numbers the apostles could have been 11

it will be indignantly repudiated by the *de re* modalist; for the number that numbers the apostles is 12 and accordingly couldn't have been 11. We must therefore take (30) as (30a).

This brings us to (31). If (30a) and (31) are to entail (32b), then (31) must be construed as

(31a) If the proposition *the number of apostles is 11* had been true, then the number that (as things in fact stand) numbers the apostles would have been prime.

But surely this is false. For what it says is that if there had been 11 apostles, then the number that in fact *does* number the apostles—the number 12—would have been prime; and this is clearly rubbish. No doubt any vagrant inclination to accept (31a) may be traced to an unremarked penchant for confusing it with

(34) If the proposition *the number of apostles is 11* had been true, then the number that *would have* numbered the apostles would have been prime.

(34), of course, though true, is of no use to Kneale's argument.

This first objection to the *de re* thesis, therefore, appears to be at best inconclusive. Let us therefore turn to a different but related complaint. Quine argues that talk of a difference between necessary and contingent attributes of an object is baffling:

> Perhaps I can evoke the appropriate sense of bewilderment as follows. Mathematicians may conceivably be said to be necessarily rational and not necessarily two-legged; and cyclists necessarily two-legged and not necessarily rational. But what of an individual who counts among his eccentricities both mathematics and cycling? Is this concrete individual necessarily rational and contingently two-legged or vice versa? Just insofar as we are talking referentially of the object, with no special bias towards a background grouping of mathematicians as against cyclists or vice versa, there is no semblance of sense in rating some of his attributes as necessary and others as contingent. Some of his attributes count as important and others as unimportant, yes, some as enduring and others as fleeting; but none as necessary or contingent.[5]

Noting the existence of a philosophical tradition in which this distinction *is* made, Quine adds that one attributes it to Aristotle "subject to contradiction by scholars, such being the penalty for attributions to Aristotle." Nonetheless, he says, the distinction is "surely indefensible."

Now this passage reveals that Quine's enthusiasm for the distinction between essential and accidental attributes is less than

[5] *Word and Object*, (MIT Press, 1960), p. 199.

dithyrambic; but how, exactly, are we to understand it? Perhaps as follows. The essentialist, Quine thinks, will presumably accept

(35) Mathematicians are necessarily rational but not necessarily bipedal

and

(36) Cyclists are necessarily bipedal but not necessarily rational.

But now suppose that

(37) Paul J. Swiers is both a cyclist and a mathematician.

From these we may infer both

(38) Swiers is necessarily rational but not necessarily bipedal

and

(39) Swiers is necessarily bipedal but not necessarily rational

which appear to contradict each other twice over.

This argument is unsuccessful as a refutation of the essentialist. For clearly enough the inference of (39) from (36) and (37) is sound only if (36) is read *de re*; but, read *de re,* there is not so much as a ghost of a reason for thinking that the essentialist will accept it. No doubt he will concede the truth of

(40) *All (well-formed) cyclists are bipedal* is necessarily true, but *all cyclists are rational,* is, if true, contingent;

he will accept no obligation, however, to infer that well-formed cyclists all have bipedality essentially and rationality (if at all) accidentally. Read *de dicto,* (36) is true but of no use to the argument; read *de re* it will be declined (no doubt with thanks) by the essentialist.

Taken as a refutation of the essentialist, therefore, this passage misses the mark; but perhaps we should emphasize its second half and take it instead as an expression of (and attempt to evoke) a sense of puzzlement as to what *de re* modality might conceivably be. A similar expression of bewilderment may be found in *From A Logical Point of View:*

An object, of itself and by whatever name or none, must be

> seen as having some of its traits necessarily and other contingently, despite the fact that the latter traits follow just as analytically from some ways of specifying the object as the former do from other ways of specifying it.

And

> This means adapting an invidious attitude towards certain ways of specifying *x* . . . and favoring other ways . . . as somehow better revealing the "essence" of the object.

But "such a philosophy," he says, "is as unreasonable by my lights as it is by Carnap's or Lewis's" (155-156).

Quine's contention seems in essence to be this: according to the *de re* thesis a given object must be said to have certain of its properties essentially and others accidentally, despite the fact that the latter follow from certain ways of specifying the object just as the former do from others. So far, fair enough. Snub-nosedness (we may assume) is not one of Socrates' essential attributes; nonetheless it follows (in Quine's sense) from the description "the snub-nosed teacher of Plato." And if we add to the *de re* thesis the statement that objects have among their essential attributes certain non-truistic properties—properties, which, unlike *is red or not red,* do not follow from *every* description—then it will also be true, as Quine suggests, that ways of uniquely specifying an object are not all on the same footing; those from which each of its essential properties follows must be awarded the accolade as best revealing the essence of the object.

But what, exactly, is "unreasonable" about this? And how is it baffling? Is it just that this discrimination among the unique ways of specifying 9 is arbitrary and high-handed? But it is neither, if the *de re* thesis is true. The real depth of Quine's objection, as I understand it, is this: I think he believes that "A's are necessarily B's" *must,* if it means anything at all, mean something like "*All A's are B's* is necessary"; for "necessity resides in the way we talk about things, not in the things we talk about" (*Ways of Paradox* p. 174). And hence the bafflement in asking, of some specific individual who is both cyclist and mathematician, whether he is essentially rational and contingently 2-legged or vice versa. Perhaps the claim is finally, that while we can make a certain rough sense of modality *de dicto,* we can understand modality *de re* only if we can explain it in terms of the former.

It is not easy to see why this should be so. An object has a given property essentially just in case it couldn't conceivably have lacked that property; a proposition is necessarily true just in case it couldn't conceivably have been false. Is the latter more limpid than the former? Is it harder to understand the claim that Socrates could have been a planet than the claim that the proposition *Socrates is a planet* could have been true? No doubt for any property P Socrates has, there is a description of Socrates from which it follows; but likewise for any true proposition p there is a description of p that entails truth. If the former makes nugatory the distinction between essential and accidental propertyhood, the latter pays the same compliment to that between necessary and contingent truth. I therefore do not see that modality *de re* is in principle more obscure than modality *de dicto*. Still, there are those who do or think they do; it would be useful, if possible, to *explain* the *de re* *via* the *de dicto*. What might such an explanation come to? The following would suffice: a general rule that enabled us to find, for any proposition expressing modality *de re*, an equivalent proposition expressing modality *de dicto*, or, alternatively, that enabled us to replace any sentence containing *de re* expressions by an equivalent sentence containing *de dicto* but no *de re* expressions.

Earlier we saw that

D_2 x has P essentially = def. the proposition x has P is necessarily true

is incompetent as an account of the *de re* thesis if taken as a definitional scheme with 'x' as schematic letter rather than variable. Will it serve our present purposes if we write it as

D_2' x has P essentially if and only if the proposition that x has P is necessarily true,

now taking 'x' as full fledged individual variable? No; for in general there will be no such thing, for a given object x and property P, as *the* proposition that x has P. Suppose x is the object variously denoted by "the tallest conqueror of Everest," "Jim Whittaker," and "the manager of the Recreational Equipment Cooperative." What will be the proposition that x has, e.g., the property of being 6′7″ tall? *The tallest conqueror of Everest is 6′7″ tall?* *Jim Whittaker is 6′7″ tall?* *The manager of the Recreational Equipment Coop is 6′7″ tall?* Or perhaps *the object variously denoted by 'the conqueror of Everest', 'Jim Whittaker' and 'the manager of the Recreational*

Equipment Cooperative' is 6′7″? Each of these predicates the property in question of the object in question; hence each has as good a claim to the title "*the* proposition that x has P" as the others; and hence none has a legitimate claim to it. There are *several* "propositions that x has P"; and accordingly no such thing as *the* proposition that x has P.

Our problem, then, in attempting to explain the *de re* via the *de dicto*, may be put as follows: suppose we are given an object x, a property P and the set S of propositions that x has P—that is, the set S of singular propositions each of which predicates P of x. Is it possible to state general directions for picking out some member of S—call it the kernel proposition with respect to x and P—whose *de dicto* modal properties determine whether x has P essentially? If we can accomplish this, then, perhaps, we can justly claim success in explaining the *de re* via the *de dicto*. We might make a beginning by requiring that the kernel proposition with respect to x and P—at any rate for those objects x with names—be one that is expressed by a sentence whose subject is a proper name of x. So we might say that the kernel proposition with respect to Socrates and rationality is the proposition *Socrates has rationality;* and we might be inclined to put forward, more generally,

> D_3 The kernel proposition with respect to x and P ('$K(x, P)$') is the proposition expressed by the result of replacing 'x' in 'x has P' by a proper name of x

adding

> D_4 An object x has a property P essentially if and only if $K(x, P)$ is necessarily true.

Now of course x may share its name with other objects, so that the result of the indicated replacement is a sentence expressing several propositions. We may accommodate this fact by adding that the kernel proposition with respect to x and P must be a member of S—that is, it must be one of the propositions that x has P. (A similar qualification will be understood below in D_5-D_9.) More importantly, we must look into the following matter. It is sometimes held that singular propositions ascribing properties to Socrates—such propositions as *Socrates is a person, Socrates is a non-number* and *Socrates is self-identical*—entail that Socrates exists, that there is such a thing as Socrates. This is not implausible. But if it is true, then D_3 and D_4 will guarantee that Socrates has none of his properties essentially.

For *Socrates exists* is certainly contingent, as will be, therefore, any proposition entailing it. K(Socrates, self-identity), accordingly, will be contingent if it entails that Socrates exists; and by D_4 self-identity will not be essential to Socrates. Yet if *anything* is essential to Socrates, surely self-identity is.

But *do* these propositions entail that Socrates exists? Perhaps we can sidestep this question without settling it. For example, we might replace D_4 by

> D_5 x has P essentially if and only if K(x, existence) entails K(x, P).[6]

Then Socrates will have self-identity and personhood essentially just in case *Socrates exists* entails *Socrates is self-identical* and *Socrates is a person*; and these latter two need not, of course, be necessary. D_5, however, has its peculiarities. Among them is the fact that if we accept it, and hold that existence is a property, we find ourselves committed to the dubious thesis that everything has the property of existence essentially. No doubt the number seven can lay legitimate claim to this distinction; the same can scarcely be said, one supposes, for Socrates. Accordingly, suppose we try a different tack: suppose we take the kernel of Socrates and rationality to be the proposition that Socrates *lacks rationality*—that is, the proposition *Socrates has the complement of rationality*. Let us replace D_3 by

> D_6 K(x, P) is the proposition expressed by the result of replacing 'x' in 'x lacks P' by a proper name of x,

revising D_4 to

> D_4' x has P essentially if and only if K(x, P) is necessarily false.

Now D_4' is open to the following objection. The proposition

> (41) Socrates is essentially rational

entails

> (42) Socrates is rational.

We moved to D_6 and D_4' to accommodate the suggestion that (42) is at best *contingently* true, in view of its consequence that Socrates exists. But if (42) is contingent, then so is (41). It is plausible to suppose, however, that

[6] This is apparently Moore's course; see above pp. 3, 4.

(43) K(Socrates, rationality) is necessarily false

is, if true at all, necessarily true. But if so, then (in view of the fact that no necessary truth is equivalent to one that is merely contingent) (43) cannot be equivalent to (41); D_4' is unacceptable.[7] Fortunately, a simple remedy is at hand; we need only add a phrase to the right-hand side of D_4' as follows:

D_4'' x has P essentially if and only if x has P and K(x, P) is necessarily false.

(41), then, is equivalent, according to D_4'', to

(44) Socrates is rational and K(Socrates, rationality) is necessarily false.

(44) is contingent if its left-hand conjunct is. Furthermore, it no longer matters whether or not *Socrates is rational* entails that Socrates exists. Existence, finally, will not be an essential property of Socrates; for even if attributions of personhood or self-identity to Socrates entail that he exists, attributions of non-existence do not.

A difficulty remains, however. For what about this '*P*' in D_6? Here we encounter an analogue of an earlier difficulty. If, in D_6, we take '*P*' as schematic letter, then K(Socrates, Socrates' least significant property) will be

(45) Socrates lacks Socrates' least significant property;

but K(Socrates, snubnosedness) will be

(46) Socrates lacks snubnosedness.

Since (45) but not (46) is necessarily false, we are driven to the unhappy result that Socrates has his least significant property essentially and snubnosedness accidently, despite the fact (as we shall assume for purposes of argument) that snubnosedness *is* his least significant property. If we take 'P' as property variable, however, we are no better off; for now there will be no such thing as, for example, K(Socrates, personhood). According to D_6, K(x, P) is to be the proposition expressed by the result of replacing 'x' in 'x lacks *P*' by a proper name of x; the result of replacing 'x' in 'x lacks *P*' by a proper name of Socrates is just 'Socrates lacks *P*', which expresses no proposition at all.

Now we resolved the earlier difficulty over 'x' in D_2 by requir-

[7] Here I am indebted to William Rowe for a helpful comment.

ing that 'x' be replaced by a proper name of x. Can we execute a similar maneuver here? It is not apparent that 'snub-nosedness' is a proper name of the property *snub-nosedness,* nor even that properties ordinarily have proper names at all. Still, expressions like 'whiteness,' 'masculinity,' 'mean temperedness,' and the like, differ from expressions like 'Socrates' least important property,' 'the property I'm thinking of,' 'the property mentioned on page 37,' and the like, in much the way that proper names of individuals differ from definite descriptions of them. Suppose we call expressions like the former 'canonical designations.'[8] Then perhaps we can resolve the present difficulty by rejecting D_5 in favor of

> D_7 K(x, P) is the proposition expressed by the result of replacing 'x' and 'P' in 'x lacks P' by a proper name of x and a canonical designation of P.

We seem to be making perceptible if painful progress. But now another difficulty looms. For of course not nearly every object is named. Indeed, if we make the plausible supposition that no name names uncountably many objects and that the set of names is countable, it follows that there are uncountably many objects without names. And how can D_4'' and D_7 help us when we wish to find the *de dicto* equivalent of a *de re* proposition about an unnamed object? Worse, what shall we say about *general de re* propositions such as

> (47) Every real number between 0 and 1 has the property of being less than 2 essentially?

What is the *de dicto* explanation of (47) to look like? Our definitions direct us to

> (48) For every real number r between 0 and 1, K(r, being less than 2) is necessarily false.

Will (48) do the trick? It is plausible to suppose not, on the grounds that what we have so far offers no explanation of what the kernel of r and P for *unnamed* r might be.[9] If we think of D_7 as the specification or definition of a function, perhaps we must concede that the function is defined only for named objects and canonically desig-

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[8] I owe this phrase to Richard Cartwright. See his "Some Remarks on Essentialism," *Journal of Philosophy,* LXV, 20, p. 631. See also, in this connection, David Kaplan's discussion of *standard names* in "Quantifying In," *Synthese,* Vol. 19, Nos. 1/2, December, 1968, p. 194 ff.

[9] Cartwright, *op. cit.,* p. 623.

nated properties. Hence it is not clear that we have any *de dicto* explanation at all for such *de re* propositions as (47).

Now of course if we are interested in a singular *de re* proposition we can always name the object involved. If the set of unnamed objects is uncountable, however, then no matter how enthusiastically we set about naming things, it might be said, there will always remain an uncountable magnitude of unnamed objects;[10] and hence D_4'' and D_7 are and will remain incapable of producing a *de dicto* equivalent for general propositions whose quantifiers are not severely restricted.

This argument conceals an essential premiss: it is sound only if we add some proposition putting an upper bound on the number of objects we can name at a time. We might suppose, for example, that it is possible to name at most countably many things at once. But is this really obvious? Can't I name all the real numbers in the interval (0,1) at once? Couldn't I name them all 'Charley,' for example? If all Koreans are named 'Kim,' what's to prevent all real numbers being named 'Charley'? Now many will find the very idea of naming everything 'Charley' utterly bizarre, if not altogether lunatic; and, indeed, there is a queer odor about the idea. No doubt, furthermore, most of the purposes for which we ordinarily name things would be ill served by such a maneuver, if it is possible at all. But these cavils are not objections. Is there really any reason why I can't name all the real numbers, or, indeed, everything whatever in one vast, all-embracing baptism ceremony? I can't see any such reason, and I hereby name everything 'Charley.' And thus I have rendered D_4'' and D_7 universally applicable.

In deference to outraged sensibilities, however, we should try to surmount the present obstacle in some other way if we can. And I think we can. Let (x, P) be any ordered pair whose first member is an object and whose second is a property. Let S be the set of all such pairs. We shall say that (x, P) is *baptized* if there is a proper name of x and a canonical designation of P. Cardinality difficulties aside (and those who feel them, may restrict S in any way deemed appropriate) we may define a function—the kernel function—on S as follows:

D_8 (a) If (x, P) is baptized, $K(x, P)$ is the proposition expressed by the result of replacing 'x' and 'P' in 'x lacks P' by a proper name of x and a canonical designation of P.

[10] *Ibid.*, p. 622.

(b) If (x, P) is not baptized, then $K(x, P)$ is the proposition which *would be* expressed by the result of replacing 'x' and 'P' in' x lacks P' by a proper name of x and a canonical designation of P, if (x, P) *were* baptized.

And if, for some reason, we are troubled by the subjunctive conditional in (b), we may replace it by

(b′) if (x, P) is not baptized, then $K(x, P)$ is determined as follows: baptize (x, P); then $K(x, P)$ is the proposition expressed by the result of respectively replacing 'x' and 'P' in 'x lacks P' by the name assigned x and the canonical designation assigned P.

And now we may reassert D_4'': an object x has a property P essentially if and only if x has P and $K(x, P)$ is necessarily false. A general *de re* proposition such as

(49) All men are rational essentially

may now be explained as equivalent to

(50) For any object x, if x is a man, then x is rational and $K(x$, rationality) is necessarily false.

So far so good; the existence of unnamed objects seems to constitute no fundamental obstacle. But now one last query arises. I promised earlier to explain the *de re via* the *de dicto*, glossing that reasonably enigmatic phrase as follows: to explain the *de re via* the *de dicto* is to provide a rule enabling us to find, for each *de re* proposition, an equivalent *de dicto* proposition—alternatively, to provide a rule enabling us to eliminate any sentence containing a *de re* expression in favor of an equivalent sentence containing *de dicto* but no *de re* expressions. And it might be claimed that our definitions do not accomplish this task. For suppose they did: what would be the *de dicto* proposition equivalent to

(51) Socrates has rationality essentially?

D_4'' directs us to

(52) Socrates is rational and K(Socrates, rationality) is necessarily false.

Now (52) obviously entails

(53) The proposition expressed by the result of replacing '*x*' and '*P*' in '*x* lacks *P*' by a name of Socrates and a canonical designation of rationality is necessarily false.

(53), however, entails the existence of several *linguistic* entities including, e.g., '*x*' and '*x* lacks *P*'. Hence so does (52). But then the latter is not equivalent to (51), which entails the existence of no linguistic entities whatever. Now we might argue that such linguistic entities are shapes or sequences of shapes, in which case they are abstract objects, so that their existence is necessary and hence entailed by every proposition.[11] But suppose we explore a different response: Is it really true that (52) entails (53)? How could we argue that it does? Well, we *defined* the kernel function that way—i.e., the rule of correspondence we gave in linking the members of its domain with their images explicitly picks out and identifies the value of the kernel function for the pair (Socrates, rationality) as the proposition expressed by the result of replacing '*x*' and '*P*' in '*x* lacks *P*' by a proper name of Socrates and a canonical designation of rationality. This is true enough, of course; but how does it show that (52) entails (53)? Is it supposed to show, for example, that the phrase 'the kernel of (Socrates, rationality)' is *synonymous with* the phrase "the proposition expressed by the result of replacing '*x*' and '*P*' in '*x* lacks *P*' by a name of Socrates and a canonical designation of rationality"? And hence that (52) and (53) express the very same proposition? But consider a function F, defined on the natural numbers and given by the rule that $F(n)$ = the number denoted by the numeral denoting n. The reasoning that leads us to suppose that (52) entails (53) would lead us to suppose that

(54) F(9) is composite

entails

(55) The number denoted by the numeral that denotes 9 is composite

and hence entails the existence of at least one numeral. Now consider the identity function I defined on the same domain, so that $I(n) = n$. If a function is a set of ordered pairs, then F is the very same function as I, despite the fact that the first rule of correspondence is quite different from the second. And if F is the very same

[11] As I was reminded by David Lewis.

function as I, then can't I give I by stating the rule of correspondence in giving F? And if I do, then should we say that

(56) The value of the identity function at 9 is composite

entails the existence of some numeral or other? That is a hard saying; who can believe it? Can't we simply *name* a function, and then give the rule of correspondence linking its arguments with its values, without supposing that the name we bestow is covertly synonymous with some definite description constructed from the rule of correspondence? I think we can; but if so, we have no reason to think that (52) entails (53).

Nonetheless difficult questions arise here; and if we can sidestep these questions, so much the better. And perhaps we can do so by giving the kernel function as follows: Let 'x' and 'y' be individual variables and 'P' and 'Q' property variables. Restrict the substituend sets of 'y' and 'Q' to proper names and canonical designations respectively. Then

D_9 If (x, P) is baptized, $K(x, P)$ is the proposition *y lacks Q* (where $x = y$ and $P = Q$).

If (x, P) is not baptized, $K(x, P)$ is determined as follows: baptize (x, P); then $K(x, P)$ is the proposition *y lacks Q* (where $x = y$ and $P = Q$).

Unlike D_8, D_9 does not tempt us to suppose that (52) entails (53).

D_4'' together with any of D_7, D_8 and D_9 seems to me a viable explanation of the *de re via* the *de dicto*. A striking feature of these explanations is that they presuppose the following. Take, for a given pair (x, P), the class of sentences that result from the suggested substitutions into 'x lacks P'. Now consider those members of this class that express a proposition predicating the complement of P of x. These all express the same proposition. I think this is true; but questions of propositional identity are said to be difficult, and the contrary opinion is not unreasonable. One who holds it need not give up hope; he can take $K(x, P)$ to be a class of propositions—the class of propositions expressed by the results of the indicated replacements; and he can add that x has P essentially just in case at least one member of this class is necessarily false.

If the above is successful, we have found a general rule correlating propositions that express modality *de re* with propositions expressing modality *de dicto*, such that for any proposition of the former sort we can find one of the latter equivalent to it. Does this show, then, that modality *de dicto* is somehow more basic or fundamental than modality *de re*, or that an expression of modality *de re* is really a misleading expression of modality *de dicto*? It is not easy to see why we should think so. Every proposition attributing a property to an object (an assertion *de re*, we might say) is equivalent to some proposition ascribing truth to a proposition (an assertion *de dicto*). Does it follow that propositions about propositions are somehow more basic or fundamental than propositions about other objects? Surely not. Similarly here. Nor can I think of any other reason for supposing the one more fundamental than the other.

Interesting questions remain. This account relies heavily on proper names. Is it really as easy as I suggest to name objects? And is it always possible to determine whether a name is proper or a property designation canonical? Perhaps the notion of a proper name itself involves essentialism; perhaps an analysis or philosophical account of the nature of proper names essentially involves essentialist ideas. Suppose this is true; how, exactly, is it relevant to our explanation of the *de re via* the *de dicto*? How close, furthermore, is this explanation to the traditional understanding of essentialism, if indeed history presents something stable and clear enough to be called a traditional 'understanding'? What is the connection, if any, between essential properties and natural kinds? Are there properties that some but not all things have essentially? Obviously so; *being prime* would be an example. Are there properties that some things have essentially but others have accidentally? Certainly: 7 has the property *being prime or prim* essentially; Miss Prudence Alcott, Headmistress of the Queen Victoria School for Young Ladies, has it accidentally. But does each object have an *essence*—that is, an essential property that nothing else has? Would *being Socrates* or *being identical with Socrates* be such a property? *Is* there such a property as *being identical with Socrates*? What sorts of properties does Socrates have essentially anyway? Could he have been an alligator, for example, or an 18th century Irish washerwoman? And is there a difference between what Socrates *could have been* and what he *could have become*? Can we see the various divergent philosophical views as to what a *person* is, as divergent claims as to what properties persons have essentially? Exactly how is essentialism related to the idea—set forth at length by Leibniz and prominently featured in recent semantical developments of quantified modal logic —that there are *possible worlds* of which the actual is one, and that objects such as Socrates have different properties in different possible worlds? And how is essentialism related to the 'problem of transworld identification' said to arise in such semantical schemes? These are good questions, and good subjects for further study.[12]

[12] I am indebted for advice and criticism to many, including Richard Cartwright, Roderick Chisholm, David Lewis, and William Rowe. I am particularly indebted to David Kaplan—who, however, churlishly declines responsibility for remaining errors and confusions.