

WORLD AND ESSENCE

IN MUCH traditional philosophy we meet the admonition to distinguish assertions of necessity *de dicto* from assertions of necessity *de re*. Thomas Aquinas, for example, considers whether God's foreknowledge of human behavior is inconsistent with human freedom. Pointing out that such foreknowledge of a given item of behavior simply consists in God's seeing it take place, Thomas asks whether:

- (1) Whatever is seen to be sitting at a time t is necessarily sitting at t

is true. For suppose it is, and suppose that Albert the Great is sitting at t . If, at time $t-1$, God has foreknowledge of Albert's sitting at t , then at $t-1$ God sees that Albert sits at t : but if (1) is true, then, so the deterministic argument goes, Albert is necessarily sitting at t , in which case he is not free to stand at t . Thomas replies that (1) is ambiguous; we may take it *de dicto* as:

- (2) It is necessarily true that whatever is seen to be sitting is sitting,

or *de re* as

- (3) Whatever is seen to be sitting at t has the property of sitting at t *essentially* or *necessarily*.

A true assertion about a proposition, (2) predicates necessary truth of

- (4) Whatever is seen to be sitting is sitting.

(3), on the other hand, does no such thing; it predicates of every object of a certain kind—those objects seen to be sitting at t —the essential or necessary possession of a certain property: the property of sitting at t . And while (2) is true, says Thomas, (3) is not; but the argument for the inconsistency of divine foreknowledge with human freedom requires the latter as a premise.

A statement of necessity *de re*, therefore, predicates of some object or group of objects the essential possession of some property—or, as we may also put it, such a statement predicates of some object the property of having a certain property essentially. Many philosophers apparently believe that the idea of *de re* modality is shrouded in obscurity, if not an utter mare's nest of confusion. The arguments they give for this conclusion, however, are by no means conclusive.¹ Indeed, I think we can see that the idea of modality *de re* is no more (although no less) obscure than the idea of modality *de dicto*; for I think we can see that any statement of the former type is logically equivalent to some statement of the latter. Suppose we let S be the set of ordered pairs (x, P) where x is an object and P a property; and suppose we say that pair (x, P) is baptized if both x and P have proper names. Ignoring cardinality difficulties for the moment (and those who feel them can restrict S in any way deemed appropriate) we may define a function—call it² the kernel function—on S as follows:

- (5) (a) If (x, P) is baptized, $K(x, P)$ is the proposition that predicates \bar{P} , the complement of P , of x and is expressed by the result of respectively replacing " x " and " P " in " x has the complement of P " by proper names of x and P .
- (b) If (x, P) is not baptized, then $K(x, P)$ is the proposition that predicates \bar{P} of x and *would be* expressed by the result of respectively replacing " x " and " P " in " x has the complement of P " by proper names of x and P , if (x, P) were baptized.

Then we may add

- (6) an object x has a property P essentially just in case x has P and $K(x, P)$ is necessarily false.

(5) and (6) enable us to eliminate any sentence containing *de re* expressions in favor of an equivalent sentence containing no expressions of that sort;

¹ See my "*De Dicto et de Re*," *Nous*, II (1969), 240-247, 248-258.

- (7) If all men are essentially persons, then some things are essentially rational,

for example, goes over into

- (8) If for any object x , x is a man only if $K(x, \text{personhood})$ is necessarily false, then there are some things y such that $K(y, \text{rationality})$ is necessarily false.

(5) and (6) provide an explanation of the *de re* via the *de dicto*; but if the explanation is apt, the former is no more obscure than the latter.

We may approach this matter from a different direction. If we are comfortable with the idea of *states of affairs*, recognizing that some but not all of them obtain, and that some that do not *could have*, we may join Leibniz and logic (the semantics of quantified modal logic, that is) in directing our attention to *possible worlds*. A possible world is a state of affairs of some kind—one which could have obtained if it does not. *Hubert Horatio Humphrey's having run a mile in four minutes*, for example, is a state of affairs that is clearly possible in the relevant sense; *his having had a brother who never had a sibling* is not. Furthermore, a possible world must be what we may call a *fully determinate* state of affairs. *Humphrey's having run a four-minute mile* is a possible state of affairs, as, perhaps, is *Paul X. Zwier's being a good basketball player*. Neither of these, however, is fully determinate in that either of them could have obtained whether or not the other had. A fully determinate state of affairs S , let us say, is one such that for any state of affairs S' , either S *includes* S' (that is, could not have obtained unless S' had also obtained) or S *precludes* S' (that is, could not have obtained if S' had obtained). So, for example, *Jim Whittaker's being the first American to reach the summit of Everest* precludes Luther Jerstad's enjoying that distinction and includes Whittaker's having climbed at least one mountain.

We may try a slightly different route to the concept of a possible world if we possess a reasonably firm grasp of the notion of a proposition. Where S is a set of propositions, suppose we say that S is *possible* if it is possible that all of S 's members be true; and let us say that q is a consequence of S if $S \cup (\text{not-}q)$ is not possible.

A *superproposition*, we shall say, is the union of some set of propositions with the set of its consequences—or, as we may also put it, a set of propositions containing all of its own consequences. Now for each superproposition S there is exactly one state of affairs A such that A obtains if and only if every member of S is true.² We have a 1-1 function F , therefore, from superpropositions to states of affairs. Let us say, furthermore, that a *book* is a maximal possible set of propositions—one that is possible and that, for any proposition q , contains either q or its denial $\text{not-}q$. A book, clearly enough, is a superproposition; and a possible world is just the value of F for some book. F -inverse, on the other hand, associates a book with each possible world; we might call it *the bookie function*.

Leibniz and logic join further in holding that propositions are properly said to be true or false *in* these possible worlds. A proposition p is true in a world W if p would have been true had W been actual; and *the book of* W is the book of which a proposition p is a member just in case p is true in W .³ The actual world is one of the possible worlds; and the set of true propositions is the set of propositions true in the actual world. Necessarily true propositions are those enjoying the distinction of being true in every world; a possible proposition is true in at least one. Still further, logic and Leibniz hold that individuals, objects, *exist* in these worlds; to say that an object x exists in a world W is to say that if W had been actual, x would have existed. Some objects—the number seven, for example—*grace* every world, but many others are restricted to only some. Socrates, for example, exists in this and some other possible worlds, but not in all; he is a contingent being who exists in fact but need not have. A given individual, furthermore, *has properties in* at least some of these worlds. Again,

² If we take it that if a state of affairs S includes and is included by a state of affairs S' , then S and S' are the same state of affairs. Alternatively, we may introduce the idea of a *super state of affairs* (analogous to a superproposition) and take the range of F to be the set of super states of affairs.

³ Here I am taking it for granted that the proposition *Socrates is wise* would have been true or false even if Socrates had not existed. The contrary view—that *Socrates is wise* is neither true nor false in those worlds in which Socrates does not exist—is not unreasonable and can easily be accommodated. Nothing I say below essentially depends upon choosing between these two.

to say that x has property P in W is to say that if W had been actual, x would have had P . And of course an individual may have in one world a property—snubnosedness, let us say—that he lacks in others.

We now have several plausible options as to what it is for an object to have a property P essentially; Socrates has P essentially if he has P in every world, or has it in every world in which he exists, or—most plausible of all—has P in the actual world and has its complement \bar{P} in no world. The idea that an object has essential as well as accidental properties, therefore, can be explained and defended. In what follows I shall take its intelligibility for granted and ask some questions about which objects have which properties essentially.

I

Consider first such properties as *having a color if red, being something or other, being self-identical, and either having or lacking a maiden aunt*. Clearly everything whatever has these properties; clearly nothing has the complement of any of these properties in any possible world. Let us call such properties—properties that enjoy the distinction of being instantiated by every object in every possible world—*trivially essential properties*. While you may concede that indeed every object does have some trivially essential properties, you may think this truth somewhat lackluster. Are there any nontrivial essential properties? Certainly; the number six has the properties of *being an integer, being a number, and being an abundant number* essentially; Paul Q. Zwier has none of these properties and a fortiori has none essentially. Well, then, are there properties that some things have essentially and others have, but have accidentally? Surely; *being non-green* is a property seven has essentially and the Taj Mahal accidentally. *Being prime or prim* is an accidental property of Miss Prudence Allworthy, Headmistress of the Queen Victoria School for Girls; it is essential to seven.

But, you say, these fancy, cooked-up properties—disjunctive or negative as they are—have a peculiar odor. What about Socrates and such properties as *being a philosopher, an Athenian, a teacher of Plato*? What about *having been born in 470 B. C., having lived*

for some seventy years, and having been executed by the Athenians on a charge of corrupting the youth? Are any of these ordinary meat-and-potatoes properties of Socrates essential to him? I should think not. Surely Socrates could have been born ten years later. Surely he could have lived in Macedonia, say, instead of Athens. And surely he could have stuck to his stone-cutting, eschewed philosophy, corrupted no youth, and thus escaped the wrath of the Athenians. None of these properties is essential to him.

But what about their disjunction? No doubt Socrates could have lacked *any* of these properties; could he have lacked them *all*? John Searle thinks this suggestion incoherent.

Though proper names do not normally assert or specify any characteristics, their referring uses nonetheless presuppose that the object to which they purport to refer has certain characteristics. But which ones? Suppose we ask the users of the name "Aristotle" to state what they regard as certain essential and established facts about him. Their answers would be a set of uniquely referring descriptive statements. Now what I am arguing is that the descriptive force of "This is Aristotle" is to assert that a sufficient but so far unspecified number of these statements are true of this object. Therefore, referring uses of "Aristotle" presuppose the existence of an object of whom a sufficient but so far unspecified number of these statements are true. To use a proper name referringly is to presuppose the truth of certain uniquely referring descriptive statements, but it is not ordinarily to assert these statements or even to indicate which exactly are presupposed.⁴

So there are what we might call "identity criteria" associated with a name such as "Aristotle" or "Socrates"; these are what the users of the name regard as essential and established facts about him. Suppose we take these criteria to be properties of Socrates rather than facts about him. Then among them we should certainly find such properties as *having been born about 470 B. C., having married Xantippe, being a Greek philosopher, being the teacher of Plato, having been executed by the Athenians on a charge of corrupting the youth*, and the like. The disjunction of these properties, Searle says (and this is the point at present relevant), is essential to its owner:

⁴ "Proper Names," *Mind*, LXVII (1958), 171. Henceforth, page references to this article will be given in the text.

It is a contingent fact that Aristotle ever went into pedagogy (though I am suggesting it is a necessary fact that Aristotle has the logical sum, inclusive disjunction, of properties commonly attributed to him; any individual not having at least some of these properties could not be Aristotle) [p. 172].

If S_1, S_2, \dots, S_n , are the identity criteria associated with the name "Socrates," therefore, then Socrates has the disjunction of these properties essentially. But why so, exactly? Searle does not explicitly say, no doubt because the focus of his piece is not on just this point. One possibility is this: we might be tempted to believe that if the S_i are the identity criteria for "Socrates," then to suppose that Socrates could have lacked most of these properties is tantamount to thinking it possible that the man who has most of the S_i does not have most of them—tantamount, that is, to endorsing

- (9) Possibly, the man who has most of $S_1, S_2 \dots, S_n$ lacks most of S_1, S_2, \dots, S_n .

But (9) appears to be false and indeed necessarily false;⁵ hence Socrates could not have lacked the disjunction of the S_i . To yield to this temptation, however, is to commit the error of confusing (9), a false *de dicto* assertion, with the assertion *de re* that

- (10) The person who has most of the S_i might conceivably have lacked most of them.

(9), indeed, is necessarily false; that (10) is false does not follow. Suppose all I know about Paul B. Zwier is that he is the redheaded mathematician seated in the third row. *Being redheaded*, *being a mathematician*, and *being seated in the third row* are, then, presumably, my identity criteria for the name "Paul B. Zwier"; it scarcely follows that Zwier is essentially redheaded or that he could not have been standing or seated elsewhere, or that "Paul B. Zwier is not a mathematician" expresses a necessary falsehood. These properties are ones that I may use to get you to see about whom it is I am talking; if I say, "My, isn't Paul B. Zwier distinguished-

⁵ If we suppose, as I do, that a modal statement—one predicating necessity or possibility of some statement—is either necessarily true or necessarily false.

looking!" and you say, "Who?," these characteristics are the ones I cite. They enable my interlocutor to identify the subject of my remarks; that these properties are essential to him does not follow.

Searle recognizes this objection and replies as follows:

But is the argument convincing? Suppose most or even all of our present factual knowledge of Aristotle proved to be true of no one at all, or of several people living in scattered countries and in different centuries? Would we not say for this reason that Aristotle did not exist after all, and that the name, though it has a conventional sense, refers to no one at all? On the above account [i.e., the one according to which the S_i serve merely to identify the subject for discussion], if anyone said that Aristotle did not exist, this must simply be another way of saying that "Aristotle" denoted no objects, and nothing more; but if anyone did say that Aristotle did not exist he might mean much more than simply that the name does not denote anyone [p. 168].

And further:

We say of Cerberus and Zeus that neither of them ever existed, without meaning that no object ever bore these names, but only that certain kinds (descriptions) of objects never existed and bore these names [p. 169].

I am not clear as to the exact structure of this argument; I do not see just how it bears on the suggestion it is designed to refute. What is fairly clear, however, is that it is to be construed as an argument for the conclusion that

(11) Socrates lacks most (or all) of the S_i

is necessarily false, where the S_i are the identity criteria for "Socrates." But the prospects for this argument are not initially promising. Different people associate different identity criteria with the same name, even when using it to name the same person (no doubt the criteria mentioned above for "Paul B. Zwier" are not the ones his wife associates with that name). Indeed, at different times the same person may associate different criteria with the same name; are we to suppose that the properties essential to Aristotle vary thus from time to time and person to person? Nevertheless, suppose we take a closer look at the argument. How,

exactly, does it go? Perhaps we can fill it out as follows. The S_i are the identity criteria for "Socrates." In (11) we have a referring use of this name; this use, therefore, presupposes the existence of an object that has a sufficient number of the S_i . (11), therefore, entails

(12) Someone has enough of the S_i .

But surely it is necessarily true that

(13) If anyone has enough of the S_i , Socrates does.

So if (11) is true, it follows that Socrates has enough of the S_i —that is, that (11) is false; (11) therefore, is necessarily false.

But why suppose that (11) entails (12)? That is, why suppose that if S_1, S_2, \dots, S_n are the identity criteria for the name "Socrates"—the properties we employ to locate and identify Socrates—then "Socrates lacks enough of the S_i " must express a proposition entailing that someone or other *has* enough of them? Perhaps the argument goes as follows. If we discovered that no one had enough of the S_i , we should say (and say quite properly) that there never was any such person as Socrates—that he did not exist.

(14) No one had enough of the S_i ,
therefore, entails

(15) Socrates did not exist.

(11), on the other hand—the assertion that Socrates had the complement of most of the S_i —entails

(16) There really was such a person as Socrates—that is, Socrates did exist.

(16) is inconsistent with (15); it is also inconsistent, therefore, with (14); (11), too, therefore, is inconsistent with (14) and entails its denial—namely (12).

But is it really true that (14) entails (15)? Why so? The answer, according to Searle, is that (14) and (15) make the same assertion; (15), despite appearances, is not a singular statement predicating a property of Socrates but a general statement to the effect that no one has enough of S_1, S_2, \dots, S_n (p. 172). And, of course, on this view the statement "Socrates does (did) exist" and its variants

do not predicate of Socartes the dubious property of existence; they assert instead that some object does (or did) have enough of the S_i .

But why should we think *that* true? Suppose, says Searle, we discovered that no one had enough of the S_i : then what we should normally say is not "Oddly enough, as it turns out, Socrates did not have enough of the S_i : no one did"; what we should say is that Socrates never really existed. Is this correct? I think it is. Suppose all we know about Homer is that he was the blind bard of Chios who was born about 835 B. C. and composed the *Iliad* and *Odyssey*, so that these properties are the identity criteria associated with the name "Homer." Now imagine that a historian says, "I have discovered that no one had those properties; Homer himself had 20-20 vision, never lived on Chios, and did not compose either the *Iliad* or the *Odyssey*; they were class projects in Xenophon's School for Rhetoric." We should be justifiably perplexed. If he goes on to add, "Furthermore, his name wasn't Homer—it was Alfred E. Neuman—and actually he was an illiterate thirteenth-century French peasant," we should no doubt think him crazed with strong drink. In discovering that no one had these properties, what he discovered is a fact we should ordinarily put by saying "Homer never really existed"; and his further allegations allegedly about Homer are utterly unintelligible. By "Homer" we mean to refer to the man who had the above properties; in answer to the question "Who was Homer?" these are the properties we should mention. If he tells us, therefore, that Homer *lacks* all these properties, we no longer have any idea whom he is talking about.⁶

So

(17) No one had (enough of) $H_1, H_2 \dots, H_n$
entails what we should ordinarily express by saying

(18) Homer never existed.

But the way to show that Homer really did exist, conversely, is to show that there really was a person who had most of the above properties; so (18) also entails (17). A pair of classicists might have

⁶ I do not mean to deny, of course, that the pressure of historical discovery could cause a change in the identity criteria for "Homer."

a dispute as to whether Homer really existed. It would be incorrect to represent them as each referring to the same person—the one who had $H_1, H_2 \dots, H_n$ —one of them attributing to him the property of existence and the other the property of nonexistence; and this is so even if existence and nonexistence are properly thought of as properties. Searle is right in taking that dispute to be instead about whether enough of these properties are instantiated by a single person.

Ordinarily, then, when someone says, "Socrates really existed," he is to be understood as affirming that some one person had enough of S_1, S_2, \dots, S_n . But of course he could be affirming something quite different; out of sheer whimsy, if for no other reason, he could be referring to the man who satisfies the identity criteria associated with "Socrates" and predicating existence of him. The fact that people do not ordinarily do this scarcely shows that it cannot be done. A man might point to the Taj Mahal and say, "That really exists."⁷ If he did, he would be right, though his assertion might be pointless or foolish. Bemused by Cartesian meditations, De Gaulle might say, "I really do exist." Nor would he then be saying that enough of the identity criteria associated with some word ("De Gaulle"? "I" in some particular use?) are satisfied by someone; he might be talking about himself and saying of himself that he really exists. Furthermore, the sentence "Socrates does not exist" ordinarily expresses the proposition that no one has enough of the S_i ; but it can also be used to express a proposition predicating of Socrates the complement of the property of existence. This proposition is false. Perhaps, furthermore, no one can believe it; for suppose someone did: how could he answer the question "Whom do you mean by 'Socrates'? Which person is it of whom you are predicating nonexistence?" It is nonetheless a perfectly good proposition.

Now suppose we rehearse Searle's argument.

(11) Socrates lacks most of the S_i

was said to entail

(12) Someone has most of the S_i .

⁷ See G. E. Moore, "Is Existence a Predicate?," *Philosophical Papers* (London, 1959).

But necessarily

(13) If anyone has the S_i , Socrates does
from which it follows that (11) entails its own denial. Why does
(11) entail (12)? Clearly (11) entails

(16) Socrates does (did) exist.

But (16) is the contradictory of

(15) Socrates did not exist;

since the latter is equivalent to

(14) No one has (had) enough of the S_i ,

the former must be equivalent to the contradictory of (14)—
namely, (12). (11), therefore, entails (16), which is equivalent
to (12); so (11) entails (12).

But (16), as we have seen, turned out to be ambiguous between
(12) and a proposition predicating existence of Socrates. This
argument turns on that ambiguity. For it is plausible to suppose
that (11) entails the latter (presumably any world in which
Socrates has the complement of most of the S_i is a world in which
he has the property of existing); but we have no reason at all for
thinking that it entails the former.

What we have seen so far is that

(16) Socrates does exist

and

(15) Socrates does not exist

normally express statements to the effect that a sufficient number
of S_1, S_2, \dots, S_n are (are not) instantiated by the same person; but
each of them can also be used to express a proposition predicating
existence (nonexistence) of Socrates. Let us call these latter
propositions (15') and (16'). It is important to see the difference
between the primed and unprimed items here. Let us say that a
subset A of (S_1, S_2, \dots, S_n) is *sufficient* just in case the fact that each
member of A is instantiated by the same person is sufficient for
the truth of (16); and let S be the set of sufficient sets. Call the
property a thing has if it has each property in some member of S

a *sufficient* property. Then if the disjunction of the sufficient properties is not essential to Socrates, it is possible that (15) be true when (15') is false. That is, if it is possible that Socrates should have lacked each sufficient property, then (15) does not entail (15'). And indeed this is possible. Socrates could have been born ten years earlier and in Thebes, let us say, instead of Athens. Furthermore, he could have been a carpenter all his life instead of a philosopher. He could have lived in Macedonia and never even visited Athens. Had these things transpired (and if no one else had had any sufficient property), then (15) but not (15') would have been true. Similarly, it is conceivable that Socrates should never have existed and that someone else—Xenophon, let us say—should have had most of S_1, S_2, \dots, S_n . Had this transpired, (15) but not (15') would have been false.

The old saw has it that Homer did not write the *Iliad* and the *Odyssey*: they were written by another man with the same name. Although this has a ring of paradox, it is in fact conceivable; there is a possible world in which the person denoted by "Homer" in this world (supposing for the moment that there is only one) does not exist and in which someone else writes the *Iliad* and the *Odyssey*.

II

Searle is wrong, I believe, in thinking the disjunction of the S_i essential to Socrates. But then what properties does he have essentially? Of course he has such trivially essential properties as *the property of having some properties* and *the property of being unmarried if a bachelor*. He also has essentially some properties not had by everything: *being a non-number* and *being possibly conscious* are examples. But these are properties he shares with other persons. Are there properties Socrates has essentially and shares with some but not all other persons? Certainly; *being Socrates* or *being identical with Socrates* is essential to Socrates; *being identical with Socrates or Plato*, therefore, is a property essential to Socrates and one he shares with Plato. This property is had essentially by anything that has it. *Being Socrates or Greek*, on the other hand, is one Socrates shares with many other persons and one he and he alone has essentially.

Socrates, therefore, has essential properties. Some of these he has in solitary splendor and others he shares. Among the latter are some that he shares with everything, some that he shares with persons but not other things, and still others that he shares with some but not all other persons. Some of these properties, furthermore, are essential to whatever has them while others are not. But does he have, in addition to his essential properties, an *essence* or *haecceity*—a property essential to him that entails each of his essential properties and that nothing distinct from him has in any world?⁸ It is true of Socrates (and of no one else) that he is Socrates, that he is identical with Socrates. Socrates, therefore, has the property of *Socrates-identity*. And if a property is essential to Socrates just in case he has it and there is no world in which he has its complement, then surely *Socrates-identity* is essential to him. Furthermore, this property entails each of his essential properties; there is no possible world in which there exists an object that has *Socrates-identity* but lacks a property Socrates has in every world in which he exists. But does it meet the other condition? Is it not possible that something distinct from Socrates should have been identical with him? Is there no possible world such that, had it obtained, something that in *this* world is distinct from Socrates would have been identical with him? And is it not possible that something in fact identical with Socrates should have been distinct from him? In this world Cicero is identical with Tully; is there no possible world in which this is not so? Hesperus is in fact identical with Phosphorus; is there no possible world in which, in the hauntingly beautiful words of an ancient ballad, Hesperus and Phosphorus are entities distinct?

I think not. Cicero is in fact Tully. Cicero, furthermore, has the property of being identical with Cicero; and in no world does Cicero have the complement of that property. Cicero, therefore, has *Cicero-diversity in no possible world*. But if an object *x* has a property *P*, then so does anything identical with it; like Calpurnia, this principle (sometimes called the Indiscernibility of Identicals) is entirely above reproach. Tully, therefore, has *Cicero-diversity in no possible world*.

⁸ Where a property *P* entails a property *Q* if there is no world in which there exists an object that has *P* but not *Q*.

Socrates-identity, therefore, is essential to anything identical with Socrates. But this does not suffice to show that this property is an *essence* of Socrates. For *that* we must argue that nothing distinct from Socrates could have had *Socrates-identity*—that is, we must argue that an object distinct from Socrates in this world nowhere has *Socrates-identity*. This (together with the previous conclusion) follows from the more general principle that

- (19) If x and y are identical in any world, then there is no world in which they are diverse.⁹

Is (19) true? I think we can see that it is. Recall that a possible world is a state of affairs that could have obtained if it does not. Here “could have” expresses, broadly speaking, logical or metaphysical possibility. Now are there states of affairs that *in fact* could have obtained, but would have lacked the property of possibly obtaining had things been different in some way? That is, are there states of affairs that in *this* world have the property of obtaining in some world or other, but in *other* worlds lack that property? Where it is metaphysical or logical possibility that is at stake, I think we can see that there are no such worlds. Similarly, we may ask: are there states of affairs that are *in fact* impossible, but would have been possible had things been different? That is, are there states of affairs that in fact have the property of obtaining in no possible world, but in some possible world have the property of obtaining in some possible world or other? Again, the answer is¹⁰ that there are no such worlds. Consider, therefore,

- (20) If a state of affairs S is possible in at least one world W , then S is possible in every world.

This principle may be false where it is causal or natural possibility that is at stake; for logical or metaphysical possibility, it seems clearly true. In semantical developments of modal logic we meet the idea that a possible world W is possible *relative to* some but not necessarily all possible worlds,¹⁰ where a world W is *possible*

⁹ Where the variables “ x ” and “ y ” range over objects that exist in the actual world.

¹⁰See, e.g., Saul Kripke’s “Some Semantical Considerations on Modal Logic,” *Acta Philosophica Fennica* (1963). To accept (20’), of course, is to stipulate

relative to a world W' if W would have been possible had W' obtained. As an obvious corollary of (20) we have

- (20') Where W and W' are any possible worlds, W is possible relative to W' .

Given the truth of (20), however, we can easily show that (19) is true. For let x and y be any objects and W any world in which x is identical with y . In W , x has *x-identity* (that is, the property a thing has just in case it is identical with x); and clearly there is no world possible with respect to W in which x has *x-diversity*. By (20'), therefore, it follows that there is no world at all in which x has *x-diversity*; in W , therefore, x has the property of being nowhere *x*-diverse. Now by the Indiscernibility of Identicals, y also has this property in W ; that is, in W y has the property of being nowhere *x*-diverse. Therefore, y 's *being x-diverse* is an impossible state of affairs in W ; accordingly, by (20) it is impossible in every world; hence, there is no world in which x and y are diverse. (19), therefore, is true. But then *Socrates-identity* is an essence of Socrates (and of anything identical with him); for (19) guarantees that anything distinct from Socrates in this or any world is nowhere identical with him.

Socrates, therefore, has an essence as well as essential properties. But here the following objection may arise. In arguing that Socrates has an essence I made free reference to such alleged properties as *being identical with Socrates in no world*, *being everywhere distinct from Socrates*, and the like. And is there even the slightest reason for supposing that there *are* any such properties as these? Indeed, is there any reason to suppose that "being identical with Socrates" names a property? Well, is there any reason to suppose that it does not? I cannot think of any, nor have I heard any that are at all impressive. To be sure, one hears expressions of a sort of nebulous discomfort; when asked to believe that there is such a property as *being identical with Socrates*, philosophers often adopt an air of wise and cautious skepticism. But this does not constitute an objection. Surely it is true of Socrates that he is Socrates and that

that R , the alternativeness relation Kripke mentions, is an equivalence relation; the resulting semantics yields as valid the characteristic axiom of Lewis' S_5 , according to which a proposition is necessarily possible if possible.

he is identical with Socrates. If these are true of him, then *being Socrates* and *being identical with Socrates* characterize him; they are among his properties or attributes. Similarly for the property of being nowhere Socrates-diverse: a thing has the property of being Socrates-diverse in a given world *W* if that thing would have been diverse from Socrates had *W* obtained; it has the property of being nowhere Socrates-diverse if there is no possible world in which it is Socrates-diverse. So these are perfectly good properties. But in fact the argument does not really depend upon our willingness to say that *Socrates-identity* is a property. We may instead note merely that *that he is identical with Socrates* is true of Socrates, that *that he is diverse from Socrates in some world* is not true of Socrates in any world, and that anything true of Socrates is true of anything identical with him.

But if we propose to explain Socrates' essence and his essential properties by means of properties he has in every world in which he exists, then do we not encounter a problem about identifying Socrates across possible worlds? What about the celebrated Problem of Trans-World Identification?¹¹ Well, what, exactly, is the problem? David Kaplan puts it as follows.

I'll let you peek in at this other world through my Jules Verne-o-scope. Carefully examine each individual, check his finger prints, etc. The problem is: which one, if any, is Bobby Dylan? That is, which one is our Bobby Dylan—of course he may be somewhat changed, just as he will be in our world in a few years. But in that possible world which ours will pass into in say 30 years, someone may ask "Whatever happened to Bobby Dylan?" and set out to locate him. Our problem is similarly to locate him in *G* (if he exists there).¹²

But have we really found a problem? Here, perhaps, there is less than meets the eye. For what, exactly, is our problem supposed

¹¹ See R. Chisholm, "Identify through Possible Worlds: Some Questions," *Nous*, I (1967), 1-8; J. Hintikka, "Individuals, Possible Worlds and Epistemic Logic," *Nous*, I (1967), 33-63; D. Kaplan, "Trans-World Identifications" (presented to an APA symposium, Chicago, 1967, but unpublished); L. Linsky, "Reference, Essentialism and Modality," *Journal of Philosophy*, LXVI (1969), 687-700; R. Purtill, "About Identity through Possible Worlds," *Nous*, II (1968); and R. Thomason, "Modal Logic and Metaphysics," in *The Logical Way of Doing Things*, ed. by K. Lambert (New Haven, 1968).

¹² Kaplan, *op. cit.*, p. 7.

to be? We are given a world W distinct from the actual world, an individual x that exists in the actual world, and asked how to determine whether x exists in W and if so which thing in W is x . We might like to know, for example, whether Raquel Welch exists in W ; and (supposing that she does) which thing in W is Raquel Welch. But the answer to the first question is easy; Raquel Welch exists in W if and only if Raquel Welch would have existed had W been actual. Or to put the matter bibliographically, she exists in W if and only if W 's book contains the proposition *Raquel Welch exists*. Granted, we may not know enough about W to know whether its book *does* contain that proposition; we may be told only that W is some world in which, let us say, Socrates exists. Whether we can determine if W 's book contains this proposition depends upon how W is specified; but surely that constitutes no problem for the enterprise of explaining Socrates' essence in terms of properties he has in every world he graces.

Similarly with the second question. Consider a world—call it RW_j —in which Raquel Welch exists and weighs 185 pounds, everything else being as much like the actual world as is consistent with that fact. Which individual, in RW_j , is Raquel Welch? That is, which of the persons who would have existed, had RW_j been actual, would have been such that, if *the actual world* had obtained, she would have been Raquel Welch? The answer, clearly, is Raquel Welch. But such an easy answer may lead us to suspect that we have misidentified the question. Perhaps we are to think of it as follows. How shall we determine which of the individuals we see (through the Verne-o-scope, perhaps) sporting in RW_j is Raquel Welch? (Can you be serious in suggesting she is that unappetizing mass of blubber over there?) Put more soberly, perhaps the question is as follows. We are given a world RW_j in which we know that Raquel Welch exists. We are given further that RW_j contains an individual that uniquely meets condition C_1 , one that meets condition C_2 , and the like. Now which of these is Miss Welch? Is it the individual meeting C_1 , or is it some other? To have the answer we must audit the book of RW_j ; does it contain, for example, the proposition *Raquel Welch meets C_1* ? If so, then it is the person who meets C_1 that is Raquel Welch. Of course our information about RW_j may be limited; we may be

told only that *Raquel Welch exists* and *Raquel Welch weighs 185 pounds* are in its book; we may not know, for any other (logically independent) proposition predicating a property of her, whether or not it is in the book. Then, of course, we may be unable to tell whether the thing that meets condition C_i in RW_j is or is not identical with Raquel Welch.

This is indeed a fact; but where is the problem? (We need not step outside the actual world to find cases where identification requires more knowledge than we possess.) Is the suggestion, perhaps, that for all we can tell there is *no* world (distinct from the actual) in which Raquel Welch exists? But to make this suggestion is to imply that there is no book containing both *Raquel Welch exists* and at least one false proposition. That is, it is to suggest that the conjunction of *Raquel Welch exists* with any false proposition p —for example, *Paul I. Zwier is a good tennis player*—is necessarily false; and hence that *Raquel Welch exists* entails every true proposition. Obviously the assets of Raquel Welch are many and impressive; nonetheless they scarcely extend as far as all that.

I therefore do not see that the Problem of Trans-World Identification (if indeed it is a problem) threatens the enterprise of explaining the essence of Socrates in terms of properties he has in every world in which he exists. But what about the following difficulty? If (as I suggested above) for any object x , the property of x -identity (the property a thing has just in case it is identical with x) is essential to x , then the property of being identical with the teacher of Plato is essential to the teacher of Plato. Furthermore, *being identical with the teacher of Plato* is essential to anything identical with the teacher of Plato—Socrates, for example. Hence, *identity with the teacher of Plato* is essential to Socrates. But surely

- (21) If a property P is essential to an object x , then any property entailed by P is also essential to x

where, we recall, a property P entails a property Q if there is no world in which there exists an object that has P but not Q . Now whatever has the property of *being the teacher of Plato* in a given world surely has the property of *being a teacher* in that world. But the former property is essential to Socrates; so, therefore, is the

latter. And yet this is absurd; the property of being a teacher is not essential to Socrates. (Even if you do not think that is absurd, we can show by an easy generalization of this argument that any property Socrates has is essential to him—and *that* is patently absurd.) What has gone wrong? (21) certainly has the ring of truth. Must we conclude after all that such alleged properties as *being identical with the teacher of Plato* are a snare and a delusion?

That would be hasty, I think. Consider a world *W* in which Socrates exists but does not teach Plato; let us suppose that in *W* Xenophon is the only teacher Plato ever had. Now in *W* Socrates is not identical with the teacher of Plato—that is, Socrates is not identical with the person who *in W* is Plato's only teacher. He is, however, identical with the person who *in the actual world* is the only teacher of Plato. Here a certain misunderstanding may arise. If *W* had transpired, then *W* would have been the actual world—so is it not true that in *W* it is *Xenophon*, not Socrates, who has the property of being the person who is the only teacher of Plato in the actual world? *Being actual* is a peculiar property; this is a property that in any given world is had by that world and that world only. Accordingly in *W* it is Xenophon who is the teacher of Plato in the actual world. We may forestall this *contretemps* as follows. Suppose we give a name to the actual world—the one that does in fact obtain; suppose we name it “Kronos.” Then this property of being identical with the teacher of Plato—the property Socrates has essentially according to the above argument—is the property of being identical with the person who in fact, in the actual world, is the teacher of Plato. It is the property of being identical with the person who *in Kronos* is the teacher of Plato. But *that* property—*identity with the person who in Kronos is the teacher of Plato*—does not entail *being a teacher*. For a thing might have that property in some world distinct from Kronos—a world in which Socrates teaches no one, for example—without having, in that world, the property of being a teacher.

But now still another query confronts us. Consider the well-known facts that Cicero is identical with Tully and that Hesperus is the very same thing as Phosphorus. Do not these facts respectively represent (for many of us, at least) historical and astronomical *discovery*? And hence are not the counterfactuals *Hesperus and*

Phosphorus are entities distinct and *Tully* is diverse from *Cicero*, though counterfactuals indeed, *contingently* counterfactual? Historical and astronomical science have been known to reverse themselves; might we not sometime come to discover that *Cicero* and *Tully* were really two distinct persons and that *Hesperus* is not identical with *Phosphorus*? But if so, then how can it be true that *being identical with Phosphorus* is an essence of *Hesperus*, so that *Hesperus* is diverse from *Phosphorus* is necessarily false?

The argument here implicit takes for granted that the discovery of necessary truth is not the proper business of the historian and astronomer. But this is at best dubious. I discover that *Ephialtes* was a traitor; I know that it is *Kronos* that is actual; accordingly, I also discover that *Kronos* includes the state of affairs consisting in *Ephialtes*' being a traitor. This last, of course, is necessarily true; but couldn't a historian (*qua*, as they say, *historian*) discover it, too? It is hard to believe that historians and astronomers are subject to a general prohibition against the discovery of necessary truth. Their views, if properly come by, are a posteriori; that they are also contingent does not follow.

On the other hand, when I discovered that *Kronos* contained *Ephialtes*' being a traitor, I also discovered something contingent. Is there something similar in the case of *Venus*? Exactly what was it that the ancient Babylonians discovered? Was it that the planet *Hesperus* has the property of being identical with *Phosphorus*? But *identity with Phosphorus* is in fact the very same property as *identity with Hesperus*; no doubt the Babylonians knew all along that *Hesperus* has *Hesperus-identity*; and hence they knew all along that *Hesperus* has *Phosphorus-identity*. Just what was it the Babylonians believed before the Discovery, and how did this discovery fit into the total economy of their belief? Perhaps we can put it like this. The Babylonians probably believed what can be expressed by pointing in the evening to the western sky, to *Venus*, and saying "*This* is not identical with" (long pause) "*that*" (pointing to the eastern sky, to *Venus*, the following morning). If so, then they believed of *Hesperus* and *Phosphorus-identity* that the latter does not characterize the former; since *Phosphorus-identity* is the same property as *Hesperus-identity*, they believed of *Hesperus-identity* that it does not characterize *Hesperus*. No doubt the Babylonians

would have disputed this allegation; but of course one can easily be mistaken about whether one holds a belief of this kind. And the quality of their intellectual life was improved by the Discovery in that thereafter they no longer believed of Hesperus that it lacked the property of Hesperus-identity. Of course we can scarcely represent this improvement as a matter of discovering that Hesperus *had Hesperus-identity*; they already knew that. Their tragedy was that they knew that, and also believed its contradictory; the Discovery consisted in part of correcting this deplorable state of affairs.

Still, this is at best a partial account of what they discovered. For they also believed that there is a heavenly body that appears first in the evening, and another, distinct from the first, that disappears last in the morning. This is a contingent proposition; and part of what they discovered is that it is false. Or, to put things just a little differently, suppose the identity criteria for "Hesperus"—such properties as *appearing just after sundown, appearing before any other star or planet, being brighter than any other star or planet that appears in the evening*—are H_1, H_2, \dots, H_n ; and suppose the identity criteria for "Phosphorus" are P_1, P_2, \dots, P_n . Then what the Babylonians discovered is that the same heavenly body satisfies both the P_i and the H_i . They discovered that the planet that satisfies the P_i also satisfies the H_i . And of course this is a contingent fact; there are possible worlds in which the thing that in fact has the distinction of satisfying both sets of criteria satisfies only one or neither. The Babylonian discovery, therefore, was a complex affair; but there is nothing in it to suggest that *being identical with Phosphorus* is not essential to Hesperus.

III

Socrates, therefore, has an essence—being *Socrates* or *Socrateity*. This essence entails each of his essential properties. And among these we have so far found (in addition to trivially essential properties) such items as *being Socrates or Greek, being a non-number, and being possibly conscious*. But what about the property of having (or, to beg no questions, being) a body? Could Socrates have been

disembodied? Or could he have had a body of quite a different sort? Could he have been an alligator, for example? That depends. We might think of an alligator as a composite typically consisting in a large, powerful body animated by an unimpressive mind with a nasty disposition. If we do, shall we say that any mind-alligator-body composite is an alligator, or must the mind be of a special relatively dull sort? If the first alternative is correct, then I think Socrates could have been an alligator (or at any rate its personal or mental component); for I think he could have had an alligator body. We have no difficulty in understanding Kafka's story about the man who wakes up one morning to discover that he now has the body of a beetle; and in fact the state of affairs depicted there is entirely possible. In the same way I can imagine myself awakening one morning and discovering, no doubt to my chagrin, that I had become the owner of an alligator body. I should then give up mountain climbing for swimming and skin diving. Socrates, therefore, could have had an alligator body; if this is sufficient for his having been an alligator, then Socrates could have been an alligator.

On the other hand, we might think, with Descartes, that an alligator is a material object of some sort—perhaps an elaborate machine made of flesh and bone. Suppose that is what an alligator is; could Socrates have been one? Descartes has a famous argument for the conclusion that he is not a material object:

I am therefore, precisely speaking, only a thinking thing, that is, a mind (*mens sive animus*), understanding, or reason—terms whose signification was before unknown to me. I am, however, a real thing, and really existent; but what thing? The answer was, a thinking thing. The question now arises, am I aught besides? I will stimulate my imagination with a view to discover whether I am not still something more than a thinking being. Now it is plain I am not the assemblage of members called the human body; I am not a thin and penetrating air diffused through all these members, or wind, or flame, or vapour, or breath, or any of all the things I can imagine; for I supposed that all these were not, and, without changing the supposition, I find that I still feel assured of my existence.¹³

¹³ Descartes, *Meditations*, Meditation I.

How shall we construe this argument? I think Descartes means to reason as follows: it is at present possible both that I exist and that there are no material objects—that is,

(23) Possibly, I exist and there are no material objects.

But if so, then

(24) I am not a material object.

But is the premise of this argument true? I think it is. The proposition that there are no material objects does not entail, it seems to me, that I do not exist. Furthermore, Descartes could have employed a weaker premise here:

(23') Possibly, I exist and no material object is my body.

But even if these premises are true, the argument is at the best unduly inexplicit. We might well argue from

(25) Possibly, I exist and no brothers-in-law exist

to

(26) I am not a brother-in-law.

What follows from (23) is not (24) but only its possibility:

(27) Possibly, I am not a material object.

What the argument shows, therefore, is that even if human beings are in fact physical objects, they are only contingently so. But something else of interest follows from the possibility of (23) and (23'); it follows that there are worlds in which I exist and not only *am* not a body, but do not *have* a body. *Being embodied*, therefore, is not essential to human persons. Here we might be inclined to object that

(28) All human persons have bodies

is necessarily true. Perhaps it is and perhaps it is not; in neither case does it follow that human persons are essentially embodied. What follows is only that, if they are not, then *being a human person* is not essential to human persons, just as *being a brother-in-law* is not essential to brothers-in-law. The property of being a human person (as opposed to that of being a divine person or an angelic person or a person *simpliciter*) may entail the possession of a body; it may be that whatever, in a given world, has the property of

being a human person has a body in that world. It does not follow that Socrates, who is in fact a human person, has the property of having a body in every world he graces.

As it stands, therefore, Descartes's argument does not establish that he is not a body or a material object. But perhaps his argument can be strengthened. G. H. von Wright suggests the following principle:

If a property can be significantly predicated of the individuals of a certain universe of discourse then either the property is necessarily present in some or all of the individuals and necessarily absent in the rest or else the property is possibly but not necessarily (that is, contingently) present in some or all individuals and possibly but not necessarily (contingently) absent in the rest.¹⁴

We might restate and compress this principle as follows:

- (29) Any property P had essentially by anything is had essentially by everything that has it.

Is (29) true? We have already seen that it is not; *being prime or prim*, *being Socrates or Greek* constitute counterexamples. Still, the principle might hold for a large range of properties, and it is plausible to suppose that it holds for the property of being a material object as well as for the complement of that property. It seems to me impossible that there should be an object that in some possible world is a material object and in others is not. That is to say, where " M " names the property of being a material object and " \bar{M} " names its complement,

- (30) Anything that has M or \bar{M} , has M essentially or has \bar{M} essentially.

And armed with this principle, we can refurbish Descartes's argument. For if I am not essentially a material object, then by (30) I am not one at all. And hence Descartes is right in holding that he is not a material object. But if I do not have the property of being a material object, I have its complement, and by another application of the same principle it follows that I have its complement essentially. Descartes, therefore, is correct; he is an immaterial object and, indeed, is such an object in every world in

¹⁴ G. H. von Wright, *An Essay in Modal Logic* (Amsterdam, 1951), p. 27.

which he exists. What Descartes's argument establishes is that persons are essentially immaterial; Socrates, therefore, could have been an alligator only if alligators are not material objects.

IV

Socrates' essence, accordingly, contains or entails trivially essential properties, the property of being immaterial, the property of being Socrates or Greek, and the like. But aren't these—except perhaps for immateriality—pretty drab properties? What about such everyday properties as qualities of character and personality—being a saint or a sinner, wise or foolish, admirable or the reverse; are none of these essential to him? I think the answer is that none are. But if the essence of Socrates has no more content than this, isn't it a pretty thin, lackluster thing, scarcely worth talking about? Perhaps; but it is hard to see that this is legitimate cause for complaint. If indeed Socrates' essence is pretty slim, the essentialist can scarcely be expected to pretend otherwise. To complain about this is like scolding the weatherman for the lack of sunshine. Still it must be conceded that the present conception of essence might seem a bit thin by comparison, for example, with that of Leibniz:

This being so, we are able to say that this is the nature of an individual substance or of a complete being, namely, to afford a conception so complete that the concept shall be sufficient for the understanding of it and for the deduction of all the predicates of which the substance is or may become the subject. Thus the quality of king, which belonged to Alexander the Great, an abstraction from the subject, is not sufficiently determined to constitute an individual, and does not contain the other qualities of the same subject, nor everything which the idea of this prince includes. God, however, seeing the individual concept, or haecceity, of Alexander, sees there at the same time the basis and the reason of all the predicates which can be truly uttered regarding him; for instance, that he will conquer Darius and Porus, even to the point of knowing *a priori* (and not by experience) whether he died a natural death or by poison—facts which we can learn only through history.¹⁵

¹⁵ Leibniz, *Discourse on Metaphysics* (La Salle, Ind., 1945), pp. 13-14.

Might *seem* a bit thin, I say; in fact it is not thin at all. And while what Leibniz says sounds wildly extravagant if not plainly outrageous, it, or something like it, is the sober truth.

Return to the property of being snubnosed. This is a property Socrates has in this world and lacks in others. Consider, by contrast, the property of being snubnosed in this world, in Kronos. Socrates has this property, and has it essentially. This is perhaps obvious enough, but we can argue for it as follows. What must be shown is that (a) Socrates has the property of being snubnosed in Kronos in the actual world, and (b) there is no world in which Socrates has the complement of this property. (a) is clearly true. Now Kronos includes the state of affairs—call it “*B*”—consisting in Socrates’ being snubnosed: that is, the state of affairs consisting in *Kronos’ obtaining and B’s failing to obtain* is impossible. By (20), therefore, this is impossible in every world; hence, Kronos includes *B* in every world. But clearly Socrates exists in a given world *W* in which Kronos includes *B* only if, in that world, he has the property of being snubnosed in Kronos. Accordingly, Socrates has this property in every world in which he exists; hence, there is no world in which he has its complement.

We may also put the matter bibliographically. It suffices to show that Kronos’ book contains *Socrates is snubnosed* in every world. But it is evident, I take it, that

- (31) For any proposition *p* and book *B*, *B* contains *p* if and only if *p* is a consequence of *B*

is necessarily true. Now clearly *Socrates is snubnosed* is a consequence of Kronos’ book: Kronos’ book *U* (*it is false that Socrates is snubnosed*) is an impossible set. By (20), therefore, this set is impossible in every world—that is, *Socrates is snubnosed* is a consequence of Kronos’ book in every world. Hence Kronos’ book contains that proposition in every world.

The property of being snubnosed in Kronos, therefore, is essential to Socrates. And (presuming that in fact Socrates was the only teacher Plato ever had) while there are worlds and objects distinct from Socrates such that the latter *teach Plato* in the former, there is no such object that in some world has the property of *teaching Plato in Kronos*. The property of teaching Plato in Kronos,

therefore, entails the property of being Socrates; accordingly, this property is an essence of Socrates. Clearly we can find as many more essences of Socrates as we wish. Take any property he alone has—*being married to Xantippe*, for example, or *being the shortest Greek philosopher* or *being A. E. Taylor's favorite philosopher*. For any such property P , *having P in Kronos* is an essence of Socrates. Take, more generally, any property P and world W such that in W Socrates alone has P ; the property of having P in W will be an essence of Socrates.

According to Leibniz, "God, however, seeing the individual concept, or haecceity, of Alexander, sees there at the same time the basis and the reason of all the predicates which can be truly uttered regarding him." Arnauld was shocked and scandalized when he read this suggestion—no doubt in part because of the bad cold he claimed he had when he received the *Discourse* from Count von Hessen Rheinfels. But in fact what Leibniz says, or something similar, is correct. We can see that this is so if we take a closer look at the notion of *essence*, or *individual concept*, or *haecceity*. An essence E of Socrates, as we have seen above, is a property that meets three conditions. First of all, it is essential to Socrates. Secondly, for any property P , if Socrates has P essentially, then E entails P . And finally, the complement of E is essential to every object distinct from Socrates. Suppose we investigate some of the consequences of this definition. We might note, first, that for any world W , either Socrates exists in W or Socrates does not exist in W . Take any world W , that is; either Socrates would have existed, had W obtained, or Socrates would not have existed had W obtained. And that he exists in W , if he does, is, by the argument above, a matter of his essence; for any world W , either *exists in W* is essential to Socrates or *does not exist in W* is. Accordingly, if E is an essence of Socrates, then for any world W , either E entails *exists in W* or E entails *does not exist in W* .

Secondly, notice that for any property P and world W in which Socrates exists, either Socrates has P in W or Socrates has \bar{P} in W . This, too, is a matter of his essence; so for any such world and property, any essence of Socrates either entails *has P in W* or entails *has \bar{P} in W* . But what about those worlds in which Socrates does *not* exist? Does he have properties in *those* worlds? Take, for

example, the property of being snubnosed, and let W be any world in which Socrates does not exist. Are we to suppose that if W had obtained, Socrates would have had the property of being snubnosed? Or that if W had obtained, he would have had the complement of that property? I should think that neither of these is true; had W obtained, Socrates would have had neither snubnosedness nor its complement. I am inclined to think that Socrates has no properties at all in those worlds in which he does not exist. We cannot say, therefore, that if E is an essence of Socrates, then for just any world W and property P , either E entails *the property of having P in W* or E entails *the property of having \bar{P} in W* ; Socrates has neither P nor \bar{P} in a world where he does not exist. Still, in *this* world, in Kronos, Socrates has, for any world W and property P , either *the property of having P in W* or *the property of not having P in W* . For either

(32) If W had obtained, Socrates would have had P

or

(33) If W had obtained, Socrates would not have had P .

More generally, an essence of Socrates will entail, for any property P and world W , either the property of having P in W or the property of not having P in W .

An essence E of Socrates, therefore, meets three conditions: (a) for any world W , E entails *exists in W* or *does not exist in W* ; (b) for any world W such that E entails *exists in W* , E also entails, for any property P , *has P in W* or *has \bar{P} in W* , and (c) for any world W and property P , E entails *has P in W* or *does not have P in W* . In addition, of course, E is essential to Socrates and its complement is essential to everything distinct from him. We might therefore characterize an essence, or haecceity, or individual concept as follows:

(34) E is an *individual concept*, or *essence*, or *haecceity* if and only if (a) *has E essentially* is instantiated in some world, (b) for any world W and property P , E entails *has P in W* or *does not have P in W* , (c) for any world W , E entails *exists in W* or *does not exist in W* , (d) for any world W such that E entails *exists in W* , E also entails, for any property P , *has P in W* or *has \bar{P} in W* , and (e) in no world is there an object x that

has E and an object y distinct from x that has E in some world or other.

But if existence is a property, clause (c) will be redundant in that it is entailed by (b). Furthermore, it is necessarily true that an object x exists only if it has, for any property P , either P or \bar{P} ; hence clause (d) is also redundant. Still further, (e) is redundant. For let W be any world in which there exists an object x that has E . Now clearly enough it is not possible that two distinct objects share all their properties; in W , therefore, there is no object distinct from x that has E . But further, W contains no object y distinct from x that has E in some world W' . For suppose it does. E then entails *exists in W'* ; hence both x and y exist in W' . But in W' there is at most one object that has E ; hence in W' x is identical with y . Accordingly in W , y is diverse from x but possibly identical with x ; and this is impossible.

Shorn of redundancy, our present characterization goes as follows:

- (35) E is an essence if and only if (a) *has E essentially* is instantiated in some world or other, and (b) for any world W and property P , E entails *has P in W* or *does not have P in W* .¹⁶

By way of conclusion, then, let us return to Leibniz and his claims about God and Alexander. What we see is that he was right, or nearly right. God has a complete knowledge of Alexander's essence; hence for any property P and world W , God knows whether or not Alexander has P in W . He knows, furthermore, that it is Kronos that has the distinction of being the actual world. From these two items he can read off all the properties—accidental as well as essential—that Alexander does in fact have. So what we have here is surely no paucity of content; an essence is as rich and full-bodied as anyone could reasonably desire.

APPENDIX

Can we make a further simplification in our account of essencehood? Yes. Suppose we say that a property P is *world-indexed* if

¹⁶ See Appendix.

there is a world W and a property Q such that P is equivalent to the property of *having Q in W* or to its complement—the property of *not having Q in W* . *Being snubnosed in Kronos*, for example, is a world-indexed property. Let us say further that a property Q is *large* if for every world-indexed property P , either Q entails P or Q entails \bar{P} . *Being Socrates* or *Socrateity*, as we have seen, is a large property. Now where Q is a large property, there may be a large property P distinct from Q that *coincides with Q on world-indexed properties*—that is, a property that, for each world-indexed property R , entails R if and only if Q entails R . *Being Socrates*, for example, and *being Socrates and snubnosed* are distinct large properties that coincide on world-indexed properties. Accordingly, let us say that a property is *encaptic* if it is large, and is entailed by every property that coincides with it on world-indexed properties. Roughly, we may think of an encaptic property as a property equivalent to some conjunctive property Q each conjunct of which is a world-indexed property, and such that for each world-indexed property P , either P or \bar{P} is a conjunct of Q . We should note that an encaptic property may entail properties that are not world-indexed; if an encaptic property Q entails *has P in W* for every world W for which it entails *exists in W* , then Q entails W . So, for example, *Socrateity* entails the property of being possibly conscious and the property of not being a number, neither of which is world-indexed. (Of course, any such non world-indexed property entailed by an encaptic property Q will be essential to whatever instantiates Q .) Given these definitions, then, we may say that

- (36) An essence is an encaptic property that is instantiated in some world or other.

I think we can see that (35) and (36) equivalently characterize the idea of essence. Let us note first that any instantiated encaptic property meets the conditions for essencehood laid down by (35). Obviously, any such property will entail, for any world-indexed property P , either P or \bar{P} . But further, whatever instantiates an encaptic property Q has Q essentially. For let W be any world in which there exists an object x that has Q , and let W^* be any world in which x exists. What must be shown is that x has Q in W^* . It suffices to show that in W^* x has every world-indexed property

entailed by Q . But an interesting peculiarity of world-indexed properties, as we have seen, is that nothing in any world has any such property accidentally. Accordingly, since in W x has each world-indexed property entailed by Q , x has each such property in W^* as well; and hence x has Q in W^* .

On the other hand, any property that meets conditions (a) and (b) of (35) is an encaptic property that is somewhere instantiated. Obviously, if E is any such property, E is instantiated in some world. But it is also encaptic. E entails, for any world-indexed property P , has P or has \bar{P} . Accordingly, E entails some encaptic property Q . Let W^* be any world in which there is an object x that has Q . E , as we know, is essentially instantiated; so there is a world W' in which there exists an object y that has E and has it in every world in which it exists. Now Q (and hence E) entails *exists in W^** ; accordingly y exists in W^* , has E in W^* , and has Q in W^* . Now clearly there is no world in which two distinct objects share an encaptic property; if, for every property P , x has P in W if and only if y has P in W , then x is identical with y . In the present case, therefore, x and y are identical in W^* , since each has Q there. But y has E in W^* ; hence so does x . Accordingly, *Q but not E* is not instantiated in W^* ; hence E both entails and is entailed by Q , and is itself, therefore, encaptic.

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