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HOW *NOT* TO DERIVE ESSENTIALISM FROM THE THEORY OF REFERENCE *

KRIPKE takes the position that certain properties of things are properties that these things could not fail to have. His view is not restricted to trivially essential properties such as the property of *not being both red and not red*. He holds, for instance, that any wooden table that was originally constructed from a certain hunk of wood is such that it *could not have* originated from a sample of water hardened into ice, and that any particular pain sensation is such that it *could not* have the feel of a tickle.† Kripke's endorsement of essentialism seems to go hand in hand with his theory of reference. Roughly put, this is the theory that certain referential devices, in particular proper names, are nonconnotative appellations and not disguised descriptions. In fact, in a footnote to his paper "Naming and Necessity" Kripke attempts to show that certain nontrivial doctrines of essentialism, in particu-

* The material in this paper, though self-contained, forms only a part of a broader and more general program of separating suppressed essentialist presuppositions from properly semantical matters in some of the recent work of Keith Donnellan, Saul Kripke, and Hilary Putnam. Many of the details of this program are carried out in my doctoral dissertation, *Essentialism in Current Theories of Reference*, University of California at Los Angeles, 1979. My interest in the connections between essentialism and the theory of reference was largely inspired by Donnellan's unpublished commentary on Putnam's "Meaning and Reference" [this JOURNAL, LXX, 19 (Nov. 8, 1973): 699–711], abstracted in "Substances as Individuals," this JOURNAL, LXX, 19 (Nov. 8, 1973): 711–712.

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† He puts forth these views in "Naming and Necessity," in D. Davidson and G. Harman, eds., *Semantics of Natural Language* (Boston: D. Reidel, 1972), pp. 253–355, and in "Identity and Necessity," in M. Munitz, ed., *Identity and Individuation* (New York: NYU Press, 1971), pp. 135–164.

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lar his essentialist thesis concerning the origin and composition of tables, can be "proved" (Kripke uses scare-quotes here) as consequences of his new theory of reference (p. 350/1, fn 56).

This is an important claim. Philosophical questions concerning a thing's essential properties (are there any, and if so, what are they?) are time-honored and notoriously difficult.[1] If Kripke is correct in his claim that solutions to these questions can be obtained from the new theory of reference, then this new theory of reference has startling and far-reaching consequences, consequences not only for philosophical semantics proper (rigid designators, necessary a posteriori truth, etc.), but also for classical philosophical problems that are squarely metaphysical.

The question I want to consider here is whether Kripke's "proof" of essentialism from the theory of reference is successful. Let us be clear about this. I do not want to challenge the new theory of reference. Indeed, the supporting arguments offered by Kripke and others seem to me to be overwhelmingly persuasive, if not conclusive. As far as present purposes are concerned, however, it does not matter whether we accept, reject, or withhold judgment concerning the new theory of reference. I also do not want to challenge Kripke's essentialist doctrines. Indeed, they too seem quite plausible to me. What I want to question is simply whether the theory yields the essentialist doctrines as consequences. The question may be put thus: Can nontrivial doctrines of essentialism, such as Kripke's thesis concerning the origin and composition of tables, be derived from the theory of direct reference taken together only with trivial and philosophically uncontroversial premises that are themselves free of nontrivial essentialist import?[2] I shall try

[1] For an illuminating discussion of the debate between essentialists and anti-essentialists, and of the difficulties inherent in arguing either side, see Richard Cartwright, "Some Remarks on Essentialism," this JOURNAL, LXV, 20 (Oct. 24, 1968): 615–626.

[2] There is considerable vagueness in the notion of an assertion (statement, sentence, proposition, etc.) "having nontrivial essentialist import." We may say, roughly, that an assertion (statement, sentence, proposition, etc.) *A has nontrivial essentialist import* whenever assertion A, taken together only with further premises that are themselves trivial, purely empirically verifiable, or otherwise philosophically uncontroversial, (modal) logically entails some statement of the form $\ulcorner(\exists x)\ \Box\ [Exists(x) \supset \phi(x)]\urcorner$ which is not trivially true (i.e., either not true, or true but not trivially so). This "definition," of course, does not succeed in removing all vagueness, but it is precise enough for our present purpose. It is to be understood, for instance, that if an assertion entails some statement of the form $\ulcorner(\exists x)\ \Box\ [Exists(x) \supset \phi(x)]\urcorner$ where $\ulcorner\phi(x)\urcorner$ is a *logical truth*, the assertion is not *ipso facto* nontrivially essentialist. In conformance with established practice, I shall often say that an assertion is "essentialist" or "has essentialist import," where I mean by this that the assertion has *nontrivial* essentialist import.

to show that Kripke's attempt to derive his essentialist thesis from his theory of reference is unsuccessful.

I

Kripke writes:

> A principle suggested by [my] examples is: *If a material object has its origin from a certain hunk of matter, it could not have had its origin in any other matter.* Some qualifications might have to be stated (for example, the vagueness of the notion of hunk of matter leads to some problems), but in a large class of cases the principle is perhaps susceptible of something like proof, using the principle of the necessity of identity for particulars. Let 'B' be a name (rigid designator) of a table, let 'A' name the piece of wood from which it actually came. Let 'C' name another piece of wood. Then suppose B were made from A, as in the actual world, but also another table D were simultaneously made from C. (We assume that there is no relation between A and C which makes the possibility of making a table from one dependent on the possibility of making a table from the other.) Now in this situation $B \neq D$; hence, even if D were made by itself, and no table were made from A, D would not be B. Strictly speaking, the 'proof' uses the necessity of distinctness, not of identity. The same types of considerations that can be used to establish the latter, can, however, be used to establish the former. . . . In any event, the argument applies only if the making of D from C does not affect the possibility of making B from A, and vice-versa (fn 56).[3]

One point should be clarified before we attempt an analysis of this argument. Kripke's use of the phrase "something like proof" clearly suggests that he regards the argument as falling somewhat short of a genuine proof of his essentialist thesis. This does not mean, however, that he believes the reasoning to be fallacious or the argument inconclusive. He *asserts* the argument. He wants to establish the truth of his essentialist thesis, and he clearly intends that the argument be taken as doing just that. One reason he might well balk at calling the argument a *proof* is that, strictly speaking, it is a derivation from certain assumptions taken as premises, whereas a proof is not. A proof is a derivation from axioms and theorems perhaps, but not from premises. The assumption of the necessity of distinctness might be taken as a theorem of the new theory of reference, and it might be taken as a premise. For present purposes, let us take it to be a theorem. Even then, we are left with the assumption concerning the possibility of constructing two tables simultaneously from distinct hunks of wood. Though

[3] A number of typographical errors in the original printing of this passage have been corrected here.

this assumption may be trivial and philosophically uncontroversial, it is no part of a theory of reference. Strictly speaking, it is an independent premise from which the derivation proceeds.

Let us first consider what the argument is supposed to show. Kripke intends to derive a special instance of the general essentialist principle mentioned at the beginning of the quoted passage. Specifically, he intends to show that *if a wooden table has its origin from a certain hunk of wood, it could not have had its origin in any other hunk of wood*. He begins his argument by supposing that we have an arbitrary table B in the actual world constructed from a hunk of wood A, and a second arbitrary hunk of wood C distinct from A. Theoretically, however, there is no reason to restrict our initial assumptions to an *actual* table and *actual* hunks of wood. Indeed, it is clear that if Kripke's argument is successful, one can obtain an even stronger conclusion simply by beginning with an arbitrary possible world W_1, letting A be the original component material in W_1 of some table B, whatever kind of material that may happen to be, and letting C be any distinct hunk of matter. Thus we might allow that A be a hunk of wood in W_1 whereas C is, say, a sample of water hardened into ice. It must be assumed that A and C are distinct hunks of matter, but they may or may not be hunks of the same *kind* of matter. Assuming that Kripke's specific argument is successful, these more general initial assumptions should yield the stronger conclusion that *if a table might have had its origin from a certain hunk of matter, it could not have had its origin in any other hunk of matter*. That is, if Kripke's argument is successful, we may similarly derive the strong essentialist thesis that if it is merely *possible* for a given table to originate from a certain hunk of matter, then it is in fact *necessary* that the table originate from that hunk of matter and no other.

Kripke's argument is perfectly general. Similar considerations can be raised with regard to objects other than tables: other artifacts such as walls and bridges, natural inanimate objects such as mountains and rocks, and even natural organisms such as people. In fact, the argument seems to apply to virtually any sort of object that may be said to have a physical origin and composition. Instead of speaking about the original material from which a given table was made, we may speak of the original gametes from which a given person sprang, and so on. In this way, if Kripke's argument is successful, variants of it may be used to establish several strong essentialist theses concerning the origin and composition of a variety of both animate and inanimate objects. Indeed, as we shall see shortly, a similar argument may even be offered in support of essentialist theses concerning chemical substances. For substances may also be said to be composed of more primary or fundamental substances or particulars, namely, component elements in the case of compounds, or atoms having a certain number of protons in the case of elements.

Let us turn now to the argument itself. We begin by letting 'B' be a name of an arbitrary possible table in an arbitrary possible world W_1. We also let 'A' name the hunk of matter from which table B is originally constructed in W_1, and we let 'C' name some distinct hunk of matter that also exists in W_1. We want to show that it is impossible for table B to originate from hunk C, i.e., that there is no possible world in which table B is originally constructed from hunk C. In order to proceed with the argument Kripke must assume at this point that there is a possible world, call it 'W_2', in which B is still a table originally constructed from hunk A, but now a second table, which he names 'D', is constructed from hunk C in such a way that it follows from the fact that their original component materials, A and C, are distinct that the tables B and D are distinct.[4] This is where the premise mentioned above enters into the argument. Kripke's remarks leave it somewhat unclear precisely what this premise is. In one place he says that the argument assumes that the possibility of constructing table B from hunk A does not affect the possibility of simultaneously constructing table D from hunk C, and vice-versa. In another place he says that we must assume that the possibility of constructing *a table* (meaning *some table or other*) from hunk A does not affect the possibility of simultaneously constructing *a table* (meaning *some table or other*) from hunk C, and vice-versa. These are quite different assumptions. It is clear from the way in which the argument proceeds, however, that the premise Kripke actually uses asserts that the possibility of constructing the very table B from hunk A does not affect the possibility of simultaneously (i.e., in the same possible world) constructing *a distinct table* (meaning *some table or other distinct from* B) from hunk C, and vice-versa. That is, the argument assumes that if it is possible for table B to be constructed from hunk A, then it is also

[4] We may assume, for the sake of simplicity, that when Kripke says that a table x was originally made from a hunk of matter y, he means that table x was originally constructed *entirely* from *all of* hunk y, i.e., that no (original) part of table x did not come from hunk y, and furthermore that no part of hunk y did not contribute to forming part of table x. It follows from this, presumably, that it is impossible for the same table x to be originally constructed from a hunk of matter y and at the same time to be originally constructed from a *distinct* hunk of matter y'.

possible for table B to be constructed from hunk A while another table distinct from B is also constructed from hunk C. Given this premise, we simply apply *modus ponens* to infer the existence of a possible world W_2 in which table B is constructed from hunk A, while some *other* table is constructed from hunk C, both tables co-existing in W_2 as distinct entities. Once this inference is drawn, we may then name the second table in W_2 'D'.[5]

The premise that we just invoked places a restriction on admissible choices for hunk C. If hunk C were, for instance, a proper part of hunk A, say, its bottom half or an interior portion, the premise may not be satisfied despite the fact that hunk A and its bottom half are distinct hunks of matter. It may be that the premise simply reduces to a requirement that A and C be *nonoverlapping* hunks of matter, in the sense that they can have no parts in common throughout their existence. In order to avoid additional complications, let us suppose that it does. That is, let us take the premise in question to be the following:

P1: For any table x and any hunks of matter y and y', if it is possible for table x to be originally constructed entirely from hunk y while hunk y' does not overlap with hunk y, then it is also possible for table x to be originally constructed entirely from hunk y while some other table x' distinct from x is simultaneously originally constructed entirely from hunk y'.

This proposition seems trivial and uncontroversial enough for the purposes at hand, even if it is not something that is entailed by the new theory of reference. Perhaps some further qualifications must be added (e.g., perhaps hunks y and y' must be assumed to be contemporaneous), but surely some version of P1 is correct. Moreover, P1 seems to be true independently of any theory about the

[5] Actually, there is already a problem in supposing that we may give a name to a merely possible table constructed from hunk C, for in order to name something we must first single it out in some way (by description, ostension, etc.). To suppose that we have singled out one particular possible table from all the rest simply by noting that it is (possibly) constructed from hunk C is to presuppose that there is only one possible table that *could be* constructed from hunk C; i.e., it is to presuppose the principle that we have called 'P2' below. [See David Kaplan, "Bob and Carol and Ted and Alice," in J. Hintikka, J. M. E. Moravcsik, and P. Suppes, eds., *Approaches to Natural Language* (Boston: Reidel, 1973), pp. 490–518, at Appendix XI, pp. 505–508.] This difficulty in naming merely possible objects is a pragmatic difficulty, not a logical difficulty. In fact, instead of taking it as a name, the letter 'D' as it occurs in Kripke's argument, like the other letters 'A', 'B', and 'C', may be taken as a *free variable* that occurs within a derivation by way of an instantiation. This point does not affect the validity of the argument, since free variables are also rigid (under an assignment of values to variables; this point about variables is emphasized by Kaplan in his unpublished manuscript "Demonstratives").

essential properties of tables and their constituent material. In any case, I am willing to let this premise stand unchallenged. The criticisms I shall raise below are independent of the legitimacy of P1, or any weakened version of it.

Given this premise, instead of letting C be any hunk of matter distinct from A, we must add the further stipulation that C does not overlap with A. The conclusion of the argument will not be that a table cannot originate from any hunk of matter distinct from its actual (or possible) original composition, but only that a table cannot originate from any nonoverlapping hunk of matter. This weaker conclusion does not diminish the significance of the argument, assuming that the argument is successful. For even this weaker assertion represents a substantive nontrivial essentialist thesis. Surely if such a thesis may be obtained from the theory of reference, then Kripke's claim that nontrivial forms of essentialism are derivable from the modern theory of reference is vindicated.

Let us be more precise. The immediate conclusion that Kripke intends to derive is the assertion that table B could not originate from hunk C, i.e., that there is no possible world in which table B is originally constructed from hunk C. Since B is an arbitrary table in an arbitrary possible world W_1, and C is an arbitrary hunk of matter that does not overlap with hunk A, B's original component material in W_1, it will follow from this that if it is possible for a given table to originate from a certain hunk of matter, then it is necessary that the given table originate from that very hunk of matter, or at least from no entirely distinct hunk of matter. The proposition that Kripke actually derives, however, is not that table B could not originate from hunk C, but rather the assertion that

> Even if D were made by itself, and no table were made from A, D would not be B.

That is, what Kripke actually derives is the assertion that there is no possible world in which table D is identical with table B, not even a possible world where table D is made by itself and no table is made from hunk A. Although this assertion certainly does follow from the principle of the necessity of distinctness together with Kripke's additional premise P1, it is not yet the desired conclusion. So far Kripke has shown only that in any possible world in which table D is constructed, D still is not the same table as B. What he needs to show is that in any possible world in which *a table* (meaning *any* table) is made from hunk C, *that very table* made from hunk C still is not table B.

The situation can easily be represented formally. Let '$T(x, y)$'

mean "x is a table that was originally constructed entirely from all of hunk y." Kripke needs to show, using only principles from the theory of reference, and essentialism-free premises such as P1, that it is impossible for table B to be constructed from hunk C:

$$\text{C1:} \qquad \sim \Diamond\, T(B, C)$$

What he has succeeded in showing is that in any possible world in which table D is constructed from hunk C, the tables D and B are still distinct:

$$\text{C2:} \qquad \Box\, [T(D, C) \supset D \neq B]$$

The desired conclusion C1 is, of course, trivially equivalent to the assertion that in any possible world in which some table is constructed from hunk C (and hence in any possible world in which some table is constructed from hunk C and table B is not constructed from hunk A), the table constructed from hunk C still is not table B:

$$\text{C3:} \qquad \Box\, (x)[T(x, C) \supset x \neq B]$$

C3 is formally very similar to Kripke's conclusion C2. Indeed, it is obvious that Kripke's reasoning is aimed in the general direction of something like C3, since it is equivalent to the desired conclusion C1. Instead of deriving C3, he derives C2. The issue, however, is not whether table B could be identical with table D, but whether table B could be originally constructed from hunk C instead of from hunk A. Now unless there is some way of moving from Kripke's conclusion to the desired conclusion, using only premises that are either entailed by the new theory of reference or free of nontrivial essentialist import, Kripke's attempted derivation of essentialism from the theory of reference is unsuccessful. It would be sufficient to be able to infer C3 from Kripke's conclusion C2, since C3 is equivalent to the desired conclusion C1. But simply ending the derivation with C2 is not enough.[6]

The fact of the matter is that C3, though formally very similar to Kripke's conclusion C2, simply does not follow from it, not even given Kripke's additional premise and all of rigid-designator theory. Insofar as Kripke's argument for his essentialist thesis appeals only to principles from the theory of reference together with his premise P1, it is simply a *non sequitur*. If the argument is going to work at all, it must rely on some further premise that has not yet been made explicit. This additional premise, of course, must also be free of any nontrivial essentialist import.

[6] It was first pointed out to me by Keith Donnellan that this argument of Kripke's did not seem correct. However, the analysis presented in this paper is, I believe, entirely my own.

How then might Kripke argue from his present premise P1 and his theory of reference to the desired conclusion C1 (or C3)? One way would be to make the additional assumption that if it is possible for table D to originate from hunk C, then it is necessary that D originate from hunk C. It would then seem to follow that table B does not originate from hunk C in any possible world, since it is table D that originates from hunk C in every possible world, and B and D are necessarily distinct.[7] But, given the arbitrary way in which hunk C and table D were selected, this additional assumption is tantamount to the assumption that if it is possible for a given table to originate from a certain hunk of matter, then it is necessary that the given table originate from the hunk of matter. Since this assertion is precisely what Kripke's argument was designed to "prove," it obviously cannot be taken as a further premise to the argument. If this were the missing premise, Kripke's "proof" of essentialism would not only be a failure, it would be a howler.

What Kripke does seem to assume is that, in any possible world, any table originating from hunk C is the very table D and no other. More precisely, Kripke apparently assumes the following principle as a tacit premise:

P2: If it is possible for a table x to originate from a hunk of matter y, then necessarily, any table originating from hunk y is the very table x and no other.

This principle may be symbolized thus:

$$(x)(y)[\Diamond\, T(x, y) \supset \Box\, (z)(T(z, y) \supset z = x)]$$

One can easily verify that Kripke's premises P1 and P2, together with the principle of the necessity of distinctness, yield Kripke's essentialist conclusion that if it is possible for a given table to originate from a certain hunk of matter, then it is necessary that the given table does not originate from any nonoverlapping hunk of matter:

$$(x)(y)(y')[\Diamond\, (T(x, y) \;\&\; y \text{ does not overlap with } y') \supset \Box \sim T(x, y')]$$

We may mimic Kripke's reasoning thus: Let W_1 be some possible world in which an arbitrary table B originates from some hunk of matter A. Let C be any hunk of matter that does not overlap with

[7] It is assumed here that only one table can originate from a single hunk of matter within a single possible world. We shall see below that this assumption is probably false. It should also be pointed out that what must be assumed here is that table D originates from hunk C in *every* possible world, including worlds in which table D is never constructed at all and does not even exist. It is fairly safe to say that this goes beyond Kripke's intentions.

A in W_1. We wish to show that there is no possible world in which table B originates from hunk C. By premise P1, there is a possible world W_2 in which table B originates from hunk A, just as in W_1, but also a second table, which we shall call 'D', originates from hunk C. By the necessity of identity and distinctness, tables B and D are distinct in every possible world since they are distinct in W_2. (Since B and D are distinct in W_2, they must also be distinct in the actual world. Otherwise, by the necessity of identity, they would be identical in every possible world, including W_2. Since B and D are distinct in the actual world, it follows, by the necessity of distinctness, that B and D are distinct in every possible world.) Now consider an arbitrary possible world W_3 in which some table is constructed from hunk C. Could that table be the very table B from W_1? Given premise P2, it cannot. For, by premise P2, the table in question in W_3 is none other than table D, and B and D are distinct entities in every possible world, including W_3. Therefore, there is no possible world in which table B originates from hunk C. Q.E.D.

Principle P2 is a crucial component in this piece of reasoning. There is a clear sense in which it is doing the brunt of the work. It tells us that in any possible world any table originating from hunk C must be D and not B. Without this additional information, there is no reason to suppose that the table in question in W_3 could not be B. Thus Kripke's argument uses origin as a (necessarily) sufficient condition for being *this very table* in order to prove that origin is also a (necessarily) necessary condition.[8]

II

Principle P2 is quite compelling. In fact, P2 or some weakened version of it is so fundamental to Kripke's point of view that he

[8] Recalling a point made in note 5, one can see that the new theory of reference, insofar as it is a theory of *closed* expressions (proper names, natural-kind terms, indexicals, perhaps referentially used definite descriptions, etc.) and not a theory of free individual variables, is entirely inessential to Kripke's argument. The argument requires only P1, P2, and the principle of the necessity of identity and distinctness taken in the form

$$\Box\ (x)(y)[\Diamond\ (x = y) \supset \Box\ (x = y)]$$

i.e., as a law of modal logic, not as a special assertion of the new theory of proper names. Our point may thus be put as follows: If Kripke's argument from P1 and his rigid-designator theory of proper names to his essentialist conclusion is valid without the help of P2, then a similar argument for the same conclusion using only P1 and the logical law mentioned above is equally valid. (The derivation is the same, except that the letters 'A', 'B', 'C', and 'D' are introduced not as proper names but as free variables obtained by universal and existential instantiation.) But it can be proved model-theoretically that the latter argument without P2 is invalid. Therefore, Kripke's argument using proper names is also invalid without P2.

takes no notice whatsoever of the fact that his reasoning crucially depends on it. But there is a clear sense in which reliance on this additional principle simply begs the question of whether nontrivial essentialism is derivable from the theory of reference. For premise P2 is a strong essentialist principle concerning tables and their origins. It asserts that if a given table x is such that it *might have* originated from a certain hunk of matter y, then the given table x has as an *essential* property the feature that no table distinct from it originates from hunk y. Looked at in another way, it asserts a nontrivial essential property of any hunk of matter y, namely that if any table is constructed from it, it is always the *same* table, or that hunk y has, so to speak, only one potential table "in" it.[9] This additional premise is something that cannot be obtained simply from the theory of reference unbolstered by any nontrivial metaphysical theory of essentialism. Since Kripke's attempted derivation of essentialism from the theory of reference falls back in the end on a hidden essentialist premise that is quite independent of the theory of reference, the "proof" is simply a failure.

It is interesting to compare Kripke's argument with an argument given by Colin McGinn concerning persons and their origins.[10] McGinn writes:

> . . . it seems essential that you come from the gametes you actually come from, as the following train of thought makes plain. Suppose, with a view to *reductio*, that I come from Nixon's actual gametes, i.e., consider a world in which this occurs. Now, what is surely compossible with the first supposition, add my actual gametes to the aforementioned world and suppose they develop into an adult. Which of these individuals has the stronger title to be me? My intuitions seem decisively to favor the latter individual. And the same verdict seems delivered if the counterfactual gametes are similar to mine (132).

McGinn's exposition is very informal, but it is clear that his

[9] More accurately, assuming the necessity of distinctness, the principle is simply tantamount to the assertion that any table that *might* have originated from a certain hunk of matter y is in fact the *only* table that *could* originate from hunk y. That is, principle P2 together with the following law:

$$(x)(y)[x \neq y \supset \Box\, x \neq y]$$

yield the following principle:

$$(x)(y)[\Diamond\, T(x, y) \supset (z)(z \neq x \supset \Box \sim T(z, y))]$$

or, equivalently,

$$(x)(y)[\Diamond\, T(x, y) \supset (z)(\Diamond\, T(z, y) \equiv z = x)]$$

[10] In "On the Necessity of Origin," this JOURNAL, LXXIII (March 11, 1976): 127–135.

argument is merely a variant of Kripke's. The difference is that McGinn does not pretend to derive essentialism simply from the principle of the necessity of distinctness. He is explicit in his reliance on a certain intuition concerning the identification of persons across possible worlds, namely the intuition that, in any possible world, any person who springs from the actual gametes of a given individual x is the person x himself or herself. This general principle is the analogue of P2 for the case of persons. It is an exceedingly plausible principle. But it is a general principle of essentialism, and would certainly be rejected by any anti-essentialist. It asserts of any person other than McGinn that he or she could not originate from McGinn's actual gametes. This thesis is entirely separate from the new theory of reference.[11]

[11] It was pointed out to me by Kit Fine and independently by Robert Stalnaker that Kripke's premises P1 and P2 can be replaced by the following two premises, the first of which is reminiscent of Kripke's P1 but at least less obviously essentialist, and the second of which is a perfectly trivial and uncontroversial principle from the theory of matter and table composition:

P5: For any tables x and x' and any hunks of matter y and y', if it is possible for table x to be originally constructed entirely from all of hunk y while hunk y' does not overlap with hunk y, and it is also possible for table x' to be originally constructed entirely from all of hunk y', then it is also possible for table x to be originally constructed entirely from all of hunk y while table x' is simultaneously originally constructed entirely from all of hunk y'.

P6: It is impossible for the same table to be originally constructed *entirely* from *all* of hunk y and at the same time to be originally constructed *entirely* from *all* of a *distinct* hunk y'.

(We saw in fn 4 that P6 may in fact be a presupposition of Kripke's premise P1.) The derivation of Kripke's essentialist conclusion is obtained by letting x and x' in P5 be the same, to obtain the principle that if it is merely possible for a given table x to originate from a certain hunk of matter y, then it is in fact necessary that the given table does not originate from any nonoverlapping hunk of matter y', *provided only that it is impossible for the given table x to be composed entirely from all of hunk y and simultaneously entirely from all of the distinct hunk y'*. Although this premise is slightly weaker than Kripke's essentialist thesis without the proviso, it hardly has any less essentialist import. (See fn 2.) Moreover, it is fairly obvious that this premise is no mere consequence of the modern theory of reference.

There are two reasons why premise P5, although philosophically suspect, appears at first glance to be no less objectionable than Kripke's premise P1. One reason is that the bound variables 'x' and 'x'' occurring in the statement of P5 are distinct, and, consequently, the reader immediately thinks of instances where these two variables take on distinct entities as values. For *distinct* tables x and x', principle P5 is quite plausible, and indeed quite free of any nontrivial essentialist import. The other reason that P5 seems as unobjectionable as Kripke's explicit premise P1 is that P5 is easily confused with the following trivial principle, which is itself too weak to take us from the necessity of identity and distinctness to nontrivial essentialism:

P7: For any hunks of matter y and y', if it is possible for *a table* (meaning *some table or other*) to originate from hunk y while hunk y' does not overlap with

Although Kripke never discusses in print how one can arrive at general essentialist principles concerning natural kinds, it is easy to see how one might extend this argument concerning tables and their origins to arrive at the principle that, if a substance S *might have had* a chemical structure C, then substance S is such that it *could not have* any chemical structure *other than* C. We need only two premises, which are perfectly analogous to Kripke's P1 and P2. Specifically, we need to assume in the first place that

P3: If it is possible for a substance S to have a chemical structure C, and C' is any chemical structure distinct from C, then it is also possible for substance S to have chemical structure C while some *other* substance S' has chemical structure C'.

We also need to assume that

P4: If it is possible for a substance S' to have a chemical structure C', then it is necessary that any substance having the chemical structure C' is substance S' and no other.

Given these two premises, we reason exactly as before to the desired conclusion. Though it may indeed be by way of this argument that one arrives at general essentialist principles concerning natural kinds, the same remarks made above concerning Kripke's tacit premise P2 apply with equal force to the premise P4 of this argument concerning substances. Like P2, premise P4 is a rather strong essentialist principle concerning substances. It is philosophically controversial to the extent that any thoroughgoing anti-essentialist would certainly reject it. Moreover, it is logically quite independent of the modern theory of reference.

As it is stated, principle P2 (and its analogues) may be too strong. P2 asserts that any table z that originates from the actual component matter of a given table x must be the very table x. It does not require that the table z be constructed *in the same way that* x is actually constructed, following the same design, or anything of the sort. All it requires is that the table z be constructed from

hunk y, and it is also possible for *a table* (meaning *some table or other*) to originate from hunk y', then it is also possible for *a table* to originate from hunk y while at the same time *a table* also originates from hunk y'.

Loosely speaking, all that separates the essentialist P5 from its nonessentialist counterpart P7 is precisely Kripke's suppressed essentialist premise P2, the principle that sameness of original composition is a sufficient condition for the crossworld identification of tables. P7 together with P2 entail P5. In a manner of speaking, P5 inherits its essentialist import from P2. Of course, neither P5 nor P7 is a consequence of the modern theory of reference. Hence, the argument employing P5 in place of Kripke's P1 and P2 fares no better than Kripke's original formulation.

the same hunk of matter. It is not at all clear, however, that this is sufficient. Suppose that, in some other possible world W, the component material of a given table x is shaped into a table that is radically different from x in design and structure. Suppose, for instance, that the portion of the component material which actually makes up the top surface of x goes instead to make up the legs of the table in W, and so on. Would the table in W nevertheless be one and the same entity as the original table x, since it is constructed in W from the same hunk of matter that x is actually constructed from? This is a difficult question.[12] Principle P2 could be replaced with the following, considerably weaker, assertion:

P2′: If it is possible for a given table x to originate from a certain hunk of matter y *according to a certain plan* P, then necessarily any table originating from hunk y *according to precisely the same plan* P is the very table x and no other.

Principle P2′ together with a correspondingly strengthened version of Kripke's original premise P1 still yield the intended essentialist conclusion concerning tables and their origins.[13]

Principle P2′ is exceedingly plausible, almost to the point of being indubitable. If two tables in two different possible worlds are constructed from the very same stuff in precisely the same way and, let us assume, with exactly the same structure molecule for molecule, how can they fail to be the very same table? What more could one ask? What more is there to being *this very table?* The fact remains, however, that even the weaker P2′ is a substantive metaphysical principle that is not entailed by the new theory of reference. It is supported by a set of intuitions that are entirely separable from our intuitions concerning reference and intensionality.

III

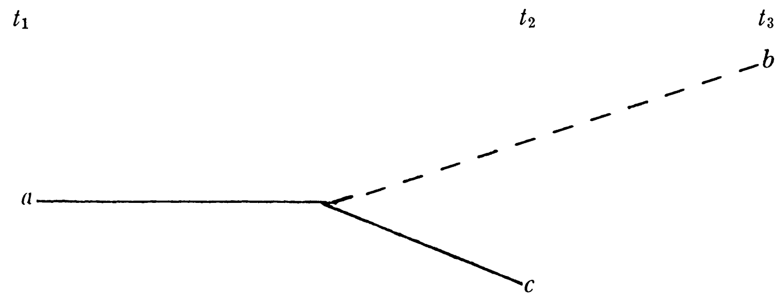
What is especially interesting is that Kripke's tacit principle P2—and even the weaker principle P2′—conflicts with certain plausible views regarding identity and the possibility of change in the physical composition of an object. This fact becomes apparent if we consider an argument given by Hugh Chandler against the new theory of

[12] Similar questions can be raised with regard to McGinn's principle concerning persons and their origins. Intuitions may differ in the two cases.

[13] The strengthened version of P1 that is needed is the following:

For any table x, any hunks of matter y and y', *and any plan* P, if it is possible for table x to originate from hunk y while hunk y' does not overlap with y, *and it is also possible for a table to be constructed from hunk* y' *according to plan* P, then it is also possible for table x to originate from hunk y while some other table x' distinct from x is simultaneously constructed from hunk y' *according to plan* P.

reference.[14] Following Hobbes's depiction from *De Corpore* of the story of the ship of Theseus, Chandler describes two possible worlds, let us call them 'W' and 'W'', in which the component planks of a certain ship a are very gradually removed, one by one, beginning at time t_1. In W each plank removed from a is immediately replaced by a new and different plank, so that at the end of this process of removal and replacement at time t_2, there stands a ship c which is composed of entirely different materials in the place where a once stood. Some time later, at time t_3, the planks removed from the original ship a are reassembled following the original plans into a ship b which is distinct from c.[15] Following Chandler, we may diagram W thus:



Following David Wiggins,[16] Chandler decides that in such a situation it would be reasonable to say that a and c are one and the same ship, in view of the fact that they are linked by spatiotemporal continuity, whereas b is simply a new ship assembled from a's original planks.

It is not clear that the Wiggins view of the situation is correct. Suppose, for instance, that a is a historically important ship, say Columbus's *Nina*, and that some unscrupulous philosopher had been commissioned to disassemble this ship, transport its disassembled parts to the Smithsonian Institution in Washington, D.C., and reassemble it there, all over a very long period of time. Suppose further that, intending to perpetrate a major hoax on the authorities, this scoundrel carefully replaces each plank by a new one before removing the next. He then smugly transports the original planks to Washington, for reassembly, believing that the real *Nina* remains standing in his garage. If the authorities discovered what had been

[14] In "Rigid Designation," this JOURNAL, LXXII, (June 17, 1975): 363–369. A similar argument is also given by Allan Gibbard in "Contingent Identity," *Journal of Philosophical Logic*, IV, 2 (May 1975): 187–221.

[15] Chandler lets $t_2 = t_3$, but I think his argument is made slightly more plausible if ship b is constructed some time after ship c, rather than simultaneously.

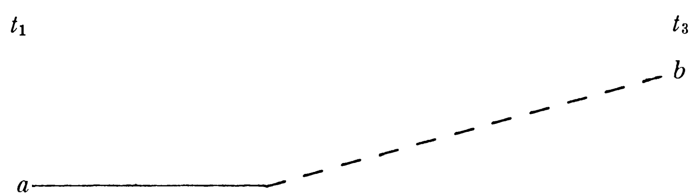
[16] *Identity and Spatio-temporal Continuity* (Oxford: Basil Blackwell, 1967).

done, they would probably be quite content to let this foolish rascal keep the ship standing in his garage. For it is nothing more than a *replica* of the genuine *Nina*, which is now disassembled, though its parts are safe and sound in Washington awaiting reassembly.[17]

There are other cases, however, which seem to go the other way. If, for instance, my dead body cells over a period of several years were collected, revived, and fused together to form a living human being, I feel quite certain that this cloned individual would not be me, even if in many respects he were more like my former self than I am. And I feel equally certain that, even if my dead body cells were fused into a human body, I would still have the same body now that I have always had, and so my cloned counterpart must have a different body than the body I used to have (and still have). The case of Chandler's possible world W is not so clear-cut as either of these two cases. Let us simply assume, however, for the sake of argument, that the Wiggins view is correct and that a is the same ship as c in W.

Chandler describes (365) the second possible world W' by stipulating that in W',

> . . . a's planks [are] removed one by one *without being replaced.* b is then constructed as in [W]. In this case a and b are the same ship. What it comes to is that [a ship] is transported from one place to another by being disassembled and then reassembled.

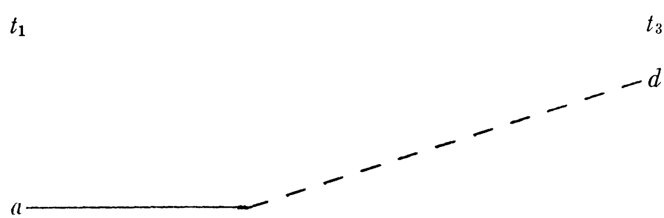


Chandler draws conclusions from this which are clearly incompatible with the new theory of reference. The ships a and b, according to Chandler, are identical in W' but distinct in W. Hence it seems that some identities are contingent. Furthermore, if 'b' is a proper name, then it is a nonrigid proper name. For it denotes the ship a with respect to W', but it does not denote a with respect to W. With respect to W it denotes a new and different ship. Hence it also seems that some proper names are nonrigid.

From the point of view of the modern theory of reference, Chandler's argument involves a fundamental mistake. The mistake occurs when he uses the letter 'b' to name two objects in different possible

[17] The example and the point it illustrates I owe to David Kaplan. A similar example has been given by Kripke in lectures.

worlds without first settling the question of whether they are indeed the same object. It is true that a possible world may be given, as it were, "by stipulation." We say "Consider a possible world in which so and so exists, and has such and such properties . . .," where we mean by this "Suppose that so and so had such and such properties. . . ." It is perfectly legitimate, therefore, for Chandler to begin with the hypothesis that the ship a exists in both W and W', and that its planks are gradually removed, with replacement in W and without replacement in W', and that its original planks are later reassembled in both worlds. But once certain stipulations have been made, one is automatically barred from making further stipulations that are not compossible with the initial stipulations, on pain of "stipulating" an *impossible* state of affairs. In Chandler's example, once the ship constructed at t_3 in W has been dubbed 'b', it is illegitimate to refer to the ship constructed in W' at t_3 by the very same name. According to the modern theory of reference, to do so is to presuppose that the two ships are one and the same. To guard against such "overstipulation" the ship constructed at t_3 in W' should be given a neutral name, say 'd'. W' would then be diagrammed thus:



With this correction made, we can now raise the question of whether d is b and can, therefore, be given the same name. Given Chandler's assumptions about identity through time, one can actually *prove* from the point of view of the new theory of reference that b and d are in fact distinct entities. For, by hypothesis, $a = d$ but $a \neq b$. Hence $d \neq b$. This proof presupposes what David Kaplan calls "haecceitism," i.e., the view that it makes sense to identify, in an *absolute* sense, individuals in different possible worlds.[18] The proof also presupposes the principle that objects identical *within* a possible world are identical in the absolute sense of being numerically one and the same object, and not two. These are presuppositions of the new theory of reference. It is quite easy to show, in fact, that these

[18] See his "How to Russell a Frege-Church," this JOURNAL, LXXII, 19 (Nov. 6, 1975): 716–729, at 722/3.

two principles are equivalent.[19] It is important to notice, however, that Chandler himself is also working within a haecceitist framework, since his initial hypothesis is that a certain ship a exists in two different possible worlds W and W'. From the point of view of the modern theory of reference, Chandler's argument that some proper names are nonrigid commits the fallacy of equivocation. It depends crucially on the illegitimate use of a single expression as a name for what are, following his own view, two distinct objects.[20]

One reason that it is tempting to use the same expression as a name for each of the two ships constructed at t_3 in W and W' is that we are inclined to think in accordance with principles like P2′. One must be careful here not to confuse crossworld identity with cross-time identity. Chandler's example is unusually complex in that it involves elements of both. An analogue of P2′ for the case of ships would assert that any two ships *in different possible worlds* which are constructed from the very same component matter according to precisely the same plan must be the very same ship. This is a *modal* principle. It would identify the two ships b and d across W and W'. It does not, however, identify a and b *within* W. A corresponding *temporal* principle for the case of ships would identify any two ships

[19] The proof makes use of the assumption that the notion of "x and y being crossworld identical across possible worlds W_1 and W_2" is definable in terms of the notion of *intra-world* identity thus: x is intra-world identical in W_1 with the individual that y is intra-world identical with in W_2.

[20] I discovered, only too late, that the criticism of Chandler given thus far is also presented, in a more skeletal but substantially the same form, by John L. King, "Chandler on Contingent Identity," *Analysis*, XXXVIII, 3 (June 1978): 135–136. One difference, however, is that King's argument on Kripke's behalf for the distinctness of b and d either involves the same presuppositions mentioned above and is unnecessarily complicated, or does not involve these presuppositions and is fallacious. King is not concerned in his paper with Kripke's attempted proof of the essentiality of origins. Kripke has mentioned to me in discussion of my criticism that he, also independently, discovered an error in Chandler's argument and realized that he may have committed a similar error in his attempt to prove the essentiality of origins.

In fairness to Chandler, it should be pointed out that his discussion leaves some reason to believe that he may be using the letter 'b' as an abbreviation for some nonrigid definite description, such as 'the ship constructed at t_3 from such and such planks'. Insofar as Chandler's argument depends on the premise that proper names are sometimes synonymous with descriptions, it is not so much an *argument* against the new theory of reference as it is merely the assertion of its negation. Chandler also shows some sympathy for the view that objects that are intraworld identical are not identical in an absolute sense. Gibbard's argument, which is similar in thrust to Chandler's, is coupled with an explicit and emphatic rejection of haecceitism.

I am not interested here in trying to settle the issues that separate the modern theorists of reference from Chandler and Gibbard, but rather in pointing out a certain largely unnoticed connection between the modern theory of reference and principles such as Kripke's P2 and P2′.

at different times *within a single possible world* provided only that they were composed of the same material. Such a principle would indeed identify a and b in W, but it would not identify b and d across W and W'. In adopting the Wiggins point of view concerning transtime identity and spatiotemporal continuity, Chandler has rejected any such naive principle of identity through time. What I want to suggest is that the modal principle may still be operant within us even after we have rejected the corresponding temporal principle. Unconscious and uncritical reliance on a modal principle like P2′ would require us to identify b and d across possible worlds, and consequently to give them the same name. We may be inclined to make this identification even in philosophically sophisticated contexts in which our sensitivity to issues involving identity and change is considerably heightened. It may be because principles such as P2′ are so deeply internalized that Kripke did not seem to realize that his argument depended crucially on just such a principle. The fact is, however, that, given our assumptions about identity, *principles such as P2′ are incompatible with the plausible view that a given object can maintain its identity through time by an appropriate sort of spatiotemporal continuity though its matter is frequently replenished*. Insofar as there are possible situations structurally similar to W in which Wiggins's view concerning identity through time is correct, principles like P2′ which allow for crossworld identification of individuals by way of more fundamental particulars are in need of further refinement. Arguments for essentialism, such as those given by Kripke and McGinn, which rely on principles like P2′, must make do with even weaker versions if they are going to hold up under careful scrutiny.

IV

Principles like P2′ can, with some care, be reformulated to handle difficulties like that raised by Chandler, and still yield Kripke's essentialist conclusion when taken together with a correspondingly strengthened version of Kripke's premise P1 or its analogues for objects other than tables. One might think that all that is required to repair principle P2′ is some restriction clause that rules out cases of replenishment or reassembly. For instance, we might replace P2′ with a weaker principle which identifies tables across possible worlds when they originate from the same hunk of matter according to the same plan provided that in neither world is that same hunk of matter ever altered and later reshaped into a table. The essentialist conclusion that one derives from this weakened version of P2′, together with a correspondingly strengthened version of P1, is slightly weaker than Kripke's original thesis. It is that every table

x is such that it could not happen that it originates from some hunk of matter y' which is never at any time altered and later reshaped into a table, if actually hunk y' does not even overlap with the actual component matter of table x. This formulation sidesteps the difficulties raised by Chandler. But there are serious problems with even this weakened version of P2′, problems which do not involve disassembly, reassembly, or replenishment, and which apply equally to the original P2 and P2′.

Ironically, one interesting problem with such variations of P2 and its analogues is raised in another paper by Chandler himself.[21] In order to make out this problem we must assume that any concrete object of a certain sort (table, ship, etc.) is such that it *could have* originated from a hunk of matter which differs only in part from the actual original component matter. That is, we need to assume that any concrete physical object of a certain sort, say, any ship, could have originated with slightly different parts, as long as some, or perhaps most, of the parts are the same. We do not have to specify exactly how much of the actual original material can be different before one gets a different ship. We need only admit that *some* difference, even if only slight, is allowable. If Kripke's type of essentialism is correct, then no one ship could have originated from distinct sets of *entirely* different parts. It seems then, given our assumption, that there must be some *threshold*, some point at which one more change from the actual original material must result in a different ship altogether. The difficulty with crossworld-identification principles like P2 and P2′ is easily exhibited in an example which is completely representative of the general case. Consider a possible world W_1 in which a ship a consists of exactly 100 planks of wood. Suppose for the sake of argument that any ship of this particular plan and structure is such that it *could have* originated from a different set of planks so long as 98% of them are the same, and only 2% are different, but that a change of more than 2% in the original material must yield a distinct ship. That is, suppose that the threshold point is: 98% the same material, 2% different. Let us call the planks that constitute ship a in W_1 'P_1', 'P_2', and so on, up to 'P_{100}'. Now surely there is a possible world W_2 in which a ship b is constructed according to the very same plan from planks $P_1, P_2, \ldots, P_{97}, P_{101}, P_{102}$, and P_{103}, where P_{101}, P_{102}, and P_{103} are any three planks that are qualitatively identical with P_{98}, P_{99}, and P_{100}, respectively, but do not even overlap with any

[21] "Plantinga and the Contingently Possible," *Analysis*, XXXVI, 2 (January 1976): 106–109. Chandler credits the discovery of the problem to Robert Stalnaker.

of ship a's original planks in W_1. Ship b does not have enough planks in W_2 in common with ship a in W_1 to be ship a itself. It must, therefore, be a completely different ship. Now either of these ships a and b could have originated from a different set of planks so long as 98 of them are the same. Thus there is a possible world W_3 in which ship a is constructed according to the same plan from planks $P_1, P_2, \ldots, P_{97}, P_{98}, P_{102}$, and P_{103}, since the first 98 of these planks are the same as those in W_1. But there is also a possible world W_4 in which ship b is also constructed according to the very same plan from the very same planks, since all but one of them, namely plank P_{98}, are the same as those in W_2:

$$\begin{array}{ccc}
W_1 & & W_2 \\
\langle\langle P_1, P_2, \ldots, P_{97}, P_{98}, P_{99}, P_{100}\rangle\rangle & \neq & \langle\langle P_1, P_2, \ldots, P_{97}, P_{101}, P_{102}, P_{103}\rangle\rangle \\
a & & b \\
\| & & \| \\
a & & b \\
\langle\langle P_1, P_2, \ldots, P_{97}, P_{98}, P_{102}, P_{103}\rangle\rangle & \neq & \langle\langle P_1, P_2, \ldots, P_{97}, P_{98}, P_{102}, P_{103}\rangle\rangle \\
W_3 & & W_4
\end{array}$$

Hence we have two ships, a and b, in two different possible worlds, W_3 and W_4, such that both are constructed in their respective possible worlds from the very same planks according to the very same plan; nevertheless they are distinct entities.

This argument seems to show, then, that ships that originate from the very same hunk of matter across possible worlds, and according to the very same plan, may not always be identified. This conclusion is very surprising. How can these two ships, having the very same original composition and structure, not be one and the same ship? After all, it would seem that a ship is nothing *over and above* its parts put together in a certain way, and these two ships do not differ in any way qualitatively or structurally. Nevertheless, the correct conclusion seems to be that they differ in their haecceities; the first ship is *this* ship, the second ship is *that* ship, they are different ships, and that is all there is to it. As unpalatable as this may sound, the conclusion seems to follow if we assume that objects might have originated with *some* different parts, but not all.[22]

[22] Chandler's main concern, *op. cit.*, is to argue that the accessibility relation between possible worlds (W is *possible relative to* W') is not transitive. Considerations similar to those presented here seem to yield this result. Given the existence of possible world W_3 in the example, there is, by hypothesis, still another possible world W_5 in which the same ship a is constructed in precisely the same way as ship b in W_2, since all but one of the planks, P_{101}, are the same as those in W_3. But even though W_5 is possible relative to W_3, and W_3 is possible relative to W_1, W_5 is, by hypothesis, not possible relative to W_1. Ship a has exchanged one too many planks. By considering a succession of 50 possible worlds, one can eventually

The problem raised here does not involve a process of replenishment or identity through time. It involves *crossworld-overlapping* matter, i.e., hunks of matter in different possible worlds which have

construct ship a from entirely different planks from those used in W_1. [This sorites construction is reminiscent of an argument given by Roderick Chisholm in "Identity through Possible Worlds: Some Questions," *Noûs*, I, 1 (March 1967): 1–8, except that Chisholm's argument is given in terms of qualitative changes rather than changes in constituent matter.] In our presentation, both W_2 and W_3 are possible relative to W_1, and W_4 is possible relative to W_2, but it has not been shown that W_4 is possible relative to either W_1 or W_3. It is open for a proponent of P2′ and its analogues to argue that W_3 and W_4 are not possible relative to each other.

In the general case, we consider an arbitrary ship a in an arbitrary possible world W_1 and let n be the total number of planks that constitute ship a in W_1. Let m be the smallest number, whatever it is, such that ship a could have been constructed according to the same plan from a different set of n planks so long as m of those planks are identically the same as those from W_1 (playing the same role in the design of ship a, etc.), while the rest are different but qualitatively similar. That is, let m be the smallest number of planks which a ship in any possible world must have in common with ship a in W_1 if it is to be identical with a. Thus $n - m$ is, so to speak, the threshold number. It is the upper limit on the number of planks which could have been interchanged with those in W_1 without getting a different ship. Now $m \leq n$. Our additional assumption is that m is in fact less than n, for if $m = n$, then no difference at all in the original physical make-up of ship a is possible. Now consider a possible world W_2 in which a ship b is constructed from n planks according to the same plan as ship a in W_1, with exactly $m - 1$ of the n planks that make up ship a in W_1 also going to make up part of ship b in W_2, each playing exactly the same role in the design in both possible worlds, the rest of ship b being made from completely different planks, none of which overlap with any of those in W_1. Then, by hypothesis, b is not the same ship as a. Ship b in W_2 has just one less than the number of planks in common with ship a in W_1 required for it to be the same ship. It follows from our assumption of $m < n$ that the number of planks in which the two ships differ across possible worlds (namely, $n - m + 1$) is at least as great as 2. Now by the definition of m, there are two possible worlds W_3 and W_4 in which the very same two ships a and b, respectively, are each constructed as follows: begin with the $m - 1$ planks that ship a has in common in W_1 with ship b in W_2, and let them play the same role in the design that they play in both W_1 and W_2. We know that there are at least two remaining planks in ship a, as it is constructed in W_1, which have not yet been used, and also that there are at least two remaining planks in ship b, as it is constructed in W_2. To complete the construction of ship a in W_3, take one of the remaining planks from ship a in W_1, and take one of the remaining planks from ship b in W_2 which does not play the same role in the design as the plank just taken from ship a in W_1. Now fill out the rest of the ship under construction by choosing from among the remaining planks of ship a in W_1 and ship b in W_2. We thus have two distinct ships, a and b, constructed in their respective possible worlds W_3 and W_4 from the very same planks according to the very same plan.

Generally, for fixed n, it may be extremely difficult to say exactly what number m is. It may even be in principle indeterminate what number m is. But the general argument does not require that we say what number m is, and it applies to any number that is, so to speak, a *candidate* for m. A variant of the argument may be given with m replaced by an *interval* in which it may be vague whether possible ships having that many planks in common can be the same ship, though this argument requires stronger assumptions concerning the relative size of the interval of vagueness. The argument assumes for the sake of simplicity that each plank some parts in common. It is especially difficult to see how principles like P2′ can be weakened even further to avoid this difficulty and still yield Kripke's essentialist theses. Further exploration of the relations between these various alternative principles that attempt to determine the identity of things from the identity of their plan and constituents—or, in an older terminology, from their *form* and *matter*—would take us beyond the scope of the present paper. For our purpose it is sufficient to point out that, even if there are weakened versions of principles like P2′ which are both consistent with all of our primary intuitions and sufficient to yield Kripke's essentialist theses, fundamental though these principles may be to our way of looking at things, they will almost certainly be quite sophisticated, nontrivial essentialist principles that are not mere consequences of the modern theory of reference.

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THE DESCRIPTIONAL VIEW OF REFERRING: ITS PROBLEMS AND PROSPECTS *

ACCORDING to a framework for singular reference developed principally by Frege, Russell, and Strawson, when we refer to something that is not present, we do so under a particular description, and our referent is the individual that uniquely satisfies this description. But the framework taken by itself does not provide a way of telling on any given occasion under what description we are supposed to be referring. When we turn to cases, this lack of guidance gives rise to questions and doubts. Thus, in using a proper name to refer, we are not clearly referring under any description; and, in using a definite description referentially and not attributively, we are not referring under the description we might first take to be governing our reference. To get an

of ship a counts equally to the ship's crossworld identity. The general argument can be made to accommodate weighting of the planks, with some counting more heavily than others to the identity of the ship. We also assume that n is large enough, or that each plank is small enough, so that a change of only one plank can yield the same ship. When this is false, the word 'plank' may be replaced by 'half-plank' or 'quarter-plank'. Indeed, in principle, the word 'plank' might even be replaced by 'cubic inch', or, for that matter, 'molecule'.

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