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THINGS, RELATIONS AND IDENTITY*

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Philosophers have long believed that if the Principle of the Identity of Indiscernibles were *logically* true, there would be no problem of individuation. I show (a) that if spatial relations are, as seems plausible, of such a *nature* that it makes no sense to say of one thing that it is related to itself, then the Principle is a *logical* truth, asserting that a certain kind of state of affairs is impossible because the kind of sentence purporting to express it is ill-formed and (b) that even if the Principle were such a truth the problem of individuation would remain. I then examine some of what Leibniz and Wittgenstein have said about the notions of individuation, difference and non-identity.

Let N be the assertion that no two things have all their relational and nonrelational properties in common. Everyone believes—indeed, knows—that N is true. Some insist, however, that N is not *just* true, but *necessarily* true. They believe, in other words, that it is *logically* impossible for two things to have all their relational and nonrelational properties in common.

One way of explicating the difference between (α) 'N is true' and (β) 'N is necessarily true' is as follows. Let C be the class of sentences each of which asserts or represents that the members of a (different) pair of things have the same relational and nonrelational properties. β states that every member of C is a contradiction; α , that every member of C is false, but not contradictory.

In this paper I propose to explore another way of explicating the difference between α and β . The latter, I suggest, states that C is empty. That is, those who believe that N is necessarily true may be understood to believe that two things *cannot be said* to have all their relational and nonrelational properties in common. A sentence asserting or representing such a state of affairs is not really a sentence at all; it is a piece of nonsense. This belief may be traced to another; namely, that certain ubiquitous relations are *inherently* irreflexive. Accordingly, the crux of the issue between those who affirm and those who deny β may be understood to concern the nature of relations. Those who affirm β believe that (the *critical*) relations are such that no thing *can* be related to itself; those who deny β , that no thing *is in fact* related to itself.

I

Consider a red disc, and assume that it is the sort of item ontologists have in mind when trying to tell us what a *thing* is. Upon this assumption, a thing, speaking ontologically, consists *minimally* of its nonrelational properties or, as I shall henceforth call them, characters. This dialectically neutral assumption¹ concerning how

* Received March, 1966.

¹ One may doubt the assumption's neutrality, for it seems to entail that if a character ascription is true, then the thing necessarily has the character truly ascribed to it. And certainly

ontologists use 'thing' when asking and answering 'What is a thing?' enables one to express concisely two basic ontological issues. (1) Is an individuator² also a constituent of a thing? (2) Is a character peculiar to the thing of which it is a character?

In this paper I shall assume an affirmative answer to (1), a negative answer to (2). These assumptions are convenient. Further, they are not prejudicial: the forthcoming analysis of what underlies the belief that *N* is necessarily true does not depend on either. The nature of relations is dialectically independent of the individuation problem, the problem expressed by conjoining (1) and (2).

Consider again our red disc. Upon the affirmation to (1) and the negative answer to (2), its ontological assay is as follows: It consists of an individuator and several characters (or universals³), those which make it true to say of the disc that it is red and so on. Besides *consisting* of those entities, the disc is, so to speak, *made from* them. That is, the constituents of which the disc consists are bound together into the disc. Let this binding be done by exemplification, a tie which ties each character in a thing to the individuator in the thing.

Consider now our red disc being to the left of a green one. This state of affairs may be assayed, compatibly with the above assay of things, as follows. To-the-left-of is an entity, a relation⁴, exemplified jointly by the individuators in the things which are truly said to stand in the relation. Since the red disc is to the left of the green one, and not the other way around, the individuator in the former and that in the latter must be tied to the appropriate ends of to-the-left-of, if I may so speak. However, that a relation is jointly exemplified is independent of whether or not it is symmetrical. A relation is tied to two individuators rather than to one. That is all that is meant by saying that a relation is jointly exemplified.

Now if the world contains only things in relation, then its ontological portrait or representation will depict individuators, characters, and relations tied together in the appropriate ways; in the ways corresponding to the facts expressed idiomatically. For what I am about, it will suffice to assume that the world does in fact contain only things in relation.

A thing, at least as 'thing' is being used here, must not be confused with the individuator in it. To realize one easy way of confusing them, consider 'This is red' asserted of our disc. 'This' refers to a thing, an entity which is, ontologically speaking, a fact; namely, *an individuator exemplifying several characters*. One constituent of this (conjunctive) fact is an individuator which, as one says, *has* (exemplifies) characters. But one also says that a thing *has* (contains) characters. A thing, how-

no one wishes to say that a thing which is, say, red is necessarily red. However, to hold that characters are intrinsic to things one need *not* hold that a thing which is red must be red. That several characters are tied together is one fact; that one of those characters is in the class of them is another fact. A thing which is red is not necessarily red in the sense that red is not necessarily connected to the other characters of the thing. This, I submit, is the crucial point.

² I use 'indivuator' simply because the deepest reason for insisting upon the presence of a non-character entity in a thing is to solve the individuation problem.

³ To answer (2) negatively is to claim that characters are universals. A universal, at least as 'universal' is used here, is not a transcendent entity.

⁴ Relations will also be assumed to be universals in the same sense that characters are.

ever, has a character in the sense that the latter is contained in the former, whereas an individuator has a character in the sense that the latter is exemplified by the former. To put the difference differently, characters are *intrinsic* to things but *extrinsic* to individuators. One who fails to appreciate this difference is likely to confuse an individuator with the thing of which it is a constituent.

Relations, of course, are extrinsic to both things and individuators, notwithstanding that individuators and not things exemplify the relations in which things are truly said to stand. This point is perhaps better put as follows. Consider 'This is to the left of that,' asserted of our red (and green) disc(s). To-the-left-of-that may be termed a relational property. It is nonetheless extrinsic to our red disc, though. This relational property is, given the ontological assay assumed here, analyzed into a relation and a thing, the latter in turn being analyzed into an individuator and its characters. Furthermore, the relation is said to be exemplified by the individuators. A relation is thus extrinsic to the individuators exemplifying it, just as a relational property is extrinsic to the thing said truly to have it.

N , recall, is a belief about things, not individuators. But despite the differences between things and individuators, there is a belief about individuators which corresponds to N . Consider N' : no two individuators exemplify all the same characters and jointly exemplify the same relations with all the same individuators. N' corresponds to N in that whatever status the former has the latter also has. Given our assay of things, if the individuators in them cannot have the same properties (i.e., characters *and* relations), then neither can the things in which the individuators are. Furthermore, since the status of N' concerns only the nature of relations and since the nature of relations is independent of the ontological assay of things, the status of N is also independent of that assay and, thus, independent of the present assumptions regarding (1) and (2).

Consider now the following, ontologically described, world of things in relation. (A) There are a finite number of each of three kinds of entities; individuators, x_1, \dots, x_5 characters, f_1, \dots, f_5 ; relations, r_1, r_2 . (B) There are but two ways in which entities are tied together by exemplification: in the one way, a character is tied to an individuator; in the other, a relation is tied to two individuators. (C) An entity of any kind may be tied to more than one other entity of the appropriate kind.⁵

In representing which entities are tied together and in speaking about the categorical features of those entities I shall use S , a schema which, by design, reflects the world's ontology and is capable of representing its states of affairs. (A') S contains signs of three shapes and but one sign for each entity: ' x_1 ', \dots , ' x_5 ' stand for individuators and so on. (B') S is governed by two formation rules (for simple strings). Only strings of the ' fx ' or the ' rx ' kind are permissible in S . (C') S contains conjunctions of simple strings.

Roughly speaking, (A'), (B'), and (C') reflect, respectively, what is expressed by (A), (B), and (C). Now for several comments which should help to eliminate the roughness. *One.* (A') reflects a categorical feature of the world which is at least implicit in (A); namely, that two entities are two and not one. In S the difference of entities shows itself by the difference of the signs standing for the entities, just as the difference in kind of two entities shows itself by the difference in shape of

⁵ I shall take the world to be atemporal. That will simplify matters without impairing the point to be made.

the signs standing for them. *Two*. It is doubtful that the number of entities in the world is a categorial feature of it. Fortunately, whether or not it is, is irrelevant, as is the issue of the status or analysis of generalizations. *Three*. There is a sharp difference between the strings of *S* (used to represent states of affairs) and the statements about *S* concerning which rules govern it and how the categorial features of the entities and facts are reflected by the geometrical features of the signs and strings representing them. The statements about *S* are, of course, the crucial ones insofar as talk about *S* is intended to clarify and dissolve some of the ontological bewilderment. (Plainly, most of the issues are dissolved before *S* can be described, for in describing it one is in effect presenting an ontological characterization of the world. Accordingly, one can argue from the nature of a language to the ontological nature of the facts describable in it, only if one knows that the language reflects the nature of the facts. That means, of course, that there are no arguments from language.)

There is one feature of the world's ontology which cannot be reflected more than partially in *S*. That feature is the one expressed by (B). That is, (B') cannot be reflected in *S*. Some, for example Wittgenstein, have wished to maintain that it can. They have suggested that the formation rules *show* themselves in *S* in virtue of *S* containing all well-formed strings. But what *S* contains is determined by the formation rules. Thus the rules are independent of the strings. By conceiving of *S* as *all well-formed* strings one does not make the rules dependent on the strings, one merely masks them behind the italicized and transparently metalinguistic phrase. The motive for denying the independence of the rules has to do, of course, with various fears about the ontological status of categorial features and categorial facts. For what I am about it is enough to point out, first, that the formation rules are independent of the schema they govern and, second, that once that is grasped then the urge to conceive of *S* as all its well-formed strings rather than those which represent actual states of affairs ought to diminish, perhaps even disappear. In other words, *S* need not be used to represent all possible states of affairs.

With respect to the entities comprising the world representable in *S* is *N'* necessarily true? Is it, in other words, *logically* impossible for two individuators to have all their characters in common and to exemplify jointly the same relations with the same individuators? As indicated, this question may be understood in two ways, each being formulated as a question about *S*. (i) Is it the case that any string purporting to represent two individuators as having the same properties is a logical contradiction (in the truth-table sense, let us agree)? (ii) Is it the case that any such string is impermissible in *S*; that is, not in accord with the formation rules of *S*? (An affirmative answer to (ii) entails, of course, that (i) has no answer. To say either that a string is a contradiction or that it is not presupposes that it is well-formed.)

What kind of string purports to represent the kind of fact which, if *N'* is necessarily true, cannot be? Consider an example. Let X_1 be ' $f_1x_1 \cdot f_2x_1 \cdot r_1x_1x_2$ ' and X_2 be ' $f_1x_2 \cdot f_2x_2 \cdot r_1x_2x_2$ '. Clearly X_1X_2 would represent, if true, that two individuators have the same properties. Is X_1X_2 contradictory? Is it ill-formed?

X_1X_2 is merely a conjunction of simple strings. Hence, if it is well-formed, it is not contradictory. The only question, therefore, is whether or not it is well-formed. In other words, the only legitimate reason for claiming that *N'* is necessarily true is that X_1X_2 (and strings like it) is (are) ill-formed, which it will be, of course, only if one of its simple strings is ill-formed. The only such string that makes one suspicious

is ' $r_1x_2x_2$ ' which would represent, if true, that an individuator has r_1 to itself. Hence, whether or not N' is necessarily true depends on how ' rx_1 ' is understood. Does it, or, perhaps better, should it permit, ' $r_1x_2x_2$ '?

If ' $r_1x_2x_2$ ' is deemed ill-formed, let us say that r_1 is inherently irreflexive; if it is not so deemed, that r_1 is not inherently irreflexive. Speaking generally, if a sign for a relation is so governed that an individuator cannot be represented as having the relation to itself, then the relation for which the sign stands is inherently irreflexive and the formation rule expresses this categorial feature of the relation. With these definitions one can say that N' is necessarily true provided that relations are inherently irreflexive. That is, to claim that it is *logically* impossible for two individuators to have their characters and relations in common is to claim, at least covertly, that relations are inherently irreflexive.

Actually, N' should be understood as the claim that relations are inherently irreflexive only if, first, there is a class of primitive (unanalyzable) relations every member of which is inherently irreflexive and, second, any two individuators (must or do) exemplify at least one of them. These conditions disallow those cases where two individuators have only characters. They therefore achieve, relative to consideration about the status of N' (and N), what is usually achieved by requiring that in the critical sentence everything that can be said about the one is said about the other.

Suppose now that r_1 and r_2 are spatial relations, say, to-the-left-of and to-the-right-of, respectively. Suppose further that any two individuators must exemplify at least one of them. In other words, suppose that S is designed to represent states of affairs in a *spatial* world; that is, one which includes spatial relations amongst its unanalyzable entities and which is such that any two individuators in it jointly exemplify some spatial relation. Accordingly, to claim that N' is necessarily true about this world representable in S is to claim that spatial relations are inherently irreflexive.

That explication of N' strongly recommends itself, for arguments about the status of N' customarily arise in contexts which presuppose that our world or the relevant portion of it is spatial.⁶ Moreover, so explicated, N' seems necessarily true. Certainly all the usual ways of speaking about spatial relations suggest that they are ontologically peculiar, more than merely matter-of-factly irreflexive. *But whether or not spatial relations are inherently irreflexive is hardly important. Whether or not N' is necessarily true makes no difference to how one solves the individuation problem.* Indeed, it seems to make virtually no ontological difference whatsoever. Nevertheless, some have believed that if N were necessarily true then the individuation problem would dissolve. This belief has, I suspect, greatly re-enforced the insistence that N is necessarily true. (Shifting from N' to N is not, as it may seem, illegitimate. If the status of N' depends solely on the nature of (spatial) relations then so, too, does the status of N . Furthermore, the nature of relations is, to repeat, independent of the ontological assay of *things*, for relations (*and* relational properties) are extrinsic to things.)

⁶ In a world containing mental entities N' could not be necessarily true. This reveals a possibly significant connection between the problems of mind and individuation. One who is determined to avoid individuators may be driven to materialism.

II

That N , even if necessarily true, does not solve the individuation problem follows from the fact that the relational difference of things does not ground their numerical difference. That is why the individuation problem is best expressed in this way: What accounts for the *numerical* difference of two things which have the same characters (nonrelational properties)? But rather than here rehearse the reasons why "relations do not individuate," (cf. [6] & [1]). I shall remark on several confusions surrounding the connection between the status of N and the individuation problem.⁷

Consider Q : no two things *can* have all their characters in common. Q , unlike N , would solve the individuation problem, were it, as it is not, necessarily true. Q , indeed, is not even matter-of-factly true: some pairs of things (in our world) actually do have the same characters. But if N were mistaken for Q , one would be misled into believing that N solves the individuation problem. And N can be and, I believe, has been mistaken for Q .

Such a mistake can come about in several ways. *One.* Consider P : no two things can have all their *properties* in common. P , which philosophers seem to prefer, means either N or Q , depending on whether 'property' is used broadly (to include relations) or narrowly (to exclude relations). When used broadly, P seems necessarily true (spatial relations do seem inherently irreflexive), but when used narrowly P is false. Failure to distinguish between the broad and narrow senses of P fosters the belief that N solves the individuation problem. *Two.* One who does not distinguish sharply between nonrelational and relational properties is also likely to confuse N and Q . One who mistakenly believes that relational properties or relations are *intrinsic* to things will undoubtedly believe that N is the same as Q and hence that N solves the individuation problem, notwithstanding the fact that his insistence on N rests, unbeknownst to him, on the apparent fact that relations are inherently irreflexive. *Three.* Q entails N . Not surprisingly, therefore, those who propound Q , even though independently of N , often use N , the more inclusive of the two, to express the fact. This promotes confusion, for N does not entail Q . *Four.* One who fails to distinguish the numerical difference of things from the qualitative difference of things is also likely to believe that N solves the individuation problem. I shall comment on this failure in the next section.

The confusion between N and Q has a deep historical root which is, I think, worth trying to uncover. Leibniz's Principle of the Identity of Indiscernibles is usually expressed by P which has more often than not been identified with N . However, what is true of Leibniz's Principle is not true of N . For, Leibniz, though often using N to express the Principle, based the Principle on Q , intending it to be one of individuation. Leibniz was aware that N alone could not realize that intention. (This is rather remarkable considering that Leibniz held that relational properties are intrinsic.⁸) Consider the following passage.

⁷ Henceforth, I shall, to repeat once more, consider N and N' as equivalent. For, 'N is necessarily true', though an assertion about things, asserts that relations are inherently irreflexive, and this assertion is, again to repeat, independent of how things are assayed.

⁸ For an illuminating discussion of Leibniz's views on relations, see [4].

It is always necessary that besides the difference of time and place there be an internal *principle of distinction*, and, though there are many things of the same kind, it is nevertheless true that none of them are ever perfectly alike: thus although time and place (i.e., external relation) serve us in distinguishing things which we do not easily distinguish by themselves, the things do not cease to be distinguishable in themselves. ([5], p. 238)

This passage needs neither explication nor elaboration. Leibniz is clearly insisting upon *Q* as the principle of distinction; that is, individuation. The only question is: Why did Leibniz assert it? It is, after all, patently false. Leibniz, I submit, was firmly convinced that individuator *could not* exist and, thus, that *Q* must be the case, the facts notwithstanding. Let me explain.

A consuming problem for Leibniz was to provide an account of what God does when he creates. According to Leibniz, God creates things by choosing amongst possible things.⁹ That is, he creates a thing by actualizing—adding *existence* to—a possible thing. Now God, of course, is rational. Hence, he must have a reason for choosing one possible thing rather than another. One can have such a reason, however, only if two possible things differ by some character. Not even God can have a reason for choosing one (possible) thing rather than another, if the two things differ merely numerically; that is, if each of two possible things differ only by an individuator.¹⁰

The line of thought just drawn does not square with certain other ideas of Leibniz concerning creation.¹¹ Nevertheless, it is the one that ties him to *Q*. Leibniz is driven to maintain that *Q* is true of actual things because he believes that since God creates by choosing rationally, *Q* *must* be true of “possible” things. So much for Leibniz. The point here is that if the Principle of the Identity of Indiscernibles is to be a principle of individuation, then it must rest on *Q*, not *N*. Also, to construe the Principle as *N* and to believe that it does what Leibniz’s Principle is intended to do is disastrous. Finally, *Q*, to repeat, is patently false, as anyone who attends to the world will see.

Before turning to the notion of identity, it might be well to remark on a phrase which could also promote the mistaken belief that the individuation problem dissolves if *N* is necessarily true. Though spatial relations do not individuate, they do, as one says, *imply* diversity. They imply diversity in the sense that they are irreflexive (by nature or otherwise). Thus, if a spatial relation is exemplified, the things exemplifying it are numerically different. To grasp the difference between *implying* and *accounting* for diversity assume that ‘*A* is to the left of *B*’ is asserted (about *things*) by one known by a hearer to be honest. The hearer thus knows that what he has heard is true. (He is at least entitled to believe it.) Now even if the hearer does not know what ‘*A*’ and ‘*B*’ designate, he does know that they designate

⁹ See, for example, *The Leibniz—Clarke Correspondence* ((ed. H. G. Alexander), Manchester University Press, 1956), p. 39. Loosely speaking, a possible thing is, upon Leibniz’s ontology, a collection of characters; an actual thing, a collection of characters *plus* existence.

¹⁰ God’s realm is, of course, atemporal and aspatial. But even in a temporal-spatial world the problem arises.

¹¹ Leibniz sometimes speaks as if God chooses amongst worlds rather than things. When he does, he need not subscribe to *Q*.

different things. This latter difference is implied by the fact that to-the-left-of is (known by the hearer to be) irreflexive. However, the numerical difference between *A* and *B* does not consist in the fact that *A* is to the left of *B*. The difference consists in something else. What that something else is depends ultimately on how one assays things. Be that as it may, though relations are intimately connected with the diversity of things, they do not succeed in grounding it. That, to repeat, is why the individuation problem is not dissolved by *N* being necessarily true.

III

I turn now to a brief examination of the connection between non-identity (identity) and difference (sameness). Briefly, difference is primitive and categorial. Two individuators (in general, two ontological entities) are two, different, and that is that. Nonidentity is either analyzable and factual or primitive and categorial. However, if it is the latter, that is only because relations are inherently irreflexive. Two individuators are nonidentical if one has a property the other does not. That is, two individuators are nonidentical (identical) if they are qualitatively different (the same). ('Quality' is being used synonymously with 'property' in the broad sense.) The key question, the one on which all others turn is the one dealt with in Section I: (a) *Can* different individuators be identical? Another question, one sometimes confused with (a) is this: (b) Are identical individuators the same? As it stands, (b) makes no sense. Two individuators are two not one. (b) thus needs to be restated. (b') If two signs (for individuators) are substitutable *salva veritate*, do they refer to one entity?

(b') cannot be asked about *S*; nor for that matter about any schema which reflects the categorial fact that two entities are two and not one. (b') can be asked only about a schema which does not reflect that categorial fact or, synonymously, only about a schema which has more than one sign for one individuator.

Consider again *S*. In it the difference of individuators shows itself by the difference of their signs. Now no two individuators are *identical*; that is, no two have all their properties in common. Hence, the only question is the one examined in Section I: Is *N'* necessarily true? As was shown, the answer is affirmative if relations are inherently irreflexive, negative if they are not. Of course, if the answer is negative, then it cannot be said *in S* that two individuators are nonidentical.

To simplify matters, assume that *S* contains only true strings. In other words, assume that *S* is a device for representing only actual state of affairs. Possible states of affairs may be talked about indirectly, in terms of the strings which could occur in *S*. Consider now the kind of conjunction built in the following way. First, conjoin all (true) strings containing ' x_1 '. Second, make another conjunction by replacing ' x_1 ' with ' x_j ' wherever the former occurs in the first conjunction. Third, conjoin the two conjunctions into a conjunction. Call such a conjunction an I-string and let ' $x_1 = x_j$ ' be its abbreviation. Naturally, no I-string will occur *in S*. Moreover, if relations are inherently irreflexive, then no I-string could occur in *S*. However, if relations are not inherently irreflexive, then an I-string *could* occur even though *none does*.

Now difference might be said to entail nonidentity. But that is only partially true, for difference *alone* does not entail nonidentity. Rather, difference *and* the fact that relations are irreflexive (inherently or not) entail nonidentity. Nothing about individ-

uators *per se* prohibits their being identical. Even if it is logically impossible, in the sense explained, for individuators to be identical, that impossibility resides in the nature of relations, not in the nature of individuators.

Consider now S' , which is like S except that it contains ' x_6 ' and ' x_7 ' which stand for x_1 and x_2 , respectively. In S' some I-strings will occur; in particular, ' $x_1 = x_6$ ' and ' $x_2 = x_7$ '. However, neither of these strings represents that two individuators are identical. In S' difference does not show itself. In S' an I-string is a criterion of "referential sameness"; the absence of an I-string, a criterion of referential difference. The I-string does not, of course, express the referential sameness, though the traditional use of ' $x_1 = x_1$ ' as an abbreviation for an I-string may obscure the fact. One infers referential sameness from identity, the ground for the inference being that different individuators are not identical.

What has so far been said about identity in S' is independent of whether or not relations are held to be inherently irreflexive. That is, even if relations are deemed inherently irreflexive, identity can be introduced into S' . For I-strings could be so characterized that they contain no reflexive strings. Further, though ' $r_{1x_1x_6}$ ', for example, might breed suspicion, it is not an embarrassment. Neither sameness nor difference shows itself in S' . Thus, ' $r_{1x_1x_6}$ ' does not represent that one thing has r_1 to itself. There is this point to be noted, though. If relations are inherently irreflexive, they cannot be transitive in S' . That is, if S' were supplemented with other connectives, one would be forced to deny that N is necessarily true. If one wished to expand S' in order to reflect inferences, then relations could not be held to be inherently irreflexive. Since most of the artificial languages which have been employed in doing philosophy have been used to represent inferences, it is not surprising that relations, more specifically, spatial relations, have not been held to be inherently irreflexive, at least by those who have so used artificial languages.

Concerning S' , it would also be noted that in the I-strings, there would be no component which represents a relation as obtaining between the identical individuators. Thus, since the world is spatial, one can immediately infer that the (subject) signs in an I-string are referentially the same. This, in fact, is the ground for inferring referential sameness, even if N is necessarily true. The latter, though, would permit a formal (*rule*) inference from a relational string to referential difference. Of course, whether or not N' is necessarily true, it could not be said in S' that different individuators are identical, for difference does not show itself. But that would not alter the fact that one has criteria of referential sameness and difference. Whether or not those criteria are, in the broadest sense, formal, depends on whether or not relations are inherently irreflexive. In S' , therefore, the status of N' determines only the status of the criteria of referential sameness and difference.

Turn now from individuators to things, and consider two things, A and B , recalling that things consist minimally of their characters. The difference between A and B is primary in the sense that their difference (not nonidentity!) cannot be grounded in their qualitative difference (nonidentity). For, first, relations do not individuate and, second, things may and sometimes do have their characters in common. Accordingly, things and individuators are alike in that their difference does not rest on their nonidentity. Nevertheless the difference of things, unlike that of individuators, needs to be grounded. That may be done in several ways: by means of places, by means of nominalism (i.e., by means of characters being peculiar to the things of which they are characters), or by means of individuators as has been assumed

here. Which way is irrelevant here. What is relevant is the fact that the difference of things cannot be accounted for by N being necessarily true. Difference and non-identity are two, not one; in the case of things, just as in the case of individuators.

At this point I want to make a comment about 'numerical difference' and 'qualitative difference,' two terms often used confusingly. Two things may be said to be *merely* numerically different. This means that they have the same characters. Two things may also be said to be qualitatively different. This means that one has a property (nonrelation *or* relational) the other does not. The individuation problem arises simply because two things are sometimes merely numerically different. The problem is to ground their numerical difference. There is, of course, no problem in grounding their qualitative difference. That resides in their difference of properties, entities which virtually no one denies.

One source of confusion regarding the individuation problem would seem to be the shifting sense of 'numerically different'. If things are said to be merely numerically different only when they are qualitatively the same, then no things are ever numerically different. But even if that is so, the individuation problem remains, for qualitative difference sometimes resides merely in relational difference. Thus it seems preferable to use the terms such that one can say that things are *merely* numerically different, even though qualitatively different.

In descending from the level of things to that of individuators and characters 'numerical difference' and 'qualitative difference' are carried along. Though both can be given a clear sense, they seldom are. Two individuators are qualitatively different if the one has a property the other does not. Two individuators are merely numerically different if both have the same characters. This use of 'numerically different' is confusing. *First*, one may be led to believe that since two individuators may be merely numerically different, they need further analysis. That is, since the numerical difference of things needs grounding, the numerical difference of individuators also needs grounding. That is absurd. Individuators ground the numerical difference of things. *Second*, one may also be misled into believing that the difference of two individuators consists in their being numerically different. That too is absurd. Two individuators are different. That is that. If one does not see that, one is likely to believe that individuators and characters are *different in kind* in that the former are merely numerically different from each other whereas the latter are qualitatively different from each other.

Consider once more the things A and B . Since they are different, the I-string about them (in a schema with signs for things) is false (or absent). Thus, from the perspective of the schema, ' A ' and ' B ' may be said to be referentially different. If the difference between difference and referential difference goes unnoticed, one may conclude that the difference of things resides in their nonidentity rather than concluding that the referential difference of their signs resides in the fact that the I-string about them is false. Of course, this mistake cannot be made in S' which has signs for individuators. But in any schema (including ordinary language) which contains signs for things instead of for individuators, the mistake is easily made. And, not surprisingly, the likelihood of the mistake is significantly increased by the deep-seated and widespread desire to avoid individuators (or, for that matter, places) on the one hand, and by the reasonable but frequently unexamined belief that N is necessarily true.

IV

In this concluding section, I want to comment on several passages in the *Tractatus* which deal with the notions of difference and nonidentity. This will perhaps enable me to clarify and elaborate some of what has been said, as well as to make evident the depth of the early Wittgenstein's insights.¹²

- 2.0233 If two subjects have the same logical form, the only distinction between them, apart from their external properties, is that they are different.
- 2.02331 Either a thing has properties that nothing else has, in which case we can immediately use a description to distinguish it from the others and refer to it; or, on the other hand, there are several things that have the whole set of their properties in common, in which case it is quite impossible to indicate one of them.

In 2.0233 Wittgenstein insists that difference ("distinction") is different from nonidentity. Two objects (individuators) are different independently of whether or not they are identical. In 2.02331 he adds, however, that if two things were identical they would be indistinguishable or, as some might prefer, indiscernible. This is a bit misleading. If different things are presented (simultaneously) their difference is recognizable. Of course, if the things are visual (spatial) things, then they also differ qualitatively. Nevertheless, the latter does not make the former dispensable. Wittgenstein's point is perhaps better made by considering a situation in which one is presented consecutively with things which have the same characters. In this case one could not say whether or not one and the same thing was re-presented on the several occasions. This, however, merely reveals that the individuators are not recognizable as such. But, to repeat, if two are presented simultaneously, their difference is also presented, be they nonidentical or not. It just so happens that spatial entities always differ spatially.

The confusion bred by 2.0331 is the familiar one. Wittgenstein creates the impression that nonidentity is a criterion of difference, and thus that the individuation problem dissolves if *N* is necessarily true. That, as we have seen, is mistaken. Wittgenstein, himself, is not guilty of the mistake, though.

- 5.5302 Russell's definition of '=' is inadequate, because according to it we cannot say of two objects that they have all their properties in common. (Even if this proposition is never correct, it still has *sense*.)
- 5.5303 Roughly speaking, to say of *two* things that they are identical is nonsense, and to say of one thing that it is identical with itself is to say nothing at all.

These passages are perfectly clear once it is realized that Wittgenstein uses 'identity' in the sense of "same" and 'nonidentical' in the sense of "different." 5.5302 is false though. Russell's definition of identity is not defective. What is defective is

¹² All quotes are from the Pear-McGuinness translation, Routledge & Kegan Paul, 1961. Gustav Bergmann has also had deep insights into the ontological issues concerning sameness and identity. ("Sameness, Meaning, and Identity," [3], pp. 132-138). They are nevertheless marred by a failure to distinguish sharply between difference and referential difference. The failure leads Bergmann to mistakes concerning the nature of thought. Bergmann himself has remarked upon those mistakes in "Meaning," [2], 94, p. 3n.

the schema into which it is introduced; in particular, one in which difference and sameness do not show themselves. That is why one cannot say that two things are identical. In *S*, identity can be introduced without preventing one from *saying* that *two* individuators (things) are identical; provided, of course, that relations are not held to be inherently irreflexive. However, in a schema where identity strings are true, rather than only well-formed, difference does not show itself.

In connection with 5.5302 it is worth noting this remark from Wittgenstein's notebooks.

'aRa' must make sense if 'aRb' makes sense. ([7], p. 51e)

Wittgenstein is consistent. If one wishes to be able to *say* of *two* objects that they are identical, then one must deny that relations are inherently irreflexive. But it is not clear that one need be able to say that different objects are identical, at least not if one wishes to represent the world and reflect its ontological features.

- 4.241 When I use two signs with one and the same meaning, I express this by putting the sign '=' between them. So 'a = b' means that the sign 'b' can be substituted for the sign 'a'. (If I use an equation to introduce a new sign 'b', laying down that it shall serve as a substitute for a sign 'a' that is already known, then, like Russell, I write the equation—definition—in the form 'a = b Def.' A definition is a rule dealing with signs.)
- 4.242 Expressions of the form 'a = b' are, therefore, mere representational devices. They state nothing about the meaning of the signs 'a' and 'b'.
- 4.243 Can we understand two names without knowing whether they signify the same thing or two different things? Can we understand a proposition in which two names occur without knowing whether their meaning is the same or different?

Suppose I know the meaning of an English word and of a German word that means the same: then it is impossible for me to be unaware that they do mean the same; I must be capable of translating each into the other.

Expressions like 'a = a', and those derived from them, are neither elementary propositions nor is there any other way in which they have sense. (This will become evident later.)

In these passages Wittgenstein attempts to show that *even in an S'-like schema*, i.e., one in which some entities have more than one name, one can represent the possibility that different things are identical. This can be done, of course, only if one introduces into the schema strings which say whether or not two names stand for a single entity. Wittgenstein does just that. He introduces "identity" strings which say that two signs name a single entity. This notion of identity is to be distinguished, of course, from the Russell notion which is merely an abbreviation for "having all properties in common." Call Russell's notion *R-identity*; Wittgenstein's *W-identity*. Now, it so happens that *W-identity* and *R-identity* are equivalent. Nevertheless, there is an important difference. *R-identity* is a consequence of *W-identity in virtue of substitution rules*, whereas *W-identity* is a consequence of *R-identity only in virtue of a fact*, the fact that different things are not identical. Accordingly, one can assert an *R-identity* while denying the *W-identity* and not be guilty of a contradiction. Wittgenstein's introduction of *W-identity* is pointless, how-

ever. It merely serves to obscure the point he wishes to make. Moreover, by introducing W-identity, Wittgenstein is driven to argue for what is patently misleading, that W-identity statements are trivial. There is nothing trivial about the fact that two names designate one object, notwithstanding that such a fact is not a fact about the nonlinguistic world.

Wittgenstein is blinded by the fact that a W-identity statement does not appear to be about words. Thus he can claim, drawing on the reference theory of meaning, that if one knows its meaning one knows whether it is true or false. But quite independently of the discredited reference theory of meaning, a W-identity statement is about words. Wittgenstein simply fails to notice that shifting from an S- to an S'-like schema significantly alters the game. All that Wittgenstein need claim is that on his view, where *N* is not necessarily true, identity in *S'* is in no sense a *formal* criterion of referential sameness. In other words, W-identity is in no sense a logical consequence of R-identity. But to insist on expressing that *in* an S'-like schema serves only to invite confusion.

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