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FACTS, EVENTS AND THEIR IDENTITY
CONDITIONS

(Received 21 February, 1973)

I

- (1) The flipping of the switch is identical with the alerting of the prowler.¹
- (2) The shooting of Robert Kennedy is identical with the killing of Robert Kennedy.²
- (3) The discovery of America by Columbus is identical with the discovery of America in 1492.

At one time I believed the first two identity statements to be false but I now believe all three to be true (the first, pretend-true, of course). Part of the aim of this paper is to explain and justify all three judgments. In a word, I shall be partly concerned with identity conditions for events. If I spend a lot of time on identity conditions for facts it's just because believe the former are correctly explicated by the latter.

Davidson³ has offered the following identity conditions for events: Events are identical if and only if they have exactly the same causes and effects. (p. 231) He goes on to add that although the definition may seem to have an air of circularity about it, it is not a formal circularity, since "no identities appear on the right hand side." But this observation misses the point of identity conditions. The usual criterion for classes is: Two first order classes are identical if and only if every individual which is a member of one class is a member of the other. The right hand side is logically equivalent to: Every individual which is a member of one class is identical with some individual which is a member of the other. This is a bit fancy but would be an unobjectionable statement of identity conditions for classes. The reason is that although it contains the identity sign, what is in question is the identity of members, not of classes themselves. Contrast this with the following: Two first-order classes are identical if every subclass of one class is a sub-class of the other. This is true

but would have to be rejected as a statement of identity conditions even though there are no identities on the right hand side. The trouble is that the right hand side contains quantification over classes, precisely the entities we are trying to get clear about. As a general rule then, a statement of identity conditions for X 's must not contain X -identities, and it must not contain quantification over X 's.

Now Davidson's criterion is (x and y being events):

$$x=y \text{ if and only if } ((\forall z) (z \text{ caused } x \rightarrow z \text{ caused } y) \text{ and } (\forall z) (x \text{ caused } z \rightarrow y \text{ caused } z))$$

Obviously we have quantification over events; if and only if every event which caused x caused y and every event caused by x is caused by y . And on this account the criterion must be faulted. In what follows I shall suggest that an event is a truncated fact, and – what is suggested by a quick glance at example (3) above – two events are identical if and only if they are carved out of the same fact. Obviously we are going to have to spend some time over facts.

Now if a person is willing to accept facts as a distinct ontological category, he may be forgiven if he doubts the existence of events. To disbelieve in events is to believe that there is a language devoid of event-talk which is adequate for saying the things about the world that are there to be said, or to believe something stronger, namely, that every specific piece of event-talk can be analyzed out. If Queen Isabella is pleased at the discovery of America by Columbus, we can say that she is pleased that Columbus discovered America. If the striking of the match caused the ignition of the match we can say that the match ignited because the match was struck. But note that among the *alternative* resources, we shall require (at least) subordinate noun clauses and the word 'because'. These resources make some people nervous and one can understand why *they* might want to have events to fall back on if the going gets too rough with these alternative resources.

It might seem that it is a mistake to confuse events with facts; and one reason for committing the alleged mistake is that it doesn't seem to make very much difference whether Isabella is pleased at the fact or pleased at the event. Nevertheless there seems to be weighty linguistic evidence for distinguishing them. What corresponds to an event is a singular event description (e.g., 'The siege of Troy'), usually involving a nominalized

verb (as in 'The Glorious Revolution'). There are exceptions, of course: one thinks of Mencken's fires and funerals. Very rarely there is an event name, such as 'Hazel'. (Hurricanes, like rainbows, are a philosophical nuisance. Most events – like the eruption of Vesuvius, the execution of Charles I – do not move, but some events (hurricanes, battles), like individuals, do *seem* to move around.⁴) The point is that the linguistic correlates of facts, viz., sentences, are true, but event referring expressions cannot be true or false, and this circumstance certainly suggests that events are not facts. But this suggestion is wrong. In the final analysis events will turn out to be facts.

II

In any case there is some kind of connection between facts and events. And to get clear about events I propose to get clear about facts first. I'm going to be short, fast and sound much more dogmatic than I really am. A fact is a true proposition – a true G-proposition as I like to say.⁵ It is a true proposition that Socrates died in 399 B.C. It is a fact that Socrates died in 399 B.C. The foregoing sentences say the same thing. Hence by the method of fractional distillation we may as well conclude that 'fact' is synonymous with 'true proposition'. To this maneuver there is the standard rhetorical objection: What do you do with false propositions? The answer is that you don't have to do anything with them, except perhaps to call them 'non-facts'. There are *there*, of course, but they do not in any way constitute the world construed as the totality of facts. We have it, then, that true sentences correspond to or signify facts and false sentences correspond to or signify false propositions. 'Correspond' is being used univocally throughout.

Now Socrates is identical with the teacher of Plato. From which it follows, we may assume, that the proposition that Socrates is red is identical with the proposition that the teacher of Plato is red. Also, red is identical with the color of ripe strawberries. From which it follows that the proposition that Socrates is red is identical with the proposition that Socrates is the color of ripe strawberries. What we are doing is clinging to Leibniz's law regarding the intersubstitutivity of identicals and letting the chips fall where they may. The way the chips fall is this: A proposition has as constituents an individual and a property, or a number of individuals and a

relation of appropriate degree. There is one other constituent (the time) which I shall have to deal with shortly. And obviously two propositions, and, *a fortiori*, two facts will be identical if they have the same constituents in the same order. This is what I shall call a 'proposition-theoretic assumption'. Symbolically:

$$\text{PTA.1. } (F = G \& x_1 = y_1 \& \dots \& x_n = y_n) \supset F(x_1 \dots x_n) = G(y_1 \dots y_n)^6.$$

The converse, be it noted, is false. Witness: (the pp that) New York is larger than Chicago is identical with (the pp that) Chicago is smaller than New York. But such identities follow from the statement that the one relation is the converse of the other. It will also be remarked that what we have covers only atomic propositions. It will turn out that that's the only kind of proposition there is anyway.

Meanwhile I want to make a few observations on the general approach and on the character of the metalanguage used and of the object language. It will be evident that the approach is pretty simple-minded. There is a minimum of technical semantical apparatus.⁷ The metalanguage is not extensional. For consider a domain consisting solely of sugar cubes, one of which is *a*. For such a domain the class of white things is identical with the class of cubical things. Nevertheless, the fact that *a* is white is not identical with the fact that *a* is cubical. And that is because the properties, whiteness and cubicalness, though coextensive, are not identical.

Nor is the metalanguage intensional. An intensional language is presumably one in which only co-intensive expressions are everywhere intersubstitutable. But with the present procedure, as we have seen, co-referential individual expressions and property expressions (whether co-intensive or not) are everywhere intersubstitutable.

Since the system isn't extensional and isn't intensional it is apt to evoke the question: What *is* it? I think it would best be described as out-of-Plato-by-Leibniz. We recognize properties. We don't have to justify this move, although I think it can be shown that general semantics cannot get along without properties.⁸ Next we bring properties under the theory of descriptions and take the line that if Leibniz is good for individuals, Leibniz is good for properties too. We compare 'Venus = the morning star' and 'Red = the color of ripe strawberries'. In the first case we conclude that the planet, Venus, can't be the meaning (if any) of its name, 'Venus', and in the second case likewise, we conclude that the property,

red (or, redness) can't be the meaning of 'red' which is *its* name. And since a proposition is constituted in part by an individual and a property, neither of which are meanings, a proposition can't be a meaning or intension either. I sometimes use the expressions 'G-property' and 'G-proposition', to distinguish the entities under consideration from the traditional intensional properties and propositions, which don't exist anyway.

One curious consequence of this simple-minded approach is that it gets even more simple-minded. The proposition that Socrates is red is identical with the proposition that the teacher of Plato is red. This latter is in turn identical, presumably, with the proposition that something is red and is identical with all and only things which are teachers of Plato. Thus there is no distinct multiply general proposition to correspond with the multiply general sentence in question. So we take the further step of declaring that there are no general propositions, no molecular propositions and no identity propositions, only atomic propositions and as a consequence only atomic facts.⁹ Furthermore there are no propositions corresponding to sentences containing expressions defined with the help of logical signs. One advantage accrues from all this: we escape the force of those uncomfortable arguments from Frege and Church which, given certain assumptions we here reject, prove that all true sentences refer to the same thing.

The intuitive rationale of all the foregoing is roughly as follows. The word 'Socrates' names, signifies or otherwise gets at the man, Socrates, and the word 'red' names, signifies or otherwise gets at the property, red. It seems to me that once we recognize properties, we do not have to distinguish between 'red' and 'redness'. We can treat 'Socrates is red' and 'Socrates has redness' as typographical variants. Now if the sentence 'Socrates is red' names, signifies or otherwise gets at anything at all, it seems reasonable to suppose that what it signifies will be a function of what the component expressions signify. A sentence whose components signified *different* entities would, *ipso facto*, signify something different from what 'Socrates is red' signifies. And just as the man, Socrates, is an improper part of what 'Socrates' signifies, we could expect the man, Socrates, to be a *proper* part, or logical constituent, as I shall say, of what 'Socrates is red' signifies. After all, the sentence says (roughly) that what 'Socrates' signifies has what 'red' signifies. This, incidentally, holds only

of names, not of descriptions. So we may take it that if the sentence signifies the proposition that Socrates is red, the constituents of that proposition are the individual, Socrates, and the property, *red*.

I think there is a certain naturalness about the foregoing, though not, I dare say, for people who are wedded to the intension-extension distinction. There is a 'pragmatics-theoretic' rationale. If someone says to me 'Socrates is red', I will get the message just in case I am correct in assuming that what he signifies by 'Socrates' is the man, Socrates, and what he signifies by 'red' is the property, redness; and, generally, that by '*Pi*' he always intends to signify the proposition that what '*i*' signifies has the property that '*P*' signifies. Hence it is the individual and the property that are what I have elsewhere¹⁰ called "the relevant semantical whatsits". Meanings or intensions don't enter into it. I should think offhand that my *concept* of Socrates (my 'meaning' for the word 'Socrates') is different from anyone else's. If *meaning* were the important thing in communication it would follow that I'd never understand anybody else talking about Socrates. Which is nonsense.

The notion of an entity being a *constituent* of a proposition may be baffling. It is, however, definable. For a starter we note that

x is a constituent of $F(y_1, \dots, y_n)$ if and only if $x = y_1$ or ... or $x = y_n$.

But obviously it is going to be more difficult to define ' x is a constituent of p '. I have already pointed out that the proposition that Chicago is smaller than New York is identical with the proposition that New York is larger than Chicago. (At least I hope others will share my intuitions in the matter. And one notes, incidentally, that there is an insuperable difficulty in treating a proposition as the sequence of its constituents. The sequence (Larger Than; New York; Chicago) is not identical with the sequence (Smaller Than; Chicago; New York).) At any rate we have it that both Larger and Smaller Than are constituents of the proposition. They are present as mutual supernumeraries, as it were, as Siamese twins pointing in opposite directions. The propositions is identical also with the proposition that New York has the property of being larger than Chicago (i.e., the property of having Chicago smaller than it) and also the proposition that Chicago has the property of being smaller than New York (i.e., the property of having New York larger than it). Now we write ' a '

and 'b' for New York and Chicago respectively, 'L' and 'S' for the relations Larger Than and Smaller Than and 'F' and 'G' for the property of Chicago being smaller than it (one) and the property of New York being larger than it. Now we have

$$L = \check{S} \quad (\check{S} \text{ for 'the converse of S'.})$$

$$(x) (Fx = Sbx)$$

$$(x) (Gx = Lax)$$

It does not matter whether the foregoing are true by definition or synthetically true. The propositional identities in question all follow from these sentences. It is clear that we have to be careful in talking about the constituents of a proposition. It would have been a mistake to treat Larger Than, New York and Chicago as the only constituents of the proposition that New York is Larger than Chicago. But we may say that Larger Than, New York and Chicago (in that order) are joint full inventory constituents of a certain proposition and Smaller Than, Chicago and New York in that order are joint full inventory constituents of the same proposition. We call them "joint full inventory constituents" because they entail all the other constituents. The point of all this is that the property of having Chicago smaller than it, and New York, are joint full inventory constituents of the proposition in question. In general, given any proposition p and a constituent x , there is a monadic (perhaps relative) property F such that $p = Fx$. Hence we may lay down the definitions:

$$x \text{ is a constituent of } p =_{df} (\exists F) (p = Fx)$$

$$F^n \text{ is a constituent of } p =_{df} (\exists x_1) \dots (\exists x_n) (p = Fx_1 \dots x_n)$$

These two definitions suffice to cover and are intended to cover only first order atomic propositions. And of course if and when we consider the time-stretch constituent of propositions, the foregoing would have to be complicated. But nothing new in principle would have to be added. What we have here is, in effect, the following abstraction axiom,

$$(\exists F) (x) (Fx = \dots x \dots)$$

where and only where the context ' $\dots x \dots$ ' is *atomic*.

Now all of the foregoing aimed at getting intelligible identity conditions for propositions, and since facts are simply true propositions, that means we have identity conditions for facts. But there is something else that is

very worrisome about facts. The main difficulty I see has to do with the indeterminacy of facts. Leaving aside quantum theory and statistical mechanics, the world itself is fully specific or determinate. That is to say, for every yes-or-no question, couched in as specific terms as you please, there is a true yes or no answer. Therefore, if – and I tend to follow *Tractatus* (1.1) here – the world is the totality of facts, then every fact is fully determinate. (Every fact? Well, you've got to have some determinate facts. Indeterminate facts riding piggy-back on the determinate ones would seem to be excess baggage.) But on the other hand all the facts that we will be concerned with are indeterminate to a degree. Suppose it is a fact that Socrates is red. How red? Pleasant pink? Apoplectic scarlet? The point is that there can be a certain amount of variation in the fact but any variant would still make our sentence true. Furthermore, the indeterminacy seems to be essential for the utility of a language: the more determinate a statement, the more difficult it is to know whether it is true or false.

But I think we are forced to concede that there is an element of make-believe about our ontology of facts. Our facts just aren't there, since our facts are 'abstract' or indeterminate (as *red* is abstract relative to any specific shade of red), and nothing real is abstract. There is a real ontology of *fully specific* facts and there is no such fact that could not be reported by some statement which exactly captures it (nothing ineffable), but by the same token no such fact can be *exactly* captured by the somewhat non-specific linguistic resources *we ordinarily use*. I don't want to say that our atomic sentences capture shadowy things that approximate to facts. I would rather say that they approximately capture facts. The point of pretending to believe in our make-believe facts is that some of the things we shall be led to say about them are things that, obviously, we shall be able to say about real facts. This is, I dare say, metaphysics. I follow Aristotle in holding that we can discover something about the general structure of reality by examining the structure of what we say about the world. That we can make such discoveries is due to the fact that we talk the way we do just because the world is the way it is.

III

Now I want to say something about the form of facts. My point will be

this: we cannot just pull formation rules for atomic sentences out of the air, as conventionalists like Carnap would have us believe. It is the world, not we, that writes the atomic formation rules. Atomic facts have a certain form and this form must be mirrored in the form of atomic sentences. Put differently, atomic facts have a certain number of constituents, no more, no fewer. An expression for which there is not a one-to-one correspondence with the constituents of a proposition is just not a sentence.

Consider:

(4) Philip is drunk.

I am assuming that the verb is tenseless. Given that assumption, we must judge (4) not to be a sentence. It has no truth value. (Well, what truth value?) We may, of course, treat it as elliptical for

(5) Philip is drunk at some time.

The point is that

(6) Philip is drunk and it is not the case that Philip is drunk at some time.

has an appearance of absurdity. It doesn't seem to make much difference whether we attribute the absurdity to the first conjunct's being ill-formed, or to its being elliptical for what is denied in the second conjunct. It goes without saying that in this discussion we are dealing with what Quine calls eternal sentences, sentences that are complete (non-elliptical), free from egocentric words and unambiguous. If (4) taken at face value is not a sentence, then I think (7) is.

(7) Philip is drunk at noon on August 31, 350 B.C.

Being a sentence, and, let us suppose, true, it reports a fact – at least a make-believe fact. It makes a respectable stab at reporting a fact, which is more than (4) does.¹¹ The point is that the fact is constituted by an individual, a property and a time and it cannot have fewer components. This holds not just of make-believe fact but of honest-to-God, fully determinate facts. Obviously this is not the only kind of fact there is. There will be facts containing an individual, a relation, an individual and a time, as, for example, the fact that Columbus discovered America in 1492.

Now it might be suggested that (7) is in fact elliptical for something still more elaborate, namely,

- (8) Philip is drunk at noon on August 31, 350 B.C. at some place.

Certainly if we consider

- (9) Philip is drunk at noon on August 31, 350 B.C. and it is not the case that there is a place such that Philip is drunk at noon on August 31, 350 B.C. at that place.

we see that although it is not logically false it is absurd. Elsewhere¹² I have argued that we should resist the suggestion that (7) is elliptical for (8), I think it preferable to regiment (8) to:

- (8') There is some place such that Philip is drunk at noon on August 31, 350 B.C. and Philip is at that place at noon on August 31, 350 B.C.

Now the absurdity can be accounted for. If, in (9), (8) is replaced by (8') and the result conjoined with the universal metaphysical truth,¹³

- (10) If x has property Q at time t , then there is a place P such that x is at P at t .

then the result is a straightforward logical contradiction.

The upshot of all the foregoing is this: A fact has a certain constitution. If you try to subtract one or more constituents, what results is not a fact. And – what is not really germane to the present enterprise – if you try to stuff a fact with more constituents than it already has, then what results is not a fact.

IV

Now we come to events. Offhand it will seem that if you *do* subtract one or more constituents of a fact then, if all goes well, what you are left with is an event. In a word, an event is a truncated fact. Let us see how it works. As I have mentioned, there are very few event names. Events are referred to by description, e.g., 'the siege of Troy', 'the Norman Conquest', 'the discovery of America'. In each case there is the uniqueness claim – there is just one event which satisfies the description. So far as we know, there was only one siege of Troy. If the Persians had besieged Troy some

centuries after the Achaeans did, we should have to speak of the siege of Troy by the Achaeans, just as we speak of the *Norman* conquest of Britain to distinguish it from the Roman conquest. We would speak of the discovery of America by Columbus if we wished to contrast it with the discovery of America by Leif Ericson. Or we might speak of the discovery of America in 1492 to contrast it with the discovery of America in 1003.

Now some people have taken the typical characteristic of events to be the fact that they invite 'when' questions. When was the siege of Troy? Or, when did the siege of Troy occur? Note that this question, unlike 'When was Troy besieged?', presupposes that there was precisely *one* siege of Troy.¹⁴ Actually, the view in question assumes that the only way to truncate a fact to get an event is to drop the time, so that the commonest question would simply ask for the time back again. The view is on the right track, but I think we may broaden it. If we leave out the agent we can get the discovery of America in 1492, which seems to be a perfectly good event and invites the question, 'By whom was the discovery of America in 1492 made?' But it seems that the action cannot be dropped from the fact to yield an event. Language just won't permit it. We might try, 'What Columbus did to America in 1492', but that is a description of an action, not of an event, and moreover doesn't satisfy the uniqueness requirement, since Columbus, we may suppose, did quite a number of things to America in 1492. He knelt down and kissed the soil of America, he planted the Spanish flag on America, and so on. Here I am, in effect, simply laboring the commonplace that event descriptions in most cases involve the nominalization of a verb, and one would not expect the action signified by the verb to be expendable from an event.

Davidson is of the opinion that every event is a change. This also seems a bit restrictive. As Sherlock Holmes pointed out, the non-barking of a dog can be even more significant than its barking. In general I don't see why a remaining-the-same shouldn't be classed as an event. A person might say, "The traffic light's remaining green was the cause of the accident," although if he writes that way all the time I shouldn't think he would be in any danger of receiving the Nobel prize for literature.

We may take it then, that an event is a truncated fact, a fact with one or more of its constituents other than the action dropped out, so that the normal questions about events simply ask that the missing constituents be reinstated. We now have simple identity conditions for events:

Two events are identical if and only if they are carved out of the same fact.¹⁵

Thus the discovery of America by Columbus and the discovery of America in 1492 are identical because they are both carved out of the same fact, the fact, namely, that Columbus discovered America in 1492.

v

The theory that an event is a truncated fact is, quite obviously, a splendid theory. Its main flaw is that it is almost totally and irredeemable false. According to that theory the constituents of the discovery of America by Columbus are a selection of the constituents of the fact that Columbus discovered America in 1492 and the discovery of America in 1492 has a different set of constituents; hence the events must be different, contrary to our intuitions. Furthermore, both events must be identical with the discovery of America by Columbus in 1492, and this event has no constituents missing. If we affirm these identities then we must hold that all three event expressions have the same referent, a fully saturated event, if I may call it that. What are truncated in two cases of the three are the event descriptions, and they can be truncated because they mention enough constituents to determine the fact uniquely.

But now we have the event, which has as constituents, Columbus, America, the action of discovering, and the time, 1492. We also have the fact that Columbus discovered America in 1492, which has *exactly the same constituents*. How are we to distinguish them? The answer is that we can't, in any manner not hopelessly artificial and pointless.¹⁶ Earlier I mentioned the 'confusion' of events with facts and cited the linguistic evidence to support the charge of confusion. What is suggested by the present evidence is not so much a confusion of two distinct kinds of entity, but the fact that we have been hornswoggled by language, in particular by the existence of nominalizing transformations, especially what Zeno Vendler¹⁷ calls *perfect* nominals, into believing in events as a separate category.

It will be noted that the foregoing argument is strictly inconsequent. It assumes that events, like facts, are identical just in case they have the same constituents, and that assumption cannot simply be tossed in to make

trouble for the notion of an event as a truncated fact. But the assumption has some independent plausibility. After all, two chips are not necessarily identical just because they are chips off the same block. They would have to have all *their* chips in common. Here it will be said that I am being misled (I would say inspired) by a concrete metaphor. In the final analysis, then, my appeal is to the difficulty of distinguishing the event, the discovery of America by Columbus in 1492 from the fact that Columbus discovered America in 1492, and also to the possibility of paraphrasing event-talk out.

Anyone who identifies events with facts must address himself to the problem of paraphrasing. For example,

- (11) The discovery of America by Columbus occurred in 1492.

This cannot be paraphrased as:

- (12) Columbus discovered America in 1492.

For, (11) claims that there was just one discovery of America by Columbus, but, the semantics of the word 'discovers' aside, (12) makes no such claim. Having noticed the word 'the' and the existence and uniqueness claim it makes we try:

- (13) There is precisely one event e such that e is a discovery of America by Columbus and e occurred in 1492.

We take classes as entities *sui generis*, which is to say, we accept ineliminable quantification over classes. And we render classes respectable by supplying identity conditions for them. I have done the same for G-propositions. (Oddly enough we accept individuals as entities *sui generis* without demanding identity conditions for them. I think this is a mistake but that's another matter.) The trouble here is that we don't *have* identity conditions for events and so (13) is an unacceptable paraphrase. I therefore suggest the following:

- (14) $(E!p) [p \ \& \ (\exists t) (p = \text{Columbus discovered America at } t) \ \& \ \text{Columbus discovered America in 1492}]$

("There is precisely one proposition p such that p and ...") means "there is precisely one fact such that"

One intuits that an equally acceptable paraphrase would be

- (14') Columbus discovered America in 1492 & (t) (Columbus discovered America @ $t \supset t=1492$)

Note that here we have a paraphrase that doesn't even invoke facts. But we do feel that (14) and (14') are somehow equivalent. I have already mentioned one 'proposition-theoretic' assumption, namely:

- PTA.1. Two propositions are identical if their corresponding constituents are identical.

Let us add another:

- PTA.2. If two propositions are identical and have their corresponding constituents identical except in one case, then in *that* case the constituents are identical also.

Under these assumptions (14) and (14') are interderivable. (Xerox of the proof on demand.) This interderivability serves to supply a kind of systematic confirmation of those assumptions.

It should be noted that the reason we cannot countenance possible or non-occurrent events – that is, why we have to paraphrase in terms of facts rather than simply propositions – is that if we didn't, we should never be able to satisfy the uniqueness condition. There are any number of *propositions* p such that there is a time t such that p is identical with (the pp that) the Titanic docked in New York at t . The docking of the Titanic in New York is handled pretty much on a par with the present king of France:

- (15) $\sim(E!p) [p \ \& \ (\exists t) (p = \text{the Titanic docked in New York at } t)]$

All of the foregoing is designed to get us in shape for the paraphrase of (3), for which we adapt the standard recipe for expanding 'The author of *Waverly* is identical with the author of *Marmion*'.

- (16) $(\exists p) \{p \ \& \ (q) [q \ \& \ (\exists t) (q = \text{Columbus discovered America at } t) \equiv q = p] \ \& \ (q) [q \ \& \ (\exists x) (q = x \text{ discovered America in } 1492) \equiv q = p]\}$

The reason it has to be so complicated is that there are two uniqueness

conditions that have to be made explicit. But again, there is a simpler version available.

- (16') $E!(t)$ (Columbus discovered America @ t) & $E!(\exists x)$ (x discovered America in 1492) & Columbus discovered America in 1492.

It may be noted that in general there are two kinds of event predications: what may be called internal and external predications. Internal predications are those which attribute to the event a missing constituent of the corresponding fact. Our example is 'The discovery of America by Columbus occurred in 1492'. I think it is clear that such predications can all be paraphrased either in terms of facts or more directly in terms of elementary resources which apparently do not commit us to facts, although, as I believe, the *semantics* of such resources does so commit us. Predications of the second sort, external predications, do require facts for their paraphrase. 'The discovery of America by Columbus had important historical consequences' becomes 'The fact that Columbus discovered America had important historical consequences' or, more technically, 'There is a proposition p such that p , and there is a time t such that $p =$ (the pp that) Columbus discovered America at t and p had ... consequences'.

We do not have here a completed program for paraphrasing event-talk into fact-talk, as, for example, *Principia Mathematica* gives us a program for paraphrasing natural number talk into second-order class talk. The reason is that the contexts involving apparent mention of events are too various. But the difficulty of differentiating events from facts is enough to entitle us to say that event talk damned well *better* be so paraphrasable. It might be said that what we have in this paper is a partial analysis of events in terms of facts. 'Some events are more disastrous than others' becomes 'Some facts are more disastrous than others'. But this is a pretty funny kind of analysis. I myself prefer to regard it as a 'no event theory'. To put it as bluntly as possible: There is no such thing as an event distinct from a fact.

The difficulties connected with a program for the complete elimination

viously, one does logic only on expansions.) To expand 'A alerted the prowler' we let ' V ' range over one-place basic actions (such as *whistling*, *flipping the switch*, etc.). It becomes:

$$(\exists V) (\exists t_1) (\exists t_2) (A \text{ did } V \text{ at } t_1 \ \& \ \text{the prowler became alert at } t_2 \text{ and the prowler became alert at } t_2 \text{ because A did } V \text{ at } t_1)$$

The claim that 'alerted' does not refer to an action is confirmed by the disappearance of the verb from the analysans. The point of saying that the agent alerted the prowler is to displace, fictitiously, to him the efficacy of his primary action and thereby attribute to him a perfectly genuine responsibility for the events consequent upon his basic action.

We have, then, the following analysis of Davidson's example, construed as a true sentence, but not as an identity sentence.

$$(E!p) (E!q) [p \ \& \ q \ \& \ (\exists x) (\exists t_1) (p = x \text{ flipped the switch at } t_1) \ \& \ (\exists t_2) (q = \text{the prowler became alert at } t_2) \ \& \ q \text{ because } p]$$

There is a tacitly understood non-commutativity about the Davidson example which should warn us not to expect it to be a genuine identity sentence. (And it should be born in mind that, appearances to the contrary, not even 'The author of *Waverley* = Walter Scott' is an identity sentence.)

Judith Thomson's example is in much the same case, assuming (doubtfully, perhaps) that *shooting* is a basic action. Here, for variety, we shall dispense with the paraphernalia of facts.

$$E! (tx) E!(t_1) E!(t_2) (x \text{ shot RFK at } t_1 \ \& \ \text{RFK died at } t_2 \ \& \ \text{RFK died at } t_2 \text{ because } x \text{ shot RFK at } t_1)$$

There is no such thing as the killing of Robert Kennedy because a killing (if I may use the word) is a causing and there is no such thing as a causing. Hence the question as to the time of the killing doesn't arise. And that is why the question, if taken seriously, should prove so baffling.

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NOTES

¹ Donald Davidson's example (p. 687) in 'Actions, Reasons and Causes', *Journal of Philosophy* 60 (1963), 685-700.

² Judith Jarvis Thomson's example in 'The Time of a Killing', *Journal of Philosophy* 68 (1971), 114–132.

³ In 'The Individuation of Events', in *Essays in Honor of Carl G. Hempel* (ed. by Nicholas Rescher *et al.*), Humanities Press, New York, 1970, pp. 216–234.

⁴ But see Fred Dretske, 'Can Events Move?' *Mind* 76 (1967), 479–492. He argues, very convincingly, that events cannot properly be said to move.

⁵ 'G' is the name I give to my own semantical methods. 'G' for 'gives'. The connection will not be apparent, but the interested reader is referred to Carnap's use of 'gives' in *Meaning and Necessity*, pp. 71ff. For a full exposition of the semantics, see the author's *The Concept of Language*, Toronto, 1959, Chs. II–IV.

⁶ A more careful form of these identity conditions is given as Axiom 19 on p. 26 of the author's *op. cit.* in n. 5. A related version, with time expressions added, is given for events by J. Kim, 'On the Psycho-Physical Identity Theory', *American Philosophical Quarterly* 3 (1966), 227–235.

⁷ I should think it owes more to Russell's *Lectures on the Philosophy of Logical Atomism* than to any other source.

⁸ Lots of people nowadays are willing to recognize properties. But note: The property human, is identical, presumably, with the property of being a member of the class of humans. Which in turn is identical with the property of being a member of the class of featherless bipeds. Which is identical with the property, featherless bipedal. Hence the property, human, is identical with the property, featherless bipedal. Which is false. Something has to give.

⁹ Oddly enough, it is possible to get a sort of bootleg existentially quantified fact.

The fact that someone burgled my house last night distresses me.

becomes

$(\exists p) [p \ \& \ (\exists x) (p = x \text{ burgled my house last night}) \ \& \ p \text{ distresses me}]$

¹⁰ 'On Relevant Semantical Whatsits', forthcoming in *Conceptual Change* (ed. by Glenn Pearce).

¹¹ Donald Davidson and others have concerned themselves with the problem of formalizing the step from (7) to (4). Davidson's problem is to get from 'Jones buttered the toast in the bathroom at midnight' to 'Jones buttered the toast in the bathroom'. See his 'The Logical Form of Action Sentences' in *The Logic of Decision and Action* (ed. by Nicholas Rescher), University of Pittsburg Press, 1966, pp. 81–95. In my view there is no such problem because it is a step from sense to nonsense. Obviously if (4) is taken as well-formed it must be regarded as entailing (5). But (7) implies (5) directly by existential generalization. If (5) entails (4) then (if (4) entails (5)) (4) is simply an ellipsis for (5). If (5) does not entail (4) then (4) would be somewhere between (7) and (5) in logical strength, and we are at a loss to see how that is possible.

¹² In 'Notes on the Form of Certain Elementary Facts', in *Essays in Honor of Charles A. Baylis* (ed. by Paul Welsh), forthcoming from Duke University Press. Some of that essay has been incorporated into the present article by kind permission of the editor and publisher.

¹³ "Well if you're going to invoke a so-called universal metaphysical truth *here*, why don't you simply make it a metaphysical truth that if Philip is drunk, then Philip is drunk at some time. Then the absurdity of (6) could be attributed to its incompatibility with this metaphysical truth." I wish I had a really decisive answer to this. The non-decisive point would be that (4) is a redundant locution. Having (5), we don't need it.

And so to invoke a metaphysical truth to accommodate (4) *appears* to multiply metaphysics beyond necessity. Actually it doesn't really, because the metaphysics in question is encapsulated in the decision to cast out (4). In short, there are 'metaphysical facts' floating around and it doesn't make much difference whether they are stated as principles in the object language or embodied in the formation rules for the object language.

¹⁴ Donald Davidson has emphasized this point in several articles.

¹⁵ We can neglect the cases that fall out from the logic of identity (e.g., the death of Walter Scott is identical with the death of the author of *Waverley*). The reason is that ordinary identity theory will guarantee the identity of the events in question.

¹⁶ Such as treating an event as the unit class whose sole member is the corresponding fact.

¹⁷ In *Linguistics in Philosophy*, Ithaca, 1967, p. 131. The distinction is quite subtle but it suffices to say that 'the discovery ...' would be a *perfect* nominal and 'that Columbus discovered ...' would be an *imperfect* nominal, that is, one in which the verb is still 'alive' as a verb.

¹⁸ The treatment in this section was prompted by some comments made on an earlier version of this paper by Jonathan Bennett.

¹⁹ For *basic actions*, see Annette Baier, 'The Search for Basic Actions', *American Philosophical Quarterly* 8 (1971), 161-170, and the articles cited therein. For these references I am indebted to Charles Ripley, 'Basic Actions and Skills', a paper given at the meeting of the Canadian Philosophical Association in June, 1972.