Events, Truth, and Indeterminacy

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1. Introduction

Some statements owe their truth (or falsity) to the way things are; others seem to owe their truth (or falsity) to the way things go. The statement

(1)   Lou's hat is lovely

will be true or false according to whether Lou's hat (an object) is lovely or not. The statement

(2)   Lou's lecture is boring

will be true or false according to whether Lou's lecture (an event) is boring or not. Davidson (1967) and many others have argued that this distinction is central to the way we talk about the world, and that both objects and events must be included in the ontological inventory if one is to make sense of much ordinary talk (and of much philosophical talk too, e.g., talk about causation). Moreover, we often speak in such a way as to suggest—implicitly—that we are talking about events. If the statement

(3)   Brutus stabbed Caesar with a knife

were taken to assert that a certain three-place relation obtained among Brutus, Caesar, and a knife, then it would be hard to explain why (3) entails

(4)   Brutus stabbed Caesar

(a statement that involves a different, two-place relation). By contrast—the story goes—if we take (3) to assert that a certain event occurred (namely, a stabbing of Caesar by Brutus) *and* that it had a certain property (namely, of being done with a knife), then the entailment is straightforward. This is not a proof that there are such entities as events. But if we are interested in an account of how it is that certain statements mean what they mean, and if the meaning of a state-

ment is at least in part determined by its logical relations to other statements, then one can hardly ignore the relevance of facts such as these.

This by now is standard lore. There are even some logic textbooks (e.g., Forbes 1994) that include Davidson's event-based analysis of sentences such as (3) or (4) as part of the basic apparatus for representing logical forms, on a par with Russell's theory of descriptions. The official advantage, in both cases, is that we may hope to capture the truth conditions of such sentences *without going beyond the framework of a purely Tarskian account*. As far as I can tell, however, in the case of events this advantage is still surrounded by a cloud of philosophical suspicion, in spite of the remarkable achievements on the technical side. For while the semantics of our object talk seems clear enough (we know what object we are talking about when we speak of Lou's hat), the semantics of our event talk turns out to be a complex affair. We may well have a rough idea of what it is that we are talking about when we use expressions such as 'Lou's lecture' or 'Brutus's stabbing of Caesar'; but things get harder as soon as we try to be more precise. Is Lou's lecture the same event as her explanation of the mind-body problem? Was Brutus's stabbing of Caesar the same event as his killing of Caesar? Was it the same as the assassination of Caesar? Was it the same as the violent assassination of Caesar?

Some take questions such as these to be *metaphysical* questions. They think that these are questions whose answers call for adequate identity criteria, and that we are not allowed to take our event talk seriously unless we can provide such criteria. I think those are, first and foremost, *semantic* questions—questions about the way we talk and about what we say. And I share with Jonathan Bennett (1988) the worry that this conflict between metaphysic and semantic concerns is indicative of a deep indeterminacy in our event concept. We do talk about events; but exactly what event a statement is about is not something that can be inferred from the event name or action verb that occurs in the statement; it depends heavily (more heavily than with ordinary material objects) on local context and unprincipled intuitions. My purpose in this paper is to explain this view—call it the *indeterminacy view*—and to illustrate its import especially in connection with two concrete examples: the phenomenon of vagueness and the dispute over identity statements.

2. Events and Their Names

Before getting to the main point let me be explicit about the basic terms. First of all, I shall assume without argument that sentences such as (2) through (4) are

indeed about events. And I shall assume, also without argument, that events are spatiotemporal *particulars* of some sort. By this I mean two things. (i) Events are particular, *unrepeatable* entities. When we say 'Lou gives the same lecture every Summer' we are not talking about a single lecture that takes place over and over; we are talking about different lectures that take place year after year, each of which is remarkably similar to the previous one. (So I side with Davidson 1970 against Chisholm 1970.) (ii) Events are *spatiotemporal* entities. Thus, Lou's most recent lecture has a temporal location (it took place last Tuesday, not last Wednesday) as well as a spatial location (it took place in New York, not in Frascati). Of course we might not be able to specify the exact temporal or spatial boundaries of an event; but I believe that this is precisely the sort of issue that involves a conflation of semantics and metaphysics, so I shall come back to it later. In any case, events are not *objects*, or so I shall suppose: Lou's lecture extends over time, i.e., has temporal parts, whereas Lou's hat endures over time, i.e., is always present in its entirety at any time at which it exists at all. (Here I follow Davidson 1985b against Quine 1960). And events are not *facts* either. Lou's lecture should not be confused with the fact that she lectured just as Lou's hat should not be confused with the fact that she has a hat. (And here I am following Ramsey 1927.)

Second forewarning: I am going to use the term 'event' quite broadly, so as to cover occurrences of various kinds: actions (such as Sebastian's walk), but also inanimate processes (such as the eruption of Vesuvius), instantaneous occurrences (a rain drop hitting the ground), or complex events (like an earthquake or a revolution) which involve bits and pieces of all these kinds. Some would also distinguish here between intentional actions (such as Sebastian's walk) and unintentional ones (such as his falling off a horse at age 5). However, one of the reasons why the question of identity criteria for events is important is precisely that it ties in with a number of philosophical issues about intentionality or materialism: can one and the same event be intentional under a description, and non-intentional under another? I certainly don't want to deny this possibility, so I don't want to view intentional and unintentional actions as different *kinds* of events. But if you do, then the notion of an event as I use it is meant to be wide enough to cover both kinds. It may also cover states, if you like, such as Lou's being silent. That all events should involve change is a significant metaphysical thesis (emphasized e.g. by Lombard 1986), but it is not part of the general concept of event that I have in mind.

Finally, I shall speak of 'event names' in a very broad sense, too, so as to include any expression (name or description) that can be used to refer to an in-

dividual event. I am not even sure that the opposition between names and descriptions applies at all in the case of events. Leibniz suggested that

> In certain cases ... there has been a need to remember an individual accident, and it has been given a name.... For example, the birth of Jesus Christ, the memory of which we celebrate every year; the Greeks called this event 'Theogony', and gave the name 'Epiphany' to that of the adoration of the Magi. (*New Essays*, III.vi.42)

I am not sure these are interesting cases. 'Theogony' and 'Epiphany' are clear examples of names with a descriptive root, although I agree that the relevant descriptions ('the genesis of God' and 'the manifestation of God') do not give the meaning of these names but rather fix their references. They are rigidified descriptions, like 'Gödel's theorem' or, to stick to events, 'World War II'. Likewise, when we say 'There are two crucial events in Western history: Waterloo and Watergate', we are indeed using 'Waterloo' and 'Watergate' as names of events, but we are doing so synecdochically (as it were). We are piggybacking on the name of the location in order to name the whole event ('the battle of Waterloo', 'the Watergate scandal') so again these are rigidified descriptions, at best. Perhaps meteorological events are a better example, as with hurricanes. We read in the paper 'Gloria is about to hit Florida' and we know what that is about. Once again, however, such proper naming seems to be parasitic on the availability of suitable identifying descriptions. As Bennett pointed out, there appears to be no practicable way of giving a hurricane the name 'Gloria' unless you say something like 'Gloria is *the hurricane* that . . .'.

> You may stand in the middle of the hurricane, wave your harms, and shout 'This is Gloria', but the rest of us don't know how far your 'this' is meant to reach, and so we don't know what you are calling 'Gloria' (1988: 3).

So even in these cases we are dealing with proper names that are not quite genuine, at least by certain standards.

Be it as it may, in the following I shall take an event name to be any individual referring expression that can be used to refer to an event. Maybe we can come up with some proper names as usually understood. But in typical cases events are named by definite descriptions: noun phrases that can tolerate articles, adjectives, and relative clauses, as in 'The death of Caesar', 'Caesar's violent death', or 'The death which was caused by Brutus's stabbing'.

3. Indeterminacy Due to Vagueness

With this background, there are now two sorts of issue that I want to address.

One concerns the spatiotemporal nature of events; the other is more specifically about their identity conditions. Both worries have been the focus of considerable debate in the philosophical literature on events. But if I am right, much of the dispute is not genuinely philosophical and results mostly from a natural difficulty to figure out the aboutness of our event language.

Let us begin with the spatiotemporal issue. Consider my talk—*this* talk of mine—an event that is taking place right now. We know that it is taking place here. But where exactly is it taking place? In Italy? Near Frascati? In the Villa Vecchia? Perhaps we should say it is taking place in this particular room of the Villa Vecchia, since nobody can hear me outside. But *would* it extend outside if somebody heard me? And how far would it extend? Davidson (1969: 228), and others after him, have suggested that the exact location of an event is the location occupied by the 'minimal' participant of the event. In this case I would be the minimal participant of my talk; so perhaps the right thing to say is that, at any instant of time, my talk is located exactly where I am located. But wait a moment: surely my big toes are not involved in this event. Nor are my knees playing any role. So perhaps we should only consider the region occupied by my head. Or perhaps only part of it . . . The spatial location of my talk appears to be a problematic business indeed, if anything because the individuation of the relevant participants is problematic.

One could say that this problem arises insofar as events are not truly spatial entities (as for instance Hacker 1982 has urged). All events have a temporal location, but the question 'Where did such-and-such an event happen?' may be meaningless for various classes of events. (If my example is not sufficiently problematic, consider the location of Lady Di's campaign to internationally ban the use of land mines, or the location of the industrial revolution. Exactly where did such events take place?) This strikes me as false, though. Surely my talk is taking place somewhere here and not in new York. Besides, focusing exclusively on the temporal nature of events is no way out, for the same problem may arise. The temporal boundaries of my talk are presumably well defined: the talk began when I opened my mouth to utter my first sentence and will be over when I shut up. But what about Lady Di's campaign? Exactly when did it begin? When did it end? Exactly when did the industrial revolution begin and end?

I doubt anyone would be satisfied by a purely epistemic account of the difficulty raised by questions such as these, as if it were just a matter of ignorance. It's not that there is this event, my talk, whose exact spatial location cannot yet be determined because of lack of relevant information (e.g., because we do not know exactly which parts of my head or of my brain are involved in my talk).

It's not that there is this event, the industrial revolution, which has perfectly precise and yet unknown spatiotemporal boundaries, boundaries that historians have not been able (and will never be able) to locate. The indeterminacy is not epistemic. Yet this is not to imply that events are not spatiotemporal particulars, or that they are *vague* spatiotemporal particulars—that they have vague (fuzzy, imprecise) spatial or temporal boundaries. Our difficulty in answering the above questions concerns the structure of our event talk, not the ontological make-up of events. It is the event names we use that are vague, not the events themselves. And those names are vague not in the sense of denoting events whose boundaries are unknown to us (as Sorensen 1988 or Williamson 1994 would have it), but in the sense of denoting vaguely (as Quine 1985, Lewis 1986, and others have it; see Varzi 2001 for my own defense of this view).

Consider: there are plenty of things going on around here, lots of more or less exciting events going on in my head, in my body, in my big toes, in this room, and so on. It is conceivable that to each region of space there correspond, at any time, one or more events of some sort. The trouble is that our way of talking about such goings-on is very loose. When I say 'my talk' I am using a definite description that is extremely poor, extremely imprecise, and it is simply preposterous to suppose that such a description should pick out a unique event. There are *many* events around here that qualify as legitimate referents of the phrase 'my talk': it all depends on how we understand this phrase. Do we want to include my hand-waving as part of my talk? Is your listening part of my talk? To me these are not questions pertaining to the nature of an event. They pertain to the semantics of an event name: exactly *what* event are we talking about? In many cases (virtually always) there is no need to be precise; in some cases (perhaps always) it may not be possible to be precise. But these facts have nothing to do with ontology. Likewise, consider the industrial revolution: for most purposes we don't need to be precise. We say 'the industrial revolution' to refer to a complex of social and economic changes that began in England (broadly speaking) in the second half of the 18th century (broadly speaking) as a result of the mechanization of various industrial processes. If we need to be more precise we can, up to some point. But this is not to say that the referent of our description is a vague entity: it is the referential pattern that is vague.

Material objects are not much better in this regard. You point to an irregularly shaped protruding piece of land and say: 'Mount Everest'. Exactly what object are you referring to? Some authors (e.g., Tye 1990 and Parsons 2000) would say that you are referring to a vague object. On this view, the name 'Everest' is vague insofar as the object Everest is vague: there is no line which

sharply divides the matter composing Everest from the matter outside it, no fact of the matter about whether certain land parcels are inside or outside the mountain. There are actually various ways of interpreting this claim. You can take the fuzziness to lie in the geographic boundary between Everest and the surrounding land (at the foothills), or you can take it to lie (also) in the physical boundary between the mountain and the atmosphere. But neither option seems reasonable to me. It is not the mountain that is fuzzy. It's the name, 'Mount Everest', that has a vaguely defined reference. There are plenty of physical objects out there—plenty of slightly distinct and yet precisely determinate aggregates of molecules. And when we say 'Mount Everest', or when we baptize a piece of land 'Mount Everest', we are just being vague as to which of these objects we are referring to. (See again Varzi 2001 for details.)

One might observe that there is a difference here depending on whether we are dealing with proper names or definite descriptions. If you say 'This is Gloria' or 'This is Everest', you are saying something vague because the rest of us cannot possibly know how far your 'this' is meant to reach. When we speak of 'hurricane Gloria' or 'Mount Everest', the vagueness stems from the vagueness of the sortals 'hurricane' and 'mountain'. I agree that this is an important difference. It is, however, a semantic difference, and not one that makes for ontological troubles.

4. Fiat and Bona Fide Boundaries

One way of making this more precise relies on a distinction between different ways in which we may speak of the boundaries of an object or event, as Barry Smith (1995) pointed out. Some objects come with natural boundaries: the boundary of this table is its surface, which we can think of (roughly speaking) as the infinitely thin extremal slice of the table. Intuitively, such a boundary is natural in that it corresponds to a qualitative discontinuity (of material constitution, texture, etc.) between the table and the rest. Other objects do not have natural boundaries of this sort. There is no such boundary separating the right half of the table from the left half. Yet we do speak of these two parts of the table as objects in their own right—they are objective parts of the world around us. We do sometimes speak of boundaries even in the absence of any corresponding physical discontinuity or qualitative differentiation, as with the boundary between Austria and Italy, or the borders of Wyoming. (People give their lives for boundaries of this sort.) Likewise for events—some events have natural boundaries that correspond to some sort of spatiotemporal discontinuity; others

do not. Some examples of natural boundaries of the first kind are the beginning of a talk, the point in the process of cooling of a liquid at which it first begins to solidify, the point in the flight of a projectile at which it reaches its maximum altitude and begins its descent to earth (all of which are temporal boundaries), or the boundary of a rotating sphere (which gives the spatial boundary of the sphere's rotation). Examples of boundaries of the second, non-natural kind might be: the boundary between the fourth and fifth minute of the talk; John's reaching the age of three; the projectile's crossing the border between Austria and Italy; or the boundary of the bottom half of a rotating sphere.

I join Smith in calling these non-natural boundaries *fiat* boundaries. (See Smith and Varzi, 2000.) They are the result of human fiat. They lie skew to any qualitative differentiations or spatiotemporal discontinuities on the side of reality. Natural boundaries of the first sort, which do involve such differentiations or discontinuities, we call *bona fide* boundaries. And, of course, the bona fide–fiat opposition can be drawn not merely in relation to boundaries but in relation to objects and events also. Wyoming is a fiat object. The right half of the table is a fiat object, and so is the North Sea, whose objectivity, as Frege writes,

> is not affected by the fact that it is a matter of our arbitrary choice which part of all the water on the earth's surface we mark off and elect to call the 'North Sea'. (1884, §26)

Likewise, most events are fiat entities, insofar as they involve fiat boundaries of some sort. The first third of this talk, Mary's childhood, the Renaissance, the industrial revolution, World War II, Lady Di's campaign, etc. All of these are perfectly objective sub-totalities within the totality of all events making up universal history, even though the spatial reach as well as the initial and terminal temporal boundaries of, for example, the industrial revolution were, like the spatial boundaries of Wyoming, decided by fiat. Such events are carved out of the whole of history by our cognitive activity. And to say that some of them, for example the industrial revolution, have indeterminate boundaries, or to say that such entities as Mount Everest have indeterminate boundaries, is to say that our fiat process has not been fully accurate.

Maybe *all* events and objects of ordinary discourse are fiat entities of this sort. Maybe fiat boundaries are *always* at work in articulating the reality with which we have to deal. (Here is one way of putting the big question of metaphysical realism.) If you think of middle-size physical objects as intricate systems of subatomic particles, for instance, speaking of a table's boundary is like speaking of the "flat top" of a fakir's bed of nails (to borrow a nice phrase

from Peter Simons 1991: 91). Such a boundary is not quite of the bona fide sort. It too is a fiat boundary, a boundary enveloping smudgy bunches of hadrons and leptons, and its exact shape and properties involve the same degree of arbitrariness as those of a mathematical graph smoothed out of scattered and inexact data. In this sense, not only the geographic boundary of Mount Everest involves vagueness, but also its physical boundary. The first would be the result of a (somewhat approximate) social fiat; the latter the result of a (somewhat approximate) individual fiat.

Indeed, an important motor for the drawing of fiat boundaries is perception, which (as we know from our experience of Seurat paintings) has the function of articulating reality in terms of sharp boundaries even when such boundaries are not genuinely present in the autonomous (which is to say mind-independent) physical world. The same applies to events. Every genuine kiss or handshake involves real physical phenomena (relating to surface tension, fluid exchange, etc.) as well as associated psychological phenomena (of tactual and emotional feeling, etc.). These are, however, merely such as to provide an appropriate real basis for our fiat demarcation. For in comprehending the apparent contact between two persons as a *kiss* or *handshake*, our cognitive apparatus carves out nicely demarcated units from this congeries of physical and psychological processes. Sometimes the demarcation is not quite precise, but it is mistaken to infer from this that the relevant events out there are vague. Just *what* would these relevant events be?

Natural language contributes to the generation of fiat boundaries also through the opposition between mass nouns (such as 'water' or 'recreation') and count nouns (such as 'apple' or 'explosion'). A hungry carnivore points towards the cattle field and pronounces 'There is cow over there'. How does this pronouncement differ, in its object, from 'There are cows over there'? Not, certainly, in the underlying real bovine material. Rather, it differs in virtue of the different sorts of boundary that are imposed upon this material in the two cases. You look back at history and say 'There was war in Europe'. How does this differ from 'There was a war in Europe'? Not certainly in the relevant historical events, but in the way the events are singled out.

5. Same Reference, Different Sense

So much for the vagueness problem. I conclude that the apparent elusiveness of the spatiotemporal location of events is not something to worry about from a metaphysical perspective. Such elusiveness is a pervasive phenomenon, and one

that may be very hard to overcome; it is, however, a semantic or cognitive phenomenon and it bears witness of the fact that our linguistic practices are not (and perhaps cannot) always be fully accurate. In the case of events, specifically, they seem to be extremely inaccurate. But that is no reason to doubt the conception of events as spatiotemporal particulars. I now want to argue that similar considerations apply to the old dispute over identity statements involving events. In that case, I submit, the deadfall is the supposition that co-referential event names must have the same sense—a supposition that is obviously mistaken when we consider names of objects.

To simplify the discussion, let me just focus on a familiar example. Brutus stabs Caesar and kills him. Is the stabbing the same event as the killing? Philosophers like Davidson (1969) or Anscombe (1979) answer in the affirmative: we are talking about one and the same action by Brutus, which we can describe either as a stabbing or as a killing. Other philosophers disagree: they would argue that Caesar could have survived the stabbing but not the killing, or that he could have been killed by other means. If so, then the event of his stabbing and the event of his killing would have different modal properties and should therefore be distinguished. (By the same pattern, some would also distinguish Brutus's stabbing of Caesar from his violent stabbing of Caesar, his knifing of Caesar, and so on. Chisholm 1970 would even distinguish between Brutus's stabbing of Caesar and his stabbing of the author of *De bello gallico*, though very few would follow him this far). Moreover—and this would be a second argument for the distinction—stabbing and killing are different *properties.* So if events are property exemplifications, as some of these philosophers have suggested (most notably Kim 1969, 1976 and Goldman 1970, 1971), then an exemplification of the first property and an exemplification of the second property should be kept distinct. (Again, the argument could then be applied to distinguish between the stabbing, the violent stabbing, the knifing, etc., though not—in this case—to distinguish between the stabbing of Caesar and the stabbing of the author of *De bello gallico*.)

Both arguments—I submit—are faulty. Consider first the argument that the stabbing and the killing must be distinct because they *have* different properties—different modal properties. (Good instances of this argument may be found in Goldman 1970:3 but also in Brand 1977:334. So it is independent from the second argument mentioned above, since these two philosophers have a different conception of the nature of events.) The underlying intuition, of course, it that there are possible worlds in which Brutus stabbed Caesar without killing him, and possible worlds in which Brutus killed Caesar without stabbing

him, e.g., by strangling him. I accept this intuition. Except for a radical determinist, what happened *need not* have happened, or need not have happened in the same way. But does it follow from this that two distinct events occurred in the actual world? As I see it, this can only follow from the above intuition as a result of a typical *de re / de dicto* confusion. Compare the following two statements:

    (5)   Brutus's killing of Caesar could have been survived by Caesar.
    (6)   Brutus's stabbing of Caesar could have been survived by Caesar.

I agree that, on a *de dicto* reading, these two statements have different truth-values. The first one reads:

    (5_d)   There is a possible world *w* such that Brutus's killing of Caesar in *w* is survived by Caesar in *w*.

This is clearly false (if not contradictory). No killing is survived by the victim. The second statement, however, is true:

    (6_d)   There is a possible world *w* such that Brutus's stabbing of Caesar in *w* is survived by Caesar in *w*.

This amounts to the assertion that Brutus's stabbing could have missed Caesar's vital organs, or could have inflicted only a flesh wound—which is certainly true except for a radical essentialist or a radical determinist. So, on a *de dicto* reading (5) and (6) have different truth-values: one is True and the other False. However this is obviously beyond the point. For if we are interested in the modal properties of the event or events that took place in *this* world, then we should not look at the alternative referents of our event *names*. Obviously, if those names have different senses (as in our example), they could have different referents. (Obviously, 'the morning star' and 'the evening star' could have different referents.) But that is not the issue. The issue is not whether our two event names *could* have different referents. It is whether they *do* have different referents, whether they have different referents in *this* world. So (5_d) and (6_d) may well have different truth values, but that does not allow us to apply Leibniz's law and conclude that Brutus committed two actions—a stabbing and a killing. Such an inference would be fallacious.

It is the *de re* reading that matters, then. But in a *de re* reading, (5) and (6) are in the same boat:

    (5_r)   Brutus's killing of Caesar—*that* particular event—is such that there is a possible world *w* in which *it* is survived by Caesar.

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(6$_r$) Brutus's stabbing of Caesar—*that* particular event—is such that there is a possible world *w* in which *it* is survived by Caesar.

(You can reformulate these in terms of counterparts, if you prefer. In that case you would say that there is a possible world *w* in which the counterpart of the given event is survived by Caesar.) If the stabbing is *not* the killing, then fine, we are talking about two different events, and perhaps we can say that (5$_r$) is false while (6$_r$) is true. But this opposition is prior to our modal speculations—it cannot be inferred from them and calls for independent grounds. (You can't distinguish two entities by looking at *their* modal properties unless you already know what *they* are, at least unless you already know whether they are distinct.) On the other hand, if the stabbing *is* the killing, then *that particular event* is the same in both cases, so (5$_r$) and (6$_r$) either fall or stand together, depending on whether you take *being followed by Caesar's death* to be an essential property of the event in question. In short, on a *de re* reading the argument is valid, but it is either unsound or question begging, as Neale (1990) would put it: you can have reasons to accept (6$_r$) while rejecting (5$_r$) if and only if you already have reasons to distinguish between Brutus's stabbing of Caesar and his killing of Caesar in the first place. Since the *de re* reading is the only one that matters (and since on a *de dicto* reading the argument is invalid anyway), this means that the argument fails to establish the distinction.

The same diagnosis, by the way, applies to a whole family of non-identity arguments, even arguments that have nothing to do with events. Take Tibbles and Sitting-Tibbles, the material body arranged in the shape of Tibbles now that she is sitting on the mat. Or take Tibbles and the lump of feline tissue of which she is presently constituted. Or take Tibbles and the mereological sum of her tail and the rest of her body. In each of these cases, some philosophers would distinguish between the first and the second member of the pair precisely on account of their different temporal or modal properties. Tibbles can get up, but Sitting-Tibbles cannot. Tibbles could be made of different tissue, but the lump of feline tissue that constitutes her could not. Tibbles could lose her tail in an accident but the sum Tail + Rest could not. In each of these cases, however, the argument is either invalid (if read *de dicto*) or question-begging (if read *de re*). Of course the terms 'Tibbles' and 'Sitting-Tibbles' have different senses; but it does not follow that they have different referents. And if their referent is the same, if they name the same thing now that Tibbles is sitting on the mat, then either *that thing* can get up or *it* cannot. Of course the terms 'Tibbles' and 'that lump of feline tissue' have different senses. But if they have the same referent,

if Tibbles *is* that lump of feline tissue, then Tibbles and the lump have exactly the same properties, here and in every possible world. Ditto for the terms 'Tibbles' and 'the sum of Tibble's tail and the rest of her body'. (Here I refer to Varzi 2000 for more details; compare also Della Rocca 1996.) To be sure, there is a difference between these cases and the case of events. Perhaps Brutus's stabbing of Caesar was his killing of Caesar, but there are lots of other stabbings that are not killings. On the other hand, if this cat in front of me is the same as the lump of feline tissue that constitutes it, then that cat next to you is also the same as the lump of feline tissue that constitutes it. Every cat must be the same as the lump of feline tissue that constitutes it, or else no cat is. Likewise, either every cat is identical with the mereological sum of its tail and the rest of its body, or else no cat is. I take these to be important metaphysical tenets. But having said this, the trouble with the argument is the same in all cases.

Let me stress, rather, that the trouble affects the argument, not the distinction itself: whether the stabbing and the killing are the same remains an open question. Moreover, my analysis is not quite neutral with respect to the issue of contingent identity. Davidson (1969: 272) said that the stabbing, though in fact identical with the killing, was not necessarily so. Kripke (1972) would say that the stabbing, *if in fact* identical with the killing, was necessarily so. I side with Kripke here, as most people today would. If Davidson were right, however, if it were possible for two events to be identical as a matter of contingent fact, then I concede that the objection would not quite apply. In that case we could speculate on the modal properties of the killing and the stabbing, and perhaps we could discover that these properties are distinct without begging the question of whether the killing and the stabbing are in fact distinct. However in that case it would remain to be shown how we can use Leibniz's law to go from the observation that there are worlds in which the killing and the stabbing have different properties to the observation that the actual killing and the actual stabbing have different properties—that is, different modal properties. And unless we can do that the argument, though formally non-vicious, would still be pretty useless.

6. Temporary Properties

Some might think that there is no need to appeal to modal properties in order for the non-identity argument to be sound. Isn't it enough to observe that while (6) sounds right (except for a determinist), a statement such as (5) is utterly *awkward*? How could a victim survive his or her own *killing*? How could (5) and (6) be materially equivalent?

I agree that (5) sounds awkward. Even on a *de re* reading it does sound quite implausible to say that the killing of Caesar could have been survived by Caesar. But what follows from this? It follows that such a statement would not be a good way to express the proposition that the event in question need not be followed by Caesar's death—the proposition that *being followed by Caesar's death* is not an essential property of our event. If we think that this proposition is true, then we should rather express it using a different sentence. In particular, if we think the event in question is nothing but Brutus's stabbing of Caesar, we would express our proposition by asserting (6), for that sentence is not at all awkward. If, by contrast, we think the proposition is false—if we think that *being followed by Caesar's death* is indeed an essential property of our event—then we might want to express this thought by asserting the negation of (5), which is perfectly plausible:

  (7)   Brutus's killing of Caesar could not have been survived by Caesar.

Depending on what we think, we decide what to say. But our thoughts cannot be influenced by the awkwardness of those sentences.

Here is a different way of making this point. Consider a purely temporal version of the argument examined above (as in Thomson 1971). Brutus stabs Caesar at time *t*, but Caesar only dies at a later time, *t'*. (Let us not worry now about the exact coordinates of these two times.) How can the stabbing be the same as the killing if the times are different? How can a killing occur *before* the death of the victim? The answer is that if you think the stabbing *is* the killing, then only one event occurred at *t*, although you cannot *call it* a killing until you have a death, at *t'*. We have two event names, 'Brutus's stabbing of Caesar' and 'Brutus's killing of Caesar', and these two names clearly have different senses. At *t*, when Brutus takes his stab at Caesar, the first name can be used to refer to what happened: Brutus's stabbing of Caesar has indeed taken place. The other event name cannot be used to refer to that event at *t*, for obviously we cannot say that we have a killing until we have a death, and that only takes place at *t'*. So at *t* only one event name names an event. But when Caesar's death does take place, at *t'*, we *can* refer to the stabbing by the name 'Brutus's killing of Caesar'. For then, at *t'*, our event does fit this description. At *t* one of the names refers, the other does not; at *t'* they both refer, and they may well refer to the same event: different senses, same reference.

Bennett (1973) and Anscombe (1979) actually pointed out that this sort of awkwardness may arise all the time: a person cannot be called a killer before the death of the victim; and a man cannot truly be referred to as the father of the

president before one of his children is elected president. When George W. Bush was elected, no new individual was brought to life. Rather, George W. Bush *became* a president—he became the forty-third US president, and his father became the father of the forty-third US president. Bush's father might not have been alive at the time of the election, or he might no longer be alive now. But that does not prevent us from referring to him as the father of the forty-third US president, now and in the future. In short, *being a US president's father* is a property that this man only came to satisfy in 2000, when his son was elected (just as *being a US president* is a property that he came to satisfy in 1988, when he himself was elected.) It is a "temporary property", in the terminology of Thomson 1998. In a similar fashion, then, one can argue that *being a killing* is a temporary property that an event can come to satisfy at a later time in history, after its complete occurrence. The stabbing of Caesar became a killing when Caesar died. And *it* became the killing of Caesar because it caused Caesar's death. I think this is what Davidson has in mind when he says that

> we cannot speak of an action as [an] action that has [a certain consequence] until the time of the consequence arrives. But the arrival of the consequence does not change the cause. It merely changes what we can, in the present tense, say of it. (1985a: 236–237)

Of course, at this point there is still room for disagreement. For instance, you might insist that every killing must *include* the death of the victim as a part. (This was Thomson's point.) If you insist on that, then you cannot accept that the stabbing and the killing are one and the same; rather, you would say that the stabbing is a proper part of the killing—that the killing is the (temporally scattered) mereological sum of the stabbing *and* the death. But this different attitude need not involve a different metaphysics. On the contrary, you could fully agree with Davidson on what happened: one event at *t* (a stabbing) and one event at *t'* (a death). Only, for Davidson 'Brutus's killing of Caesar' would be another name for the first event; for you it would be a name for the mereological sum of the stabbing and the death. (Compare: there is one fountain pen on the table, with a nice cap. I use 'the pen' to refer exclusively to the writing instrument, without the cap. You use 'the pen' to refer to the writing instrument *and* the cap. A minor disagreement; a difference in our idiolects—but we can easily resolve it without revising our ontologies.)

What if we were referring to our events by means of proper names? I don't think that that would make a difference for this analysis. Precisely because the proper naming of events seems to be parasitic on the definite descriptions that we use to pick them out (to fix the reference, if not to give the meaning), it is

unlikely that you attach a proper name to an event without first specifying the event. You are likely to say 'Let *a* be the stabbing that . . .' or 'Let *b* be the killing that . . .'. If you think the stabbing and the killing are the same, then you will eventually use '*a*' and '*b*' as coreferential. If you do not think that they are the same, you will never use these names coreferentially. But you can hardly expect us to understand your words without a word of clarification.

7. Partial Descriptions vs. Complete Descriptions

So much for the argument that the stabbing and the killing are different events because they *have* (or could have) different properties. Let me now briefly consider the other half of the story: the argument that they must be distinct because they *involve* different properties (they *are* different property exemplifications).

Here again the main insight comes from Bennett (1988, 1997). Let us agree that events are indeed property instances, or property exemplifications, as Kim used to say, or tropes, as some prefer to put it. (These notions do not quite coincide, but I do not think the differences will affect what I want to say.) For example, Brutus's stabbing of Caesar is the exemplification *of* the property referred to by the noun 'stabbing' *by* the agent and patient referred to by the names 'Brutus' and 'Caesar' *at* a certain time, *t*. On the other hand, Brutus's killing of Caesar is the exemplification of the property referred to by the noun 'killing' by the agent and patient referred to by the names 'Brutus' and 'Caesar' at a certain time, *t'*. If this is what events are—tropes—then it is easy to provide identity criteria: *x* and *y* are the same event if and only if they are exemplifications of the same property by the same objects at the same time. In our case, we may suppose for simplicity that Caesar dies instantaneously, so that *t* and *t'* are unproblematically the same time. Since the agents and the patients are also the same, this suggests that the only difference (if any) between Brutus's stabbing and Brutus's killing of Caesar will lie in the properties referred to by the nouns 'killing' and 'stabbing'. And since these nouns name different properties, the suggestion would imply that the events are indeed distinct.

But this suggestion is misleading. When I speak of Brutus's stabbing of Caesar, I'm using 'stabbing' as a name to pick out the property, *P*, which this event is an exemplification of. But I am not implying that this property *P* is the property of stabbing. It *includes* the property of stabbing, but it is much more complex than that. It is a property that, if I needed to be more precise, I could describe as *stabbing with a sharp knife, very violently, and in such a way as . . .*, etc. I don't think I could come up with a name that tells the whole truth

about *P*, even if I wanted to do so. This is where vagueness lurks back. But it is the vaguely understood property *P* and not the property *stabbing* that the event I am talking about is an exemplification of. As Bennett would put it, the metaphysical thesis that Brutus's stabbing of Caesar is an exemplification of property *P* has not the faintest tendency to imply the semantic thesis that any name of that event must contain a predicate that fully connotes *P* (1988: 93). But then, the same goes for the event I have been calling 'Brutus's killing of Caesar'. Surely the property exemplified by this event, call it *Q*, included the property of killing, or at least we can say so now that we know for sure that Caesar did not survive the experience of it. But *Q* is much more complex than that. If I wanted to be more precise, I would describe it as *killing with the help of a sharp knife, and in such a way as . . .*, etc. When fully spelled out, this property may well turn out to be the same property as *P*. At least *I* might have the same property in mind, so I could come out with a description (possibly a vague one) that qualifies as a description of *P* as well. Who else could say whether *Q* is indeed the same as *P*? All one can say on the basis of linguistic competence is that the two event names 'Brutus's stabbing of Caesar' and 'Brutus's killing of Caesar' have different senses because they connote the relevant property in different ways. But they may well have the same reference—if they have a reference at all. And there is no way you can rule that out just by looking at the name because the name is not informative enough.

Note that the same would apply if we took material objects to be tropes too. I can refer to Professor Dottori by the description 'the gentleman over there'. But it would be wrong to infer from this that Riccardo Dottori is nothing but an exemplification of the generic property of *being over there*. The property which *he*—Riccardo Dottori—is an exemplification of is infinitely more complex than that. I don't need to tell the whole story because you already understand me if I just say 'over there'. If you didn't understand me, however, I would have to give you a more complete description of that property, which includes some properties that we would normally attribute to Riccardo Dottori (at this time). And I would not thereby bring a new person into existence.

All this becomes clear especially if we consider the case of definite descriptions that do not have a reference, such as 'the golden mountain' or, to go back to our subject matter, 'the nap that I did not manage to take yesterday'. There are philosophers who would say that such descriptions stand for *incomplete entities*—entities that are incomplete not only because they do not exist or occur, but because they are not defined with respect to so many other properties. (Is the golden mountain tall? How long is the nap that I did not take yes-

terday?) Most people, however, find the relevant notion of ontological incompleteness unintelligible, and I share this attitude. 'The golden mountain' or 'the nap that I did not manage to take yesterday' are not complete descriptions of incomplete entities. They are incomplete descriptions. They are incomplete just as every description that we normally use is incomplete. The trouble is that normally, when we are talking about objects that actually exist or events that actually took place, we *can* be more accurate, if needed, whereas in these cases there is no way of improving our descriptions. These descriptions, though incomplete, are complete enough to imply that nothing can fit them.

8. To Pick Out the Right Entities

There is still one problem one might want to raise, if we accept a metaphysics of events as tropes. Isn't the name 'Brutus's stabbing of Caesar' *ambiguous* between a partial describer of the event I had in mind since the beginning (the one which was a *stabbing with a sharp knife, very violently, and in such a way as . . .* , etc.) and a complete describer of a different trope, namely the exemplification of the property *stabbing* in and of itself? Indeed, isn't there a countless multitude of property exemplifications that are ambiguously, and more or less precisely, referred to by this same event name?

I think this question is legitimate. However, I don't think much new follows from it. Surely, you cannot tell which of these many possible entities I intend to designate by the description 'Brutus's stabbing of Caesar' unless you know I intend to be talking about an event. I think the designator does indeed convey that intention. But if it didn't, the only way to avoid the ambiguity would be for me to make it explicit by saying '*the event* of Brutus's stabbing of Caesar', or something like that. Again, this is not something peculiar of events. If I say 'the *x* over there', I could in principle be referring to many other tropes besides Riccardo Dottori: his body (if you are a dualist); the spatial region occupied by his body; the sum total of his present intradermal events. As it stands, the expression 'the *x* over there' is ambiguous between these and many other possible designations, as Quine (1960) made clear. But what follows from this? Nothing more than we already know. We very seldom (if ever) use the complete-describer language. We refer to objects and events by means of descriptions that we take to be sufficiently accurate to pick out our intended referents. Context and linguistic conventions usually cooperate, making it possible for us to speak very loosely. In the case of objects this seems to work well. In the case of events, unfortunately, the picture is worse and a lot seems to depend on local

context and unprincipled intuitions. If necessary we must be more explicit and say more, and that makes life more difficult. But of course this is not a way of multiplying entities. It is, more modestly, an attempt to pick out the ones we want.[1]

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[1] Parts of Section 4 of this paper draw from Smith and Varzi (2000) and Sections 5-7 draw partly from material originally presented in Pianesi and Varzi (2000).

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