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ESSENTIAL CONCEPTIONS OF EVENTS

Abstract. The paper distinguishes various conceptions of events with respect to the properties which are considered to be essential with respect to them. Is being located at a place p , or at a time t , or having a content g a property which is such that every event either necessarily has it or necessarily has it not (for all places p , times t and contents g)? Different combinations of answers to these three questions (addressing place, time and content) define different conceptions of events. In turn, different principles of event-individuation – the main subject of recent ontological discussions of events – are seen to answer to the essentialistically distinguished event-conceptions. The paper closes by providing two specifications of events that correspond, respectively, to the maximal and the minimal position on event-essence.

In this paper I will compare conceptions of events according to which properties are considered to be essential *with respect to all events*. This will elucidate some aspects of the controversy about events in recent years. Different views on what is essential to events naturally define different (essential) conceptions of them. More specifically, a minimalistic position on the essence of events defines an event-conception on the basis of which events *could* even be taken to be more or less like ordinary individuals; positions on event-essence that depart from the minimalistic one, on the other hand, rather point us towards a more or less far-reaching assimilation of events to states of affairs.

First of all, the notion of an *essential property with respect to something* needs to be defined:

F is a property which is essential *with respect to* X $\hat{=}$ necessarily X is F , or necessarily X is not F .

Compare this definition with:

F is an essential property of X \equiv necessarily X is F .

Obviously being an essential property of X logically implies being a property which is essential with respect to X .

I will now proceed by considering consecutively several proposals of properties that might be held to be essential with respect to events.

1 Is *being actual* (or *real*) a property which is essential with respect to events?

Or, semi-formally speaking:

(1) $\text{all}x(\text{if } EV(x), \text{ then } NR(x) \text{ or } N\text{not}R(x))?$

The answer is "No." On the contrary (*contrary*, given that there are any events at all): $\text{all}x(\text{if } EV(x), \text{ then } P\text{not } R(x) \text{ and } PR(x))$ – for every event it is both possible that it is real, and possible that it is not real: reality is a property which is *contingent* with respect to all events. Everybody seems to agree, in particular if we add that to be actual or real for events is the same as *to happen*, and if we conceive of necessity and possibility in an appropriate sense, which renders necessity strong, and possibility correspondingly weak. It seems utterly uncontroversial that every event that happens (hence: can happen) might, in principle, not have happened, and that every events that does not happen (hence: can possibly not happen) might, in principle, have happened. But note: *actualism* with respect to events – which is the position that it is impossible that there be an event that does not happen (one is indeed tempted to think of this as a conceptual truth) – implies (1):

P1 (*Thesis of Actualism*): $\text{Nall}x(\text{if } EV(x), \text{ then } R(x)).$

P2 $\text{Nall}x(\text{if } EV(x), \text{ then } NEV(x)).$

Hence (by an uncontroversial modal inference): $\text{Nall}x(\text{if } EV(x), \text{ then } NR(x)).$ Hence *a fortiori*: $\text{Nall}x(\text{if } EV(x), \text{ then } NR(x) \text{ or } N\text{not}R(x)).$

Therefore, since (1) is not plausible, neither is actualism with respect to events. This is so, because the second premise, P2, is not to be doubted, in view of the fact that being an event is a categorial ontological property. P2 trivially implies that *being an event* is a property which is essential with respect to events, and this, too, is beyond reasonable doubt. But there is not much else concerning the essential constitution of events which is as unproblematic as that.

2 Is occupying the spatial location r a property which is essential with respect to events (for all spatial locations r)?

(2) $\text{all}r[\text{if } \text{SL}(r), \text{ then } \text{all}x(\text{if } \text{EV}(x), \text{ then } \text{NO}(x,r) \text{ or } \text{NnotO}(x,r))]$?

No: this year's Baltic Workshop is certainly an event, but it is both possible and not necessary that it occupies this particular spatial location. After all, this year's Baltic Workshop might have taken place somewhere else.

However, in contrast to what holds of actuality, there are also events which are such that occupying this particular place in Poland is an essential property of (and hence with respect to) them: the event which we are witnessing and participating in during these few days is an example of them. That event could not have taken place at any other location, since its location is part of its intrinsic constitution. The strange thing is: the last-mentioned event may easily appear to be no other event than *this year's Baltic Workshop*.

3 Is occupying the temporal location t a property which is essential with respect to events (for all temporal locations t)?

(3) $\text{all}t[\text{if } \text{TL}(t), \text{ then } \text{all}x(\text{if } \text{EV}(x), \text{ then } \text{NO}(x,t) \text{ or } \text{NnotO}(x,t))]$?

The answer is "No" again: this year's Baltic Workshops occupies the temporal location it does occupy; but surely it might have started earlier or ended later. We even can imagine, with some effort, that this year's Baltic Workshop goes on forever.

But again there also seem to be events which are such that occupying that particular location in time which this year's Baltic Workshop occupies is an essential property of them. Again the strange thing is: one of these events may easily appear to be no other event than this year's Baltic Workshop.

4 Is having the aspect of content g a property which is essential with respect to events (for all aspects of content g)?

(4) $\text{all}g[\text{if } \text{AC}(g), \text{ then } \text{all}x(\text{if } \text{EV}(x), \text{ then } \text{NH}(x,g) \text{ or } \text{NnotH}(x,g))]$?

Once more "No." It is certainly an aspect of content of this year's Baltic Workshop that Uwe Meixner is presenting a paper on events. But this year's Baltic Workshop does not necessarily have that aspect of content; after all, the Workshop could have taken place without me; it would have

taken place without me if I had failed to show up. However, there also appears to be an event which necessarily has the aspect of content that Uwe Meixner is presenting a paper on events. You can guess by now which event *that* event appears to be identical to.

What are the conclusions that are suggested by the described modal intuitions concerning events? *One*: there is a conception of events – call it CE1 – which is such that, for some spatial location r , temporal location t and aspect of content g , neither occupying spatial location r , nor occupying temporal location t , nor having aspect of content g is a property which is essential with respect to events. *Two*: there is an opposed conception of events – call it CE2 – which is such that, for all spatial locations r , temporal locations t and aspects of content g , having spatial location r , having temporal location t , and having aspect of content g are properties which are essential with respect to events. *Three*: both conceptions agree in not counting actuality or reality as a property which is essential with respect to events. *Four*: it is unclear which of the two conceptions is more appropriate for this year's Baltic Workshop.

Note that the above-mentioned propositions (2), (3) and (4) which are involved in distinguishing CE1 and CE2¹ are different from those involved in distinguishing *coarsegrained* and *finegrained* conceptions of events.² The notion of identity is not involved in them at all. Nevertheless, modal considerations have consequences for considerations of identity: if event E and event E' occupy (that is, fill precisely) the spatial location r and the temporal location t , but do not necessarily occupy those locations in space and time, then we cannot, without further considerations, conclude that E is identical with E' simply from the fact that E' is an event that occupies the very same spatial location and the very same temporal one that E does occupy. For let it be *possible* that E and E' occupy not the same spatial or not the same temporal location; this possibility is already sufficient for the non-identity of E and E' . If we want to generally conclude the identity of events from their spatio-temporal *de facto* coincidence, then this is justifiable only if their *de facto* coincidence generally implies their *necessary* coincidence, which general implication seems plausible only if events necessarily occupy the spatio-temporal locations they do occupy – and that, in turn, is plausible only if, for any given location in time

¹CE1 is defined by denying (2), (3) and (4); CE2 is defined by affirming (2), (3) and (4). The various consistent and complete choices among these propositions and their negations yield, beside CE1 and CE2, six additional, intermediate essential conceptions of events, for example CE3 which will be considered below.

²Much of the ontological controversy about events is concerned with the question of the "coarse" or "fine" individuation of events. Cf. (Stoecker 1992)

or in space, occupying that location is a property which is essential with respect to events.

But even if we decide positively on the points just mentioned by accepting propositions (2) and (3) (let's do this for the sake of the argument), spatio-temporal coincidence is still a somewhat problematic foundation for event-identity. John's saying "hello" on the phone – let this be event E – appears to be identical with John's saying *loudly* "hello" on the phone – let this be event E'. On what grounds do we conclude that E and E' are identical? Presumably it is spatio-temporal coincidence; for E and E' certainly coincide spatially as well as temporally, and if we hold that occupying any given location in time or in space is a property which is essential with respect to events, then they even coincide necessarily in time and space. But does this really make E and E' identical? It seems that John's saying "hello" on the phone could very well have been not loud, while John's saying "hello" *loudly* on the phone could not have been not loud. Hence E and E' seem to be different events, even if they coincide necessarily in space and time.

But this argument is, in fact, fallacious. In comparing E and E' we have to decide on a *common* event-conception for them: both must be events in the same sense; else we would be comparing apples with pears. There can be no comparing of E and E' if there is no common basis of comparison for them. Given our three propositions (2), (3) and (4) and their negations and our previous choices with respect to (2) and (3) (we have accepted them for the sake of the argument), the only choice that is still open to us in this matter (in the given situation) is whether we should hold that having an arbitrary aspect of content *g* is a property which is essential with respect to events, or whether we should deny this, that is, we have to choose precisely between conception CE2 and conception CE3 (as I decide to call it) *for both* E and E'. Suppose we decide to apply CE3 to both events, to some degree motivated by the intuition that *saying loudly "hello"* is an aspect of content of E that E does not necessarily have; then, since CE3 is also applied to E', it is unobjectionable also to hold that *saying loudly "hello"* is an aspect of content of E' that E' does not necessarily have, notwithstanding the fact that that aspect of content is mentioned in the description of E'.³ Suppose now we decide on the contrary to apply CE2 to both events, to some degree motivated by the intuition that *saying loudly "hello"* is an aspect of content of E' that E' necessarily has; then, since CE2 is also applied to E, it is most fitting (indeed inevitable, since saying loudly "hello" is *de facto* an aspect

³Note that one also cannot conclude that John's beloved brother is necessarily beloved from the fact that "beloved" occurs in his description.

of content of E) also to hold that *saying loudly "hello"* is an aspect of content of E that E necessarily has, notwithstanding the fact that that aspect of content is not mentioned in the description of E. Thus we see that there is no obstacle to considering John's saying "hello" on the phone and John's saying "hello" loudly on the phone as identical events (as Davidson holds); that there seems to be a serious obstacle to this is the consequence of fallaciously applying different event-conceptions to E and to E', of letting E be an event in a *different sense* than E'.

Yet the above considerations also show quite clearly that the aspects of content of events matter for their identity or non-identity. John's saying "hello" on the phone and John's saying "hello" loudly on the phone are not identical already because they coincide spatio-temporally, or rather necessarily spatio-temporally, but *at least* (there may be required even more than this: see IE below) also because they have the same aspects of content in the same modal manner: necessity for necessity, contingency for contingency.⁴ Spatio-temporal coincidence by itself, even if it is necessary coincidence, is surely not sufficient for event-identity (contrary to what many people believe).

Consider a Frisbee. While it flies, it rotates, and while it rotates, it flies; its flying lasts precisely as long as its rotating; indeed, its flying and its rotating occupy the very same interval of time. Moreover, the Frisbee's flight and the Frisbee's rotation occupy the very same section of space: the parts of space the Frisbee covers while flying comprise precisely the parts of space it covers while rotating. Thus the Frisbee's flight and the Frisbee's rotation are spatio-temporally coincident. But even if they are *necessarily* spatio-temporally coincident, they still seem to be different events (although very closely connected to each other) - in marked contrast to our previously considered pair of events involving John. Why? If we proceed on the basis of conception CE3, then we can say that the rotation of the Frisbee contingently has the aspect of content *continuously flying Frisbee*, but necessarily the aspect of content *continuously rotating Frisbee*; and that the flight of the Frisbee contingently has the aspect of content *continuously rotating Frisbee*, but necessarily the aspect of content *continuously flying Frisbee*. Thus, while the rotation of the Frisbee and the flight of the Frisbee do indeed have the same aspects of content, they do not have them *in the same modal manner* - necessity for necessity, contingency for contingency - and this makes them different.

We have to argue quite differently for the non-identity of the Frisbee's flight and the Frisbee's rotation if we proceed on the basis of CE2; there

⁴The prima facie impression was that they do have the same aspects of content, but *not* in the same modal manner: *saying "hello" loudly* seemed initially to be an aspect of content that E has contingently, but E' necessarily.

we have to say that the rotation of the Frisbee, while having the aspect of content *continuously rotating Frisbee*, does not have the aspect of content *continuously flying Frisbee*, and that the flight of the Frisbee, while having the aspect of content *continuously flying Frisbee*, does not have the aspect of content *continuously rotating Frisbee*. Thus, while according to CE3 we can hold that the flight of the Frisbee and the rotation of the Frisbee are different, *although* they have the *same* aspects of content and necessarily the same spatial and temporal location, we can, according to CE2, only hold that the two events are different if we say that they have different aspects of content. There seems to be no other way to uphold their non-identity.

Whether we proceed on the basis of CE3 or on the basis of CE2 or on the basis of any of the other six event-conceptions which are distinguishable (as described) on the basis of propositions (2), (3) and (4), in any case the following principle of identity for events appears to be generally adequate:

IE If E and E' are events that necessarily have the same spatial and the same temporal location and necessarily the same aspects of content, then E and E' are identical events.

Note that " $\text{all}g[\text{if } AC(g), \text{ then } N(H(E,g) \text{ iff } H(E',g))]$ " logically implies " $\text{all}g[\text{if } AC(g), \text{ then } (H(E,g) \text{ iff } H(E',g))]$ and $\text{all}g[\text{if } AC(g), \text{ then } (NH(E,g) \text{ iff } NH(E',g))]$," but not vice versa. Having necessarily the same aspects of content is logically stronger than having the same aspects of content in the same modal manner: Let both E and E' contingently have the aspect of content g (let them both have g, but neither one of them have g necessarily), and let it be possible that E' has g without E having g; this excludes that E and E' have necessarily the same aspects of content; but it does not exclude that they have the same aspects of content in the same modal manner.

Given CE2, IE is tantamount to

IE_{CB2} If E and E' are events that have the same spatial and the same temporal location and the same aspects of content, then E and E' are identical events.

For every event-conception CEN (N=1, ..., 8) distinguishable on the basis of propositions (2), (3) and (4) there is a specific variant of IE, IE_{CBN}, which is equivalent to IE if CEN is assumed. Note that IE_{CB1} is IE itself. To CE3 (which accepts (2) and (3), but denies (4)) there corresponds

IE_{CB3} If E and E' are events that have the same spatial and the same temporal location and necessarily the same aspects of content, then E and E' are identical events.

The question is: Which essential conception of events should we accept? Now, it seems to me that there is no clear-cut answer to this question. Intuitions can be found that speak for every single one of the eight event-conceptions considered. But we tend to favor the event-conceptions which represent extreme positions with respect to the essence of events more than those which represent intermediate positions in this matter. Thus we tend to prefer the extreme event-conceptions CE1 and CE2 to the remaining six intermediate event-conceptions, and the main issue tends to be between CE1 and CE2.

Conception CE2 lends itself readily to conceptualization. Given CE2, it is quite easy to provide an ontological conceptualization of events which corresponds to that conception:

OCE2 *Every event is a function which assigns to every moment in a certain non-empty set of moments a certain non-contradictory momentary state of affairs, and not to every moment in that set a tautological state of affairs.*⁵

(OCE2 merely states a necessary condition for eventhood; one may want to add further specifications in order to obtain a *definiens* for the predicate "x is an event.")

Obviously, according to OCE2, a temporal location *t* either is identical with the domain of an arbitrary event *E* – and then *E* necessarily occupies that temporal location; or it is not identical with the domain of *E*, and then *E* necessarily does not occupy (that is, does not fill precisely) the temporal location *t*. Hence occupying the temporal location *t* is a property which is essential with respect to events (for every temporal location *t*). This must be so because, according to the given conceptualization of events, a certain temporal location is an *intrinsic constituent* of each event, to which the event is necessarily bound: it necessarily occupies that temporal location, and cannot occupy any other. Likewise, according to OCE2, all aspects of content of each event – the momentary states of affairs which figure as functional values and follow each other in a certain order, and everything which is intrinsically bound up with these – are intrinsic constituents of the event: it necessarily has these aspects of content, and it cannot have any other. Finally, although spatial locations are not mentioned in OCE2, the spatial location of an event can certainly

⁵ Cf. my (Meixner 1994). "Momentary states of affairs" is here taken to designate such states of affairs which are *momentary without intrinsic temporal specification*, as is for example the state of affairs that *x*₀ is at location *p*₀ (in contrast to the state of affairs that *x*₀ is at location *p*₀ at moment *t*₀, which is momentary with intrinsic temporal specification). The clauses concerning the non-contradictoriness of all, and non-tautologicalness of some, of the assigned states of affairs are meant to guarantee the contingency of events with respect to actuality.

be regarded as being intrinsically bound up with the aspects of content of an event, and hence that spatial location is just as intrinsic to an event as its aspects of content are according to OCE2 (indeed, the spatial location may be regarded as being itself an aspect of content of the event), and therefore an event necessarily occupies that spatial location, and cannot occupy any other.

CE1 has the disadvantage that it is much less clear than in the case of CE2 which is the ontological conceptualization of events that is appropriate for it. OCE2 takes events to be very much like states of affairs (states of affairs, which are temporally fully determined); CE1, on the other hand, is compatible with an ontology of events that takes them to be entities similar to you and me: *ordinary individuals*. Consider the sum of the moments I live through: this is my temporal location (which I occupy *simpliciter*), and the sum of the spaces I fill during my lifetime: this is my spatial location (which I occupy *simpliciter*); and consider the set of all (time-specified) properties *F* such that I am (tenselessly) *F*: this is the set of my aspects of content (which I have *simpliciter*). Clearly, I might not have occupied that particular temporal and that particular spatial location, and I might not have had some of my aspects of content (for example, attending the Baltic Workshop in 1997). There is some temporal location *t*, some spatial location *r*, and some aspect of content (time-specified property) *g* such neither occupying *t* nor occupying *r* nor having *g* is an essential property with respect to me. Thus, we see that, on the basis of CE1, events can be considered to be like ordinary individuals.

But, in closing, let me also provide an ontological conceptualization of events corresponding to CE1 where events are nevertheless fairly analogous to states of affairs. As far I know, the conceptualization was first advanced by David Lewis (see Lewis 1986, pp. 243 ff):

OCE1 *All events are non-empty sets of world-regions, at most one region from each world, and from some world no region.*

(OCE1 merely states a necessary condition for eventhood; one may want to add further specifications in order to obtain a *definiens* for the predicate “*x* is an event.”)

According to OCE1, an event may have many possible *specific ways of happening* (but in every world at most one such way: this distinguishes events from *event-types*, which may *recur*), which are represented by the world-regions that belong to it.⁶ Obviously, the many world-regions

⁶The contingency of OCE1-events with respect to actuality is guaranteed by the non-emptiness of the sets (that is, events occur in some world: *they can happen*) and the stipulation that some world is *not* represented in them by one of its world-regions (that is, events do not occur in some world: *they can also not happen*).

belonging to some OCE1-event E or other will differ as to their aspects of content and as to their temporal and spatial locations; and consequently there will be some temporal location t such that occupying t is not a property which is essential with respect to E (E contains both a world-region that occupies t , and a world-region that does not); there will be some aspect of content g such that having g is not a property which is essential with respect to E (E contains both a world-region that has g , and a world-region that does not), etc. Therefore: for some temporal location t , spatial location r , aspect of content g , neither occupying t , nor occupying r , nor having g is an essential property with respect to OCE1-events: they fit conception CE1.

Note, finally, that OCE1 apparently presupposes events in the sense of OCE2. For world-regions, which are the elements of events in the sense of OCE1, could be taken (given an appropriate conception of worlds and their parts – a conception certainly more abstract than Lewis') to be events in the sense of OCE2,⁷ and if they are taken to be events in that sense, then events in the sense of OCE1 appear to be constructions out of events in the sense of OCE2; this makes OCE2-events appear to be ontological prior to OCE1-events. But a champion of OCE1 may argue that world-regions simply are not events in *any* reasonable sense, even though world-regions do indeed correspond one-to-one to certain events: to the singleton sets of world-regions. However, this would imply that the champion of OCE1 does not recognize OCE2 even as a *possible* alternative ontological conceptualization of events, and this seems to be a position that is hardly tenable, since OCE2 undeniably has some solid intuitions on its side.

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⁷For Lewis himself, world-regions (he simply says "regions") are spatio-temporal "individuals which are parts of possible worlds." (Lewis 1986, p. 245.) Since Lewis' worlds are event-like (because they have temporal parts, which characteristic is widely associated with eventhood), Lewis' world-regions, being (spatio-temporal) parts of worlds, could very well be also regarded as events, Lewis' conception of worlds (according to which no world-region is part of two different worlds) being no obstacle to this. Lewis' himself discusses and *rejects* the idea of identifying events with world-regions (Lewis 1986, p. 246). But his world-regions are certainly not events in the sense of OCE2, and therefore thinking of world-regions as events in the sense of OCE2 is not touched by his argument, which is based on the intuition that *two* events may occur in the very same world-region.

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