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Event Semantics: A Husserlian Critique

1. Semantics and Phenomenology

The following investigation occupies an unusual domain, where phenomenological concerns intersect with formal-semantic ones. Because this is relatively uncharted territory, I will take up the core issue of the paper only after some preliminary considerations regarding the mutual relevance of these two theoretical spheres. Here, I will simply present the issue in its most basic contours.

My aim, in brief, is to use phenomenological criteria to evaluate a crucial hypothesis concerning the semantics of event sentences. By 'event sentence', I mean a sentence which appears to describe an event of any kind, e.g. "Brutus kills Caesar at midnight," or "My tooth fell out." The hypothesis in question is the widely-adopted 'Davidsonian' approach, according to which event sentences have a formal structure which diverges radically from their natural-language syntax. Specifically, the formal representation of event sentences includes a 'covert' (i.e. unexpressed) variable which stands in for an event. Thus, a sentence like "Brutus kills Caesar at midnight" is rendered as a formal sentence that, translated back into English, would read: "There is an event e that is a killing of Caesar by Brutus, and this event e was at midnight." It is this idea of covert event variables that I will subject to a phenomenological—or, more precisely, Husserlian—critique, ultimately arguing that the notion is phenomenologically implausible.

It is important, however, to first address the fact that such a critique does not fit comfortably into any contemporary research program, whether mainstream or marginal. Indeed, to propose a phenomenological critique of a formal semantic theory is to make two rather uncommon recommendations. The first is that problems in formal semantics should be of philosophical interest to phenomenologists. The second is that theories in formal semantics should be evaluated using phenomenological criteria. Depending on one's philosophical predilections, at least one of these claims is likely to raise an eyebrow. It is worth first making the case, then, that an intermingling of semantic and phenomenological concerns is, in fact, a good thing. The following introductory comments argue for the mutual relevance of these two fields, both in a general sense and with respect to event semantics specifically.

Why Phenomenology Needs Event Semantics

First: why should phenomenologists care about semantics at all, and event semantics especially?

We can begin by noting the role played by semantic analysis at the origin of phenomenology, in Husserl's studies on logic and language. It was not only present in this work, but in fact was integral to the development of key phenomenological concepts. This connection is most clearly visible in the case of the 'categorical intuition'. The idea is introduced in the *Logical Investigations* in the context of Husserl's reflections on copular predicative judgments of the form ' S is p ,' e.g. 'The ball is red.' The categorical intuition serves as the answer to the question: What kind of evidential experience can fulfill a predicative meaning-intention?

Husserl arrives at his answer through a cursory semantic analysis of the copular structure itself, with particular attention to the syncategorematic contribution of the copula. The meaning-intentions associated with the subject S and predicate p are relatively unproblematic for Husserl, insofar as these

intentions could be independently fulfilled by the perception of the subject (e.g. a ball) and the perception of its property (e.g. the color red) (Hua. XIX/2, pp. 661–70). The copula, by contrast, “can find no possible objective correlate, and so no possible fulfillment in the acts of such perception” (Hua. XIX/2, p. 667; 2000, p. 278). Instead, it plays the role of assigning the predicate to the subject, thereby forming a new intention of a judicative sort: the being-*p* of *S*, e.g. ball’s being red. This kind of ‘categorical’ intention has as its intentional object a state of affairs (Hua. XIX/2, pp. 667-70). To fulfill a judicative meaning is thus to intuit, categorially, the state of affairs intended in the copular construction (Hua. XIX/2, pp. 670-76).

I do not wish to dwell here on the nature of a categorial intuition, and Husserl’s evolving approach to the idea. The point is rather that the very concept is prompted by—or, at least, cannot be disentangled from—a semantic analysis wherein the goal is to explain the contribution of sub-sentential components to sentential meanings. This cannot take place without a formal analysis which abstracts from particular sentences to identify universal semantic structures. It must be admitted, however, that Husserl’s conception of grammatical and semantic categories seems rudimentary considering subsequent innovations in linguistic semantics. All the more reason, then, to update and expand Husserl’s ideas through an engagement with more recent, technically refined semantic investigations—including the issues in event semantics I will be addressing here.

Yet phenomenologists should not approach event semantics as if it were an arbitrary example of linguistic analysis which, along with other topics, might be brought into the phenomenological fold. An encounter with event semantics, rather, offers a vital opportunity to address a major lacuna in the phenomenology of judgment. Throughout Husserl’s analyses of logic and judgment, the copular form is presumed—following tradition—to be the paradigm of propositional structure. Yet our language is replete with sentences that do not seem to take this form, namely sentences with full-fledged verbs in them: “Brutus killed Caesar,” “My tooth fell out,” “The wind rustled the leaves,” and so on. Such sentences seem not to be about states of affairs, but rather actions, events, or happenings of some sort. While Husserl did note the existence of such grammatical forms, and admitted that it remains an open question whether they can be “transformed without alteration” into the copular form (Husserl 1939, p. 6; 1973, p. 15)—or whether, instead, they are fundamentally different type of judgment—it is not a question he ever returned to. Nor has the question been explored by other phenomenologists.

It is thus of paramount importance for a phenomenology of judgment that we develop an account for event sentences, in addition to copular ones. This is where existing work in event semantics can be of use. Let’s say that we want to articulate the nature of the evidential experiences through which event sentences are fulfilled—to find, that is, the ‘categorial intuition’ that corresponds to judgments of this kind. If we follow Husserl’s model in this enterprise, we can proceed only with a clear sense of the semantic structure of event sentences. Specifying this structure, it turns out, is not an easy thing to do. Fortunately, semanticists and semantically inclined philosophers have been working on this problem for several decades, and their work provides a crucial foothold for phenomenological exploration.

In this context, the Davidsonian approach to event semantics is of decisive phenomenological significance. As noted above, the Davidsonian approach claims that event sentences include, as logical constituents, ‘covert’ variables which stand in for events. Delineating the phenomenological nature of this semantic claim will be the task of the following section. But we can already observe how such a proposal, if correct, would guide and constrain a phenomenology for judgments of this kind.

It would, for example, prevent us from treating events analogously to Husserl's states of affairs. States of affairs are not, for Husserl, included as constituents of judicative meaning intentions; rather, they are 'synthetic' objects generated through the predicative process itself, and which correspond to the judgment as a whole (Hua. XIX/1, pp. 491–92). If the Davidsonian account is right—if event sentences contain an event variable—one would instead expect judgments of the evental variety to *already include* an intention of an event as a constituent. This would, in turn, bear on the phenomenology of events in general, since the intentional availability of events would not depend on a judicative synthesis. Instead, events would have to be constituted as intentional objects prior to the judicative act, by some other constitutive process.

It therefore matters quite a bit whether the Davidsonian account is correct. Yet what are phenomenologists to do with such a proposal? Should we just wait until semanticists sort out whether it is correct, before adopting it (or not) in a phenomenology of evental judgments? A semantic proposal must of course be evaluated by semantic standards: Does it predict the right entailments? Are there natural language sentences it cannot adequately represent? Yet such standards are not the only ones we should apply. Semantic proposals can entail phenomenological claims, and must accordingly be measured against phenomenological criteria. For the phenomenologically disinclined, this may be a tough pill to swallow. In section 1, below, I will show how Davidson's proposal does indeed raise unavoidable phenomenological questions. First, however, I'd like to address the relevance of phenomenology to semantics in broader terms.

Why Event Semantics Needs Phenomenology

Readers familiar with work in so-called 'cognitive linguistics' may feel an urge to chime in here, and point out that the dialog between semantics and phenomenology is already well underway. Since the 1970s, a growing body of literature has sought to uncover the relations between language structures (grammatical and lexical) and pre- or non-linguistic cognitive systems. This is arguably phenomenological in spirit, and has certainly been characterized as phenomenology by some of its proponents (Talmy 2003, p. 4; Langacker 2008, p. 31).¹ However, the cognitive linguistics research program does not self-evidently serve as an example of the approach I propose here, in which the phenomenological commitments of a formal semantic system are identified and evaluated. Insofar as the aim of cognitive linguistics has been to situate linguistic competence within a broader array of cognitive capacities, it has not focused on questions concerning the translation of natural language into symbolic form (for instance, whether first-order predicate logic is a suitable framework). The latter, formal enterprise has witnessed no analogous awakening of phenomenological interest.

A first step towards correcting this problem would be to acknowledge the quasi-phenomenological character of the very practice of formalization. The development of logical forms is, necessarily, informed and constrained by an examination of our own intentional states. To accurately represent, in a formal language, the meanings and structures of our natural-language sentences, we must regularly 'check in' with ourselves, to make sure that our formalizations in fact mirror what we already know

¹ See Zlatev (2010) however, for a discussion of some deficiencies in the conception of phenomenology employed in "mainstream" cognitive linguistics.

ourselves to mean. For example, in the context of developing a theory of anaphoric pronouns, I might bring to mind these two sentences pairs:

- (1) The chair was upside down. It was blue.
- (2) The chair was upside down. It was strange.

I can then ask myself what ‘it’ means to me in each case. In (1), the pronoun refers to the chair; in (2), it might do so, but that is not the favored reading. Rather, in the preferred reading the pronoun refers to a fact, perhaps, or a state of affairs. It is certainly no trivial task to characterize such abstract referents and incorporate them into a robust semantics. My point, however, is that such work is already guided by our pre-theoretical inspection of our intentional states—in this case my understanding that, with the pronoun in (2), I am not directed to a chair or any discrete object, but rather to something that somehow corresponds to the preceding proposition in its entirety.

This kind of analysis certainly qualifies as phenomenological, but only in a minimal sense. It is phenomenological because, in performing such analyses, we shift away from our mundane, ‘naïve’ concern with the things we are talking about (chairs, colors, facts, etc.) to focus on these ‘as meant’—that is, as intentional objects. We avoid a theoretical concern with the metaphysical status of our referents. Both chairs and facts must be accommodated in our semantics, regardless of whether we think they exist. In other words, a kind of ‘phenomenological attitude’ pervades the work of semantic analysis. Yet this hardly counts as ‘doing phenomenology’, since it goes no further than examining the contents of our intended meanings, which is all that is usually needed to monitor the faithfulness of our formalizations. To that end, it is not necessary to engage in more probing phenomenological analyses, regarding, for example, the intentional acts involved in constituting abstract objects of reference.

Yet properly phenomenological questions must be raised regarding core issues in the formalization of language. Take, for instance, the question of whether first-order logic provides an adequate framework for the representation of natural language. Even if first-order translations could always succeed in representing the contents of natural language sentences, and predicting their entailment relations, one would still have to ask whether such representations correspond to the cognitive reality of natural-language speakers.

Among such decisive issues in semantic research, the viability of the Davidsonian model stands out as particularly ripe for phenomenological critique. This is because it posits a semantic object which is invisible to surface syntax, but supposedly present in the logical form of the sentence; and this, in turn, invites the concern that it introduces, for semantic reasons, a covert *intentional* object—without, however, assessing this idea for phenomenological plausibility.

It is worth noting that suspicions regarding the phenomenological aspects of Davidson’s approach are not completely absent from the semantic literature—even if, when raised, they are not framed in phenomenological terms. What we find, here and there, are fleeting worries about the cognitive implications of the theory. Along these lines, Bennett protests in *Events and their Names* that Davidson’s theory, “when understood as a psychological and not merely a logical theory... treats an enormous amount of what we say as covertly asserting that there are events of various kinds—and that is a point in its disfavor” (1988, p. 173). A trace of phenomenological discomfort can be found as well in Graves (1993), who hopes to avoid the implications of the Davidsonian model, namely that “events are at the

very least a fundamental feature of human cognition, and perhaps that events are part of the fundamental ontology of the world” (p. 608). Yet these misgivings are never pursued rigorously.

The rest of this paper is, in some sense, an effort to follow up on such proto-phenomenological concerns. There are three steps to this critique. First, we must identify the phenomenological claim implicit in Davidson’s theory (section 1). Second, we need to establish a criterion, rooted in Husserlian analyses, by which to evaluate this claim phenomenologically (section 2). We can then test the claim against the criterion (section 3). This will show that we have strong reasons to be skeptical of Davidson’s theory on phenomenological grounds—and, more generally, that the marriage of phenomenology and semantics is a fruitful one.

2. The Phenomenological Content of Davidson’s Theory

To clarify the phenomenological implications of Davidson’s theory, we need to understand the core argument he presents in its favor. The argument rests on an observation about so-called modifier-dropping entailments. Note the following sentences, where (3) entails (4) and (5):

- (3) Jones buttered the toast with a knife in the bathroom at midnight.
- (4) Jones buttered the toast at midnight.
- (5) Jones buttered the toast.

Davidson suggests that these entailments, in which modifiers are successively eliminated, appear to follow as a matter of logical form—that is, that they should be derivable using purely syntactic rules (Davidson 1985, p. 107).² Unfortunately, the most obvious first-order representation of (3)-(5) does not predict these entailments. The obvious approach would be to treat “Buttered” as a predicate, and all the other sentential elements (objects, places, and times) as arguments:

- (3’) Buttered (Jones, knife, the toast, the bathroom, midnight)
- (4’) Buttered (Jones, the toast, midnight)
- (5’) Buttered (Jones, the toast)

The problem arises because of the ‘variable polyadicity’ of the predicate ‘Buttered’. In (3’) it takes five arguments (and so has an ‘adicity’ of five), whereas in the following sentences it has increasingly lower adicity. Yet there is no established mechanism in first order logic to eliminate arguments.³ Nor, it seems, can we treat (4) and (5) as successively more elliptical, for example taking (5) to mean ‘Jones buttered the toast with something, somewhere, at some time’—unless we have a reliable way to determine how many ‘standby positions’ are actually needed to accommodate a potentially infinite array of modifiers (1985, p. 107-108).⁴

Enter event quantification. We represent ‘Jones buttered the toast’ by introducing a quantified event argument: ‘ $(\exists e)(\text{Buttered}(\text{Jones}, \text{the toast}, e))$ ’ which means something like ‘There is/was an event ‘e’

² It is not self-evident that modifier-dropping entailments should be a matter of logical form. For contrary views and discussion, see Cresswell (1974) and Thomason & Stalnaker (1973).

³ Such mechanisms have been proposed, of course. See Graves (1993), and Beaver and Condoravdi (2007).

⁴ For arguments that we can, in fact, limit standby positions in a principled way, see Schwartz (1975) and Stanosz (1978).

which was a buttering, by Jones, of the toast.’ With the introduction of an event argument, we can now treat modifiers as additional predicates of this argument. That the event was done with a knife, for example, can be represented as $\text{With-a-knife}(e)$; ⁵ additional predications can be added to the sentence through conjunction. Thus (3)-(5) become (6)-(8):

(6) $(\exists e)(\text{Buttered}(\text{Jones, the toast, } e) \wedge \text{With-a-knife}(e) \wedge \text{In-the-Bathroom}(e) \wedge \text{At-midnight}(e))$

(7) $(\exists e)(\text{Buttered}(\text{Jones, the toast, } e) \wedge \text{At-midnight}(e))$

(8) $(\exists e)(\text{Buttered}(\text{Jones, the toast, } e))$

The entailments now follow naturally through the elimination of conjuncts, as represented by the simplification rule: any conjunction entails any one of its conjuncts singly.

$$\frac{A \wedge B}{\therefore A}$$

Now, if we are going to use the simplification rule to explain our intuitions about entailment relations among event sentences, we must assume that each conjunct is actually entertained by speakers of such sentences. Otherwise, there would be no sense in deploying conjunction elimination to explain why the entailments are valid for natural language speakers. For Davidson’s proposal, this means that sentences like “ $\text{With-a-knife}(e)$ ” must represent actual judgments made by natural language speakers.

Of course, such an analysis does not require that a speaker consciously hold in mind a string of sentences linked by conjunction operators, just as if she were saying “A, and also B, and also C.” This is no more required here than it is in the standard analysis of noun modifiers, from which the Davidsonian analysis is derived.⁶ For example, a first-order treatment of (9) predicts that it will entail (10), through the elimination of conjuncts:

(9) A big red ball is on the shelf.

(9’) $(\exists x)(\text{Ball}(x) \wedge \text{Big}(x) \wedge \text{Red}(x) \wedge \text{On-the-shelf}(x))$

(10) A ball is on the shelf.

(10’) $(\exists x)(\text{Ball}(x) \wedge \text{On-the-shelf}(x))$

Each modifier, along with the noun ‘ball,’ is treated as a predicate in an independent sentence. We are not expected to believe, however, that someone entertaining (9) is knowingly entertaining four distinct formulae, and knowingly conjoining them.

Yet we do need to presume—if the symbolic form is to explain the natural-language entailment—that each predication represents a distinct cognitive act of the speaker. We may not be in agreement about just what it is for a speaker to attribute a predicate to a subject; but whatever that activity involves, we must assume that the speaker is doing it in four distinct ways. She must think there is a thing which is a

⁵ Whether we represent this as suggested, or as $\text{With(a knife, } e)$, or in some other way, does not bear on the point at issue here, namely the use of event variables to explain entailment relations. Throughout the paper I will adopt the simplest possible Davidsonian forms.

⁶ Landman (2000, p. 2–15) provides a useful and thorough discussion of the parallels between the “classical semantic theory” for adjectives and the Davidsonian approach to adverbs.

ball, which is big, which is red, and which is on the shelf. Otherwise we cannot argue that formal relation between (9') and (10') explains why (9) entails (10).

The same requirement applies, *mutatis mutandis*, to the Davidsonian approach. Herein lies the phenomenological content of Davidson's theory. Since it is used to explain logical entailments, it must assume speakers of event sentences are *actually performing predicative acts* in which events are the intentional objects about which something is predicated.

The key point here is that the phenomenological claim inherent in the Davidsonian approach follows not simply from its treatment of verbs and modifiers as predicates of events, but in the use of these forms to explain entailment relations between sentences. To illustrate this, it is helpful to contrast this use of event predications with uses that are not meant to predict natural-language entailments, such as we find in later extensions of Davidson's theory. A clear example can be found in Parsons' treatment of aspectual information, using the predicates 'Cul' and 'Hold' (1991, pp. 23-27; 170-172). These are deployed to indicate whether a sentence describes an event that 'culminates' at a determinate endpoint, and one that does not, but rather simply 'holds' at a time. For example, in (11) we know that there is a culminating time at which a house got finished, while in (12) there is no culmination, but only a time during which Mary was running.

(11) Mary built a house. [Culminates]

(12) Mary is running. [Holds]

Greatly simplifying Parsons' formal proposal, we get the following for (11):

(11') $(\exists e)[\text{Build}(\text{Mary}, \text{house}, e) \wedge (\exists t)[t < \text{now} \wedge \text{Cul}(e, t)]]^7$

The right conjunct tells us that there is an event, prior to the time of utterance, at which the event culminated. Similarly, for (12) we get the following:

(12') $(\exists e)[\text{Run}(\text{Mary}, e) \wedge \text{Hold}(e, \text{now})]^8$

The function of Cul and Hold is not to explain modifier-dropping entailments, or entailments of any kind. Rather, they are introduced in order to encode aspectual information inherent to the meaning of the sentence.⁹ It is convenient to use the conjunction operator to introduce this information, but no desired explanatory force is forfeited if we adopt a different convention. Therefore, we don't need to make the *phenomenological* claim that speakers are in fact performing predications using Cul and Hold, since we don't need such predications to guarantee entailment relations. A Davidsonian account of modifier-dropping entailments, by contrast, is committed to the phenomenological claim that speakers are in fact performing event predications, since this is required to explain those entailments.

So, is the phenomenological claim plausible? Are we predicating events—and thus intending them—when we utter event sentences? If these supposed predications are cognitively real, then they should

⁷ "There is an event *e* which is a building of a house by Mary; and there is a time which is earlier than now, and which is the time when that event culminated."

⁸ "There is an event which is a run by Mary, and which is holding now."

⁹ See section 3, however, for discussion of a deficiency in Parsons' proposal that arises precisely because it fails to capture apparent entailment relations.

exhibit the phenomenological characteristics of predication in general. To answer our question, then, we first need to identify some of these characteristics.

2. Phenomenology of Predication: Predicative Intentionality and ‘Logical Sense’

A thorough phenomenological consideration of event predication would involve a great deal more analysis than I will offer here. A phenomenology of judgments of any kind must include an account of how such judgments are ‘fulfilled’ in evidentiary experiences. We would have to examine the paradigmatic experiences in and through which events are perceived and apprehended first-hand. For the purposes of this paper, however, we don’t need to carry out a phenomenological aesthetic of event perception, or even consider events as a distinct kind of intentional object. We can take it for granted that events (runs, killings, etc.) *can* be intentional objects. The question concerning Davidsonian event semantics is whether we predicate events covertly. We can proceed simply by reflecting on what is cognitively involved in predication *per se*, and ask whether this is happening beneath the surface of event sentences. To this end, it will suffice to consider the phenomenology of predication in the most general sense, as presented in Husserl’s *Experience and Judgment*.

The key concept to extract from this text is Husserl’s notion of a ‘predicative subject’; that is, an object intended *as* the subject a predication—an object which, in Husserl’s terminology, has been invested with ‘logical sense.’ This investment is an intentional achievement which Husserl characterizes by contrasting it with ‘prepredicative’ perceptual intentionality. Although Husserl’s account of prepredicative perceptual experience is not directly relevant to our concerns here, it is important to establish a basic understanding of it, to make better sense of Husserl’s contrastive description of predicative intentionality.

The centerpiece of Husserl’s discussion of prepredicative experience is his analysis of ‘explication,’ i.e. the progressive perceptual discovery of an object’s features. In explication, I have a perceptual object as the theme of my interest—a ball, let’s say. I am intentionally directed towards it, as I progressively uncover its features or ‘explicates.’ I notice the green color of the ball, its smooth surface, its soft feel, a seam around the circumference, and so on. Throughout this process, the ball remains my continuous theme, even as my focus shifts among its various explicates. By discovering these features, what was initially an indeterminate ‘horizon’ of possibilities in the ball becomes progressively more determinate.¹⁰ Once discovered, these explicates now accrue to my intention of the object, through a kind of perceptual *habitus* (Husserl 1939, p. 137); if I return to the ball at a later time, I now do so anticipating its smoothness, its softness, its seam, etc. Explication results, as Husserl puts it, in a “horizon of familiarities” (1939, p. 231; 1973, p. 197).

Howsoever much we may gain from explication in our dealings with the world, it does not yet, for Husserl, count as true knowledge acquisition, or what he calls ‘cognition’ [*Erkenntnis*]. This is the domain of predicative activity alone. The perceptual *habitus* acquired through explication serves only to condition our further perceptual or recollective experiences of the object.¹¹ Since it is effective only in the context of these experiences, it is not yet cognition, but only the “forestage” of cognition (1939, p.

¹⁰ This is what Husserl describes “as an *elucidation* and clarification, as a more precise determination of what is indeterminate in the horizon-form” (1939, p. 140; 1973, p. 124).

¹¹ It is “bound to the immediate intuition of the substrate, whether this intuition is self-giving or reproductive” (1939, p. 231; 1973, p. 197).

232; 1973, p. 198). True cognitions are permanent and enduring “possessions” which we can reawaken and communicate at will (1939, p. 231; 1973, p. 197). By actively predicating something of an object, what is otherwise merely perceptual *habitus* now achieves the status of enduring and communicable fact. This transition is described by Husserl as the investment of the intentional object in question with ‘logical sense,’ something which perceptual experience cannot do:

[A]n object can even already have been viewed from all sides in the greatest possible plenitude of intuition without, for all of this, there necessarily having to result even a single step of predicative apprehension. As long as this step has not been taken, the object, the theme of all contemplative apprehensions, is, despite the rich profusion of its modes of givenness, indeed the theme, but a theme *completely indeterminate from the point of view of logic*. (1939, pp. 277-78; 1973, p. 233)

It is, he claims, “only in the predicative judgment that an object, hitherto logically undetermined, can be invested with logical sense” (1939, p. 278; 1973, p. 234).

What does Husserl mean by “logical sense”? For an object to have “logical sense” is for it to be intended in a predicative mode: that is, to be apprehended explicitly as the subject of a predication. In a judgment ‘*S* is *p*,’ *S* is actively grasped as the ‘explicand’—that which is determined by the predicate—and *p* as its ‘explicate.’ “It is only then,” Husserl writes, “that there is realized in a productive activity... the consciousness that *S* receives a determination *by p* in the mode ‘*S* is *p*’” (1939, p. 244; 1973, p. 207). Or as he puts it elsewhere, the subject is “posited in the form of subject, and *p* expresses the determination” (1939, p. 246; 1973, p. 208). Thus, one essential feature of predicative intentionality is the isolation of the predicative subject, a predicable ‘something,’ from the predicate which determines it. This is not the case in perceptual explication, where newly discovered features are simply new amplifications of my experience of the object. They are, taken together, simply the object itself as it appears to me. Through the predicative act explicand and explicate are actively distinguished from each other, so that the determination of the former by the latter can be asserted.

With predicability comes iterability. Once we grant to an object the status of isolated predicative subject, it is now available for additional, independent predications. Throughout any number of predications, the object is intended as the ‘same,’ no matter what is asserted about it. It is the “object-pole which is held to as identical” (1939, p. 276; 1973, p. 232), the “intersection of various judgments and, correlatively... the identical reference point of the corresponding attributes” (1939, p. 279; 1973, p. 234). Here, again, we can distinguish predicative intentionality from perceptual intentionality. Perception does involve a kind of identity, insofar as a perceptual object persists as the ‘same’ throughout a perceptual experience. Perceptual sameness is a “unity of its sensuous multiplicity and its changing modes of givenness” (1939, p. 279; 1973, p. 234), a stitching together of various perceptions into a coherent object. Yet the predicative subject, by contrast, maintains its identity independently of any perceptual experience, and only through the active (“spontaneous”) identification of one iteration with another (1939, p. 279; 1973, p. 234). If I say (or read, or hear) ‘This valley is verdant. It is also sparsely populated,’ I take the subject in the first and second sentence to be the same identical thing. Only through this identification can the sentences bear (for me) a logical relation to each other.

Such an identification is also the intentional underpinning of any *formal* sentence in which repeated instances of a constant or variable are understood to have the same referent. Thus in ‘Happy(*c*) \wedge

Healthy(c)', both predicates are meant to apply to the same object labeled 'c'. Quantifying this, we get e.g. $(\exists x)(\text{Happy}(x) \wedge \text{Healthy}(x))$. Now we no longer have a reference to a specific entity (since x is a variable rather than a constant), but 'x' must nonetheless be understood to pick out the same object in both predications. Whenever we take formulas of this kind to be cognitively real, we are claiming that speakers are performing predicative acts in which an entity is intended as the identical subject of various predications.

While this phenomenological characterization may seem obvious enough, it allows us to establish a criterion by which to evaluate Davidson's theory, which posits covert predicative acts. If speakers are predicating events covertly, it must be that they have taken the cognitive step which generates a predicative subject. This evental object must have a logical sense: i.e. *it must be available for multiple predications, and maintain its identity across all predications*. As we will see in the next section, we can devise ways to test whether this criterion is in fact met by the hypothesized covert events.

First, however, it is vital that we distinguish the claim of covert predication from a weaker one, namely that event sentences simply bring events 'into view'. We can say of some types of judgment that they make possible the intention of an object *post hoc*, without claiming that this object has become a predicative subject in that judgment. For example, let us imagine that, after watching a child play on a beach, I report his behavior to his parents:

- (13) Sergio carefully arranged twelve shells around a handful of pebbles in a small ditch.
- (14) It looked like some kind of sacred totem.
- (15) He was upset when the surf came and washed it away.

(14) and (15) refer pronominally to the same totem-like entity. This entity, however, is not yet a predicative subject in (13). Rather, the description in (13) brings it into view, by describing a scene in which it is constructed. Once in intentional reach, the object can be made into a predicative subject *post hoc* in (14), and then again in (15). Until such a predication is performed, however, the entity has not been intended as a predicative subject—it has no 'logical sense.' Accordingly, we are not compelled, or even tempted, to include the object in the formal representation of (13). (The idea that sentences furnish objects for *post hoc* reference, without logically including them, is itself of phenomenological interest, and will be revisited in section 3.)

Davidson's event semantics, however, requires a much stronger claim about speaker intentionality. To explain modifier-dropping entailments, the theory must assume that speakers of action sentences have, at that moment, taken the cognitive step which generates a 'logical' (but covert) evental object. The question, then, is whether this is really the case.

3. Evaluating the Evidence for Covert Intentions

If the Davidsonian account is correct, then—as we have just established—speakers of event sentences covertly intend a predicative subject, which is then available for further predication. Now, if that is true, what should we expect? What would give us evidence that this intentional achievement has in fact taken place? The event sentences in question cannot confirm it, since their event predications, by hypothesis, are covert. Yet there is no obvious reason why the supposed intentional object must *remain* covert. That is, once a predicative subject has been intended, it should now be available for *overt* predication. The expectation, then, is that if event sentences involve the unexpressed intention of an

event, then this same identical event should be available, down the road, for logical operations which are visible in the surface syntax.

This expectation appears to inform some further applications of Davidson's theory that its proponents have suggested. For example, it is evidently at work whenever the theory treats the variable 'e' as target of pronominal reference. Davidson himself suggests this possibility in the opening passages of 'The Logical Form of Action Sentences.'

Strange goings on! Jones did it slowly, deliberately, in the bathroom, with a knife, at midnight. What he did was butter a piece of toast. We are too familiar with the language of action to notice at first an anomaly: the 'it' of 'Jones did it slowly, deliberately...' seems to refer to some entity, presumably to an action, that is then characterized in a number of ways. (1985, p. 105)

Davidson does not go on to argue that his account of modifier-dropping inferences also explains the function of the pronoun in 'Jones did it'. This is strongly implied however, and in any case others have adopted the idea (Asher 1993; Cappelen and Lepore 2002). Cappelen and Lepore, for example, go so far as to make anaphora a test for covert semantic elements. Event sentences pass this test in their view, as we supposedly see in (16). Anaphora is not licensed, however, in (17), which they cite as evidence against a proposed covert index that restricts the domain of discourse. (The symbol '*' indicates unacceptability.)

(16) Mary kissed John, and she did *it* in the bathroom

(17)*Many students failed, and *it* is a big domain.

Whether or not this is actually a useful diagnostic for covert structure, the test depends on the supposition that, if a variable *e* is introduced covertly, it can also be the overt argument of a new predicate.

A subtler example can be found in Parsons' use of the theory (1991, pp. 18–19) to explain the entailments in (18):

(18)

- A. Agatha burned the wood.
- B. In every burning, oxygen is consumed.
- C. Oxygen was consumed.

A Davidsonian approach, Parsons argues, allows us to easily account for the apparent validity of this entailment, since it treats (A) as if it (covertly) quantifies over burnings, just as (B) does overtly. To represent this formally, we need to introduce Parsons' 'neo-Davidsonian' framework, where 'Agatha' and 'wood' are identified as the 'agent' and 'patient' of the event, in separate predications. For simplicity, however, I leave 'oxygen is consumed' unanalyzed as the simple statement 'O':

A'. $(\exists e)(\text{Burning}(e) \wedge \text{Agent}(e, \text{Agatha}) \wedge \text{Patient}(e, \text{wood}))$ ¹²

¹² "There is an event *e*, such that *e* is a burning, and the agent of *e* is Agatha, and the patient of *e* is wood."

B'. $(e)(\text{Burning}(e) \supset O)$ ¹³
 C'. O

Given (A') and (B'), (C') follows as a matter of logical form.

This example is more complex than those concerning anaphora, since in (B) there is no term that targets a particular event, let alone the 'same' event as in (A); instead, it says something about burning events in general. Parsons' example, however, presumes that an eventual object predicated covertly in (A) is available for subsequent *interactions* with the overt predication in (B). Roughly speaking, Parsons' logical form works only if we assume that Burning (*e*) in (A') yields a concrete instance of a 'burning', which can then be 'plugged in' to (B'), which is true of every burning, resulting in (C').

In both cases, the behavior is exactly what we would expect from Davidson's theory, once we take seriously its phenomenological implication: if events are covertly intended as predicative subjects, then we expect them to be available for further logical operations. Thus, while these applications of the theory are not particularly common, let alone viewed as crucial to the defense of Davidson's theory, they should in fact be taken much more seriously than they are, since they are *predicted* by the theory.¹⁴ At the same time, we cannot be satisfied with the positive evidence these applications offer for the Davidsonian model. Those approaches simply build on the idea that covert eventual objects are logically present; they are not used to carefully test and challenge this idea. To get to the heart of the matter, we need to adopt a more critical attitude, and look for data that might undermine the basic assumptions of Davidson's theory.

Again, the idea under review is that speakers of event sentences are performing covert predicative acts, in which events are intended as the predicative subjects. If this intention is truly active, we should be able to bring these events 'into view', so to speak. We should be able to overtly identify these events, and confirm their identity across various predications.

However, it is quite easy to frustrate this expectation. Consider the modifier-dropping entailment in sentences (19) and (20), along with some admittedly coarse Davidsonian translations. I have rendered the predicate associated with the verb 'run' as 'R' since, as we will see, this characterization of 'e' is precisely what is at issue.

- (19) Melanie ran vigorously to the top of the hill.
 (19') $(\exists e)(R(\text{Melanie } e) \wedge \text{Vigorous}(e) \wedge \text{To-the-top-of-hill}(e))$
 (20) Melanie ran vigorously.
 (20') $(\exists e)(R(\text{Melanie}, e) \wedge \text{Vigorous}(e))$

A more robust representation might incorporate tense, and add more structure to the prepositional phrase.¹⁵ My simpler translations, however, suffice for the point I want to make. If the logical form is to explain the entailment, there should be a single entity that can take the place of 'e' in every predication, both within and across both sentences. The same event that makes (19) true should also make (20) true.

¹³ "For every event *e*, if *e* is a burning, then oxygen is consumed."

¹⁴ See Rothstein (1998, p. 5) for a brief discussion of the dispensability of anaphoric evidence. See Landman (2000, pp. 18–19) for an argument that Parsons' 'burnings' argument is dispensable.

¹⁵The last conjunct could be rendered To(top of the hill, *e*), or in some more complex way. See fn. 5.

Phenomenologically, this means that the intentional object maintains its identity across sentences. Herein lies the problem. As we will see, it is not possible, in any obvious way, to identify an intentional object that works as the value of 'e' in both sentences.

We can try to get an indirect view of the supposedly underlying event by observing its aspectual features—whether it is telic (i.e. terminative, or culminative) or atelic (durative). The two sentences communicate different aspectual properties, as we can see using the now-standard 'for a minute/in a minute' test. If 'in a minute' can be added felicitously to a sentence, the event in question is considered to be telic. If it cannot, the event is atelic, and should accept 'for a minute'. Using this test, we see the first sentence involves a telic event, while the second involves an atelic one:

- (21) Melanie ran vigorously to the top of the hill (*for a minute/in a minute)¹⁶
 (22) Melanie ran vigorously (for a minute/*in a minute)

Parson's formalization of aspectual properties, as we saw earlier, would represent this distinction by adjoining 'Cul(e)' to the logical form in the first case, and 'Hold(e)' in the second. (I have ignored tense in this case.)

- (21') $(\exists e)(R(\text{Melanie } e) \wedge \text{Vigorous}(e) \wedge \text{To-the-top-of-hill}(e) \wedge \text{Cul}(e))$
 (22') $(\exists e)(R(\text{Melanie } e) \wedge \text{Vigorous}(e) \wedge \text{Hold}(e))$

As noted by Lascarides (1988, p. 101–2), this analysis presents a logical problem. There is no logical relation between the predicates 'Cul' and 'Hold,' so it is not clear why the telic sentence logically entails the atelic one. Yet the deeper problem, I submit, is a phenomenological one: the sentences are supposed to share an identical intentional object, yet they do not appear to, since in the first case we have a telic event, and in the second an atelic one.

Parsons' representation of aspectual properties is not the last word on the topic, and I will consider an alternate proposal below. First, however, I'd like to make a stronger case that the sample sentences do not share a covert intentional object. If they did, this object would be available for overt predications as well. So, we can try to bring the covert event into the open, using grammatical formations that reference it overtly. The results should be consistent with the idea that the intentional object is identical across both sentences. As we will see, they are not.

Trouble arises as soon as we try to determine just what the covert event is. Let's return to 'R(Melanie, e)', from the Davidsonian forms above. This statement first introduces the entity as an event of a certain type 'R'. But what type is this? What type of event does 'R' tell us 'e' is? We have two clear choices. The event in question is either Melanie's *running*, i.e. a specific kind of bodily activity (which was vigorous in this case); or else it is Melanie's *run*, a spatio-temporal traversal which extends to the top of the hill.

Could either of these be the type of covert event shared by *both* of our sentences? Let's be clear about what would be required. Whatever entity is introduced by 'R(Melanie, e)' would have to be the subject of 'Vigorous(e)' in each sentence, and of 'To-the-top-of-the-hill(e)' in the longer one. Melanie's

¹⁶ 'For a minute' is marginally acceptable for (21), but only if we understand 'to the top of the hill' to mean 'towards the top of the hill'.

running, understood as a bodily activity, does not appear to serve both purposes. We can see this if we construct sentences in which the event is invoked explicitly. Melanie's running certainly works as an explicit subject for Vigorous(e):

- (23) Melanie's running was vigorous.
- (24) We observed Melanie's vigorous running with interest.
- (25) Juan and Melanie met for some vigorous running.

However, it is not plausible as the subject 'To-the-top-of-hill(e)'; this predicate measures not her running activity, but rather her run, i.e. a type of traversal of space. These intuitions are supported by the contrasts below, where only a run, and not a running, is an acceptable subject when 'to the top of the hill' is the predicate.

- (26) *Melanie's running was to the top of the hill.
- (27) Melanie's run was to the top of the hill.
- (28) *We observed Melanie's (vigorous) running to the top of the hill with interest.¹⁷
- (29) We observed Melanie's (vigorous) run to the top of the hill with interest.
- (30) *Juan and Melanie met for some running to the top of the hill.
- (31) Juan and Melanie met for a run to the top of the hill.

The supposedly shared intentional object, then, does not seem to be a running activity. (See, however, fn. 20, below.) Why not, then, settle on the run, rather than the running, as the true predicative subject? 'Melanie's run was vigorous' is perfectly acceptable, so we might be tempted to conclude that it is synonymous with 'Melanie ran vigorously.'

However, we cannot hold that a run is the covert intentional object subject of 'Melanie ran vigorously.' When we hear this sentence out of the blue, we are not intentionally directed to Melanie's run, but rather to her running. We can confirm this by observing the kind of anaphoric relations we can establish on the basis of this sentence. If the sentence has a covert predicative subject, and if that subject is a 'run', then the run should be available as the target of a pronoun. Yet it is not, as we can see in (32). The pronoun refers felicitously only if it can refer to Melanie's running activity; if it must refer to a run, reference fails. (It is important to treat the source sentence 'Melanie ran vigorously' as an 'out of the blue' reading, where no previous context has introduced a 'run' which could be targeted anaphorically.)

- (32) Melanie ran vigorously.
 - a. It hurt her knees.
 - b. It didn't seem to tire her out.
 - c. *It took her four hours.
 - d. *We watched it in its entirety.
 - e. *It had never been achieved.

¹⁷ I include 'vigorous' here in order to force the reading of 'running' as a nominal, rather than a verbal gerundive. The verbal gerundive is marginally acceptable, as in "We observed Melanie's vigorously running to the top of the hill." But this is irrelevant, as 'running' here does not function as a noun, as is evident from its modification by an adverb.

In (33) we observe a different pattern; pronominal reference to a run is unproblematic, as we see in c-e:

(33) Melanie ran vigorously to the top of the hill.

- a. It hurt her knees.
- b. It didn't seem to tire her out.
- c. It took her four hours.
- d. We watched it in its entirety.
- e. It had never been achieved.

It does not seem, then, that a run is intentionally available as the identical intentional object of both sentences. What is more, while it *cannot* be the object of the shorter sentence, it clearly *is* what is intended in (33)c-e, suggesting that the two sentences simply cannot share an object.

Note, however, that the examples a-b are acceptable in both cases. What should we make of this? In those cases, at least, might there be a shared intentional object? I find it difficult to decide what the pronoun refers to in (33)a-b, but we can consider both options. On the one hand, we can hold that these instances are consistent with the remainder of the examples in (33), and thus refer to Melanie's run as a whole (e.g. 'Melanie's vigorous run hurt her knees'). If so, then the intentional object cannot be the same as in (32), where a run event is not available for predication.

If, on the other hand, we take the subject in (33)a-b to be Melanie's running activity, then it would appear that the source sentence—"Melanie ran vigorously to the top of the hill"—in fact makes two events intentionally available: a running activity (in a-b) and a run (in c-e). Yet, how can we account for this duality within a Davidsonian framework? One option is to argue that this sentence in fact contains two event variables, one for a running and one for a run, and that we can refer anaphorically to either.¹⁸ While this may solve the reference issue, it strains believability to suggest that speakers actively perform two eventual predications, intending two predicative subjects, when they utter a sentence as simple as (33).¹⁹

A second option is to revert to the idea that the only predicative subject for the source sentence in (33) is a running activity (ignoring or somehow explaining the counterevidence (26)-(31)),²⁰ and treat subsequent reference to the completed run as a *post hoc* construal. We encountered this idea in the 'sacred totem' example discussed earlier. In this case, the idea would be that the specification of a terminus (the top of the hill) allows us to subsequently construe a completed run, without this run ever

¹⁸ A rough logical form would be as follows, with $\Theta(e',e)$ standing in for whatever constitutive or causal relation holds between the two events:

$(\exists e)(\text{Running}(e) \wedge \text{Agent}(\text{Melanie}, e) \wedge \text{Vigorous}(e) \wedge (\exists e')(\Theta(e',e) \wedge \text{Run}(e') \wedge \text{To-the-top-of-hill}(e'))))$

¹⁹ Pustejovsky (1991) does propose a semantics which multiplies the event arguments introduced by a verb, in order to account for complexities in event structure (e.g. transitions from one state to another). Yet since his theory is primarily designed to elucidate lexical structure (rather than entailment relations or anaphora) it does not necessarily imply that these events be cognitively realized as predicative subjects.

²⁰ For example, one could respond to (26)-(31) by suggesting the underlying form should not directly predicate 'To-the-top-of-the-hill' of an event. Instead it should indicate that the event *stopped* at the top of the hill, using e.g. the predication 'End(top of the hill, e)'. 'Melanie's running stopped at the top of the hill' certainly poses no problems.

being a covert logical subject; only the running activity is logically included. This seems a more promising way to proceed than positing two covert events, especially since we already need *post hoc* construal, as we have seen, for other cases.

Far from rescuing a Davidsonian analysis, however, such an approach undermines it. If we allow that we can, by construal, refer to events that are not included in the underlying logical form, we have pulled the rug from under *any* attempt to confirm covert events via subsequent overt reference. For we can argue that any such reference is a *post hoc* construal, and thus does not demonstrate the presence of a covert object. In our examples, this would mean that all the pronouns in (32)-(33), whether *runnings* or *runs*, depend on a construal of this kind, rather than an underlying event.²¹

This strategy should be amenable to Husserlians, since Husserl proceeds along similar lines his analysis of the ‘nominalization’ of states of affairs (see Hua. XIX/1, pp. 474–95). At issue there are constructions like, “Rain has set in. This will delight the farmers.” For Husserl, the pronoun in the second sentence refers to the state of affairs described in the first. But this does not mean it is already intended as an object in the initial judgment. Rather, the state of affairs is available as an object of reference only through an additional act which targets the original judgment and nominalizes it. I suspect something analogous is at work when we refer to events pronominally, as in the examples above.

I will not pursue this line of analysis further here, except to note that event construal also gives us a new way to explain examples like Parsons’ ‘burnings’ argument (see (18), above). Such entailments hold, we can suggest, because evental entities can always be construed from verbal constructions. The advantage of such a strategy, besides avoiding covert events, is that it can countenance cases such as the following:

(34)

- A. John traveled to Springfield by bicycle
- B. Whenever there is biking, pedals are pushed.
- C. Pedals were pushed.

If this argument were to depend on a predication shared across sentences, this particular one should fail, since (A) cannot plausibly be interpreted as logically containing something like ‘Biking(e).’ There is no problem, however, if the argument simply depends on our ability to construe biking activity as an intentional object based on the content of A.

There is another possible modification to the Davidsonian model which could answer some of the challenges raised above. It is, however, phenomenologically unpalatable, and as such helps exhibit the constraints a phenomenological approach imposes on semantic theory. The strategy borrows from an analysis of aspect that is more sophisticated than what Parsons offers. (See (11)-(12), above.) Parsons’ analysis represents aspectual features of sentences (telicity vs. atelicity) as predicates of an underlying event variable (Cul and Hold). As we saw, however, this blocks the relation between the telic sentence

²¹ For a proposal along these lines, see Roeper (1987). While Roeper’s approach can hardly be called phenomenological, it is worth noting that it is motivated in part by his ‘semantic intuitions,’ namely that nouns are referring expressions while verbs are not.

“Melanie ran vigorously to the top of the hill” and the atelic sentence “Melanie ran vigorously,” since the underlying events in each of these sentences can no longer be treated as the same.

Later attempts to formalize aspectual features seem to offer a way out of this dilemma, insofar as they do not represent aspectual features as predicates of an underlying event variable. Instead, aspect is treated as the output of complex interactions between various sentence constituents (verb, direct objects, prepositions, subjects, etc.). It is worth noting that Verkuyl (1997), adopting such a strategy, argues that event variables can in fact be done away with altogether, at least in the treatment of aspect. Krifka (1989), however, retains Davidsonian event variables, and develops formal rules that predict whether sentences will be interpreted as telic or atelic. The complex mechanics of Krifka’s proposal are beyond the scope of this paper, but the bottom line for our purposes is that telicity and atelicity are not treated as properties predicated of underlying events (Krifka 1989, p. 91). Instead, the core underlying events are aspectually ‘neutral,’ so to speak, and telicity is determined at the level of overall sentence structure.

Building on such a strategy, we might formulate a new response to the data in the Melanie examples, one which preserves the notion of covert events. Our two sentences appear to have different intentional objects, we might argue, because their intentional objects are not the underlying ‘neutral’ events, but rather more complex objects whose structure depends on global features of the sentence; the underlying event variables remain aspectually neutral in both sentences, thus preserving the logical relations between them.

Note, however, that embracing such a proposal requires abandoning the very phenomenological criteria that has guided this investigation. For it countenances predicative subjects (the ‘neutral’ events) which enter into covert logical relations, but which are *not* intentionally available for overt predication. This means rejecting the Husserlian idea that predication is essentially an intentional process which generates a new kind of intentional object—one with logical sense. We would instead have to allow that predication can occur without any corresponding intentional act. A more un-phenomenological thesis is scarcely imaginable.

What we find from the foregoing analysis is that the phenomenological implications of Davidsonian event semantics lead us quickly into serious, potentially insurmountable complications. In summary: to adopt the semantics, we must assume that the proposed covert predications generate intentional objects of the predicative type, whose identity across predications can be confirmed through some overt means. As we have just seen, such a confirmation appears to be unavailable for a relatively simple action sentence. To salvage the Davidsonian approach, we were led to either (a) multiply the covert events implausibly, (b) introduce *post hoc* construal, which in fact undermines evidence in favor of the theory or (c) hypothesize covert predication without intentionality, which is a phenomenological non-starter. We thus have good cause to reject the idea of covert events, or at least suspend acceptance of it.

* * *

Of course, this is just the beginning of a phenomenological critique. We need to examine more examples, and explore further, phenomenologically grounded ways to evaluate the notion of covert predication. This beginning, however, should suffice to bolster a more general point, namely that phenomenology has a role to play in semantic analysis. This position can be maintained even in the face

of revisions to the Davidsonian proposal that respond to the challenges I have raised. Perhaps, for example, a Krifka-like proposal could be preserved, by showing that its 'neutral' underlying events are in fact intentionally available in some way. Yet even if this or some other response can be rendered plausible, the important point to keep in view is that Davidson's theory is phenomenologically problematic, and that any revisions that address these flaws would also have to conform to standards of phenomenological plausibility.

Finally, it must be acknowledged that abandoning the Davidsonian model would leave us with the daunting question of how to explain the logical entailments it was designed to address. Do any existing alternatives hold up to phenomenological scrutiny? Is a syntactic explanation even necessary? Or—what is most troubling—might we need to look beyond the predicate/argument structure at the heart of predicate logic, and seek a formal system centered on verbs and subjects? What would it mean to have a semantics that could more adequately express *happening*, not just *being*? We can best tackle such challenges, I am convinced, by recognizing that semantic problems are, at bottom, also phenomenological ones, and thus that semantic proposals must be phenomenologically guided and constrained.

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