

REVIEW ARTICLE

PERSPECTIVES ON VAN VOORST'S THEORY OF EVENT STRUCTURE

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Van Voorst, J. *Event structure*. Amsterdam: John Benjamins, 1988, 181pp.

The author of *Event structure*, Jan van Voorst, proposes an approach to linguistic semantics that constitutes a significant departure from conventional ways of dealing with phenomena of language. The aim of this review is to evaluate how well he succeeds in presenting and justifying his theory.

My remarks will be structured as follows. In order to provide the requisite background for the critical discussion to follow, I believe it necessary to describe, in considerable detail at times, the various proposals made by von Voorst. In Section I, therefore, I present an overview of the book's contents, chapter by chapter. Section II, the critical discussion, consists of three parts. The first of these deals with considerations of style and form. In the second I turn to a discussion of questions of substance, pointing out problems with ideas of the theory and with data used to support it. The third part offers a few comments on theoretical issues more general in scope, and concludes the review with an overall assessment of the book.

SECTION I: OVERVIEW OF THE BOOK'S CONTENTS

In the introductory chapter and chapter I, the author declares his intention to present a theory in natural language semantics that is relevant to the functioning of rules in a grammar. Tracing the historical predecessors of this kind of approach, e.g. Hjelmslev (1935) and Jakobson (1936), he concludes that it is "hard to find studies that tie in semantic research with grammatical phenomena or vice-versa." (p.2)

The author then goes on describe inadequacies of certain grammatical theories, and to propose his own approach. In Lexical Functional Grammar, verbs are specified in the lexicon according to different possible syntactic environments: lexical roles relate these environments to each other. (cf. Bresnan 1982) But the weakness in LFG, according to van Voorst, is that "no attempt is made to uncover semantic generalizations in this part of the lexicon. There is no explanation for why the verb in (1) may occur in other grammatical contexts, such as (2) and (3)." (p.2) (I use the

author's numbering for examples taken directly from the book; other example sentences are numbered beginning with 101)

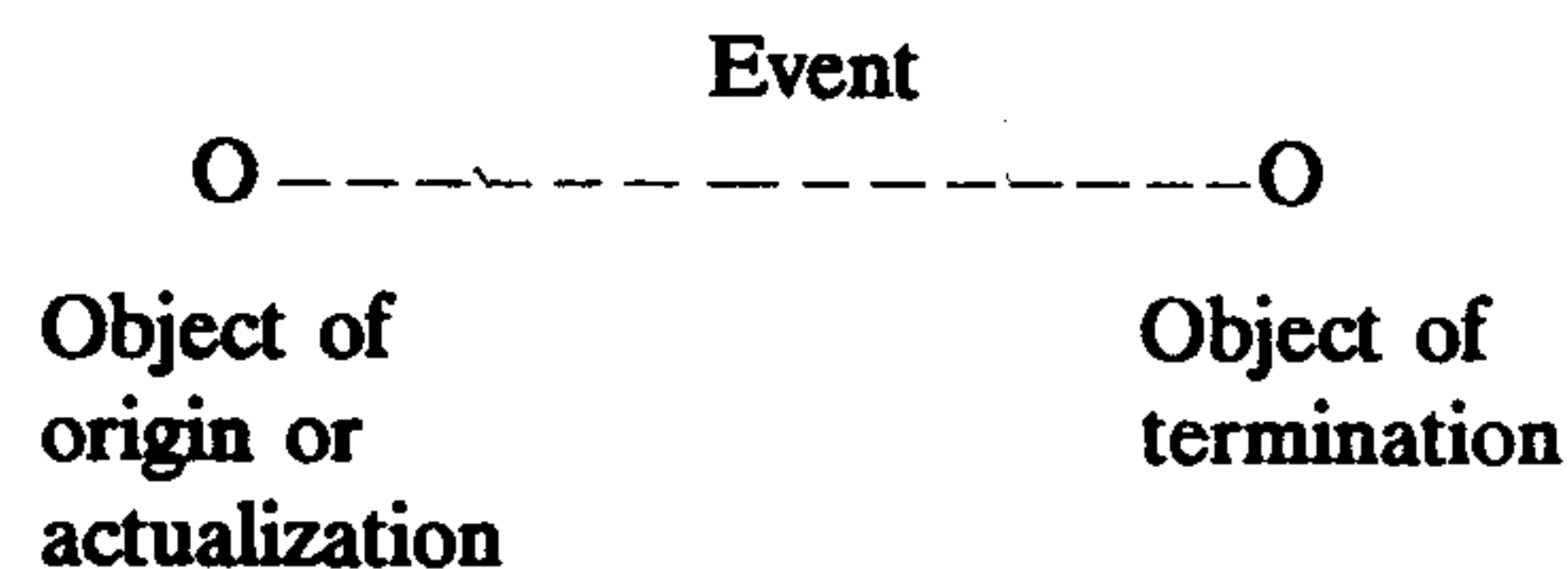
- (1) Fred reads Russian novels.
- (2) These novels were read by Fred.
- (3) Fred reads easily. (p. 2)

Van Voorst notes similar inadequacies in the theoretical machinery of Relational Grammar, as it is presented in Perlmutter (1978), and in Case Grammar, as developed in Fillmore (1968). He proposes to show that correlations discerned in Relational Grammar between "rules of grammar, semantics and deep structure"(p.3) are based on wrong assumptions, and that a case role theory does not easily allow for the possibility of falsification, since case roles can be added at will, thus allowing for easy incorporation of counterexamples. Van Voorst says that his use of aspectual notions is to be preferred in that they constitute a limited number of primitives, not freely expandable.

Although he faults "purely semantic" studies for their lack of reference to rules of grammar, he will make intensive use of concepts contained in some of them, in particular those of Vendler (1967) and Dowty (1979).

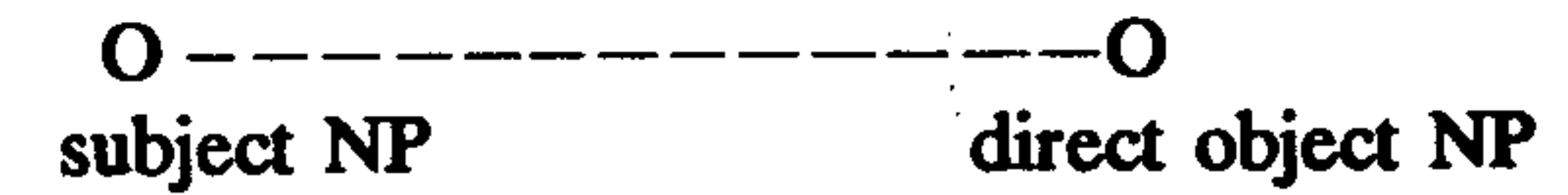
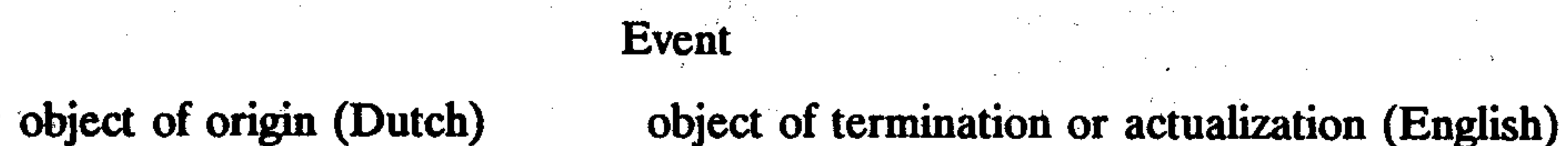
The model of grammar he proposes to use as a framework in which to situate his subset of grammar is that of Jackendoff (1983), which van Voorst claims "can be considered an addition to the Government and Binding model of Chomsky" (1981:6). Within the GB model, van Voorst isolates theta role assignment and case assignment as modules of importance to his theory. The way he proposes to include his own aspectual notions within the Chomskyan model is to assign them as theta roles. Necessarily this would involve replacing the traditional theta roles such as agent, patient, theme, etc. by notions that denote the position of constituents within the structure of an event.

What is the event structure that van Voorst intends to use as the basis for his theory? An event is viewed as being delimited by an entity identifying the beginning of the event and an entity identifying its end. The first entity makes the event originate or helps to actualize it, and the second entity is the "object of termination" Van Voorst diagrams these as follows:



The Event Structure Correspondence Rule links the conceptual structure above to deep structure positions in syntax:

Event Structure Correspondence Rule



Stative constructions are characterized by the absence of Event Structure.

Chapter 2 reviews Vendler's (1967) event and state semantics, in which four verb classes are distinguished. One of these consists of stative verbs; the three others are activities, accomplishments, and achievements. Accomplishments, unlike activities, have a set terminal point, as in *He drew a circle*. Achievements do not last a period of time, e.g. *He reached the top*. The author provides a number of tests to distinguish the four verb classes, some of these from Lakoff (1965), as well as Vendler (1967). He provides a table of examples of the four verb classes, taken from Dowty (1979):

- Accomplishment: paint a picture
- Achievement: recognize, find, reach
- State: believe, have, desire
- Activity: run, walk, drive a car (p.21)

Van Voorst discusses Vendler's and Smith's definitions for states and events, providing some evidence for rejecting the criterion of the applicability of the progressive tense as a test for stative versus event verbs. He adopts a state-event distinction by extrapolating from Vendler's (1967) distinction between facts and events. According to Vendler, events take place; facts do not. Facts are *about* the world but not *in* the world. In his theory of event structure, Van Voorst likens states to facts.

As a background for his definition of event, van Voorst looks at notions proposed in Bennett and Partee (1972) and Freed (1979), which are essentially analyses of events as time segments. Van Voorst's proposal is to consider events as structures related to objects in reality. On this notion, events are delimited by objects in space and not by the beginning or end of a time segment. In connection with this idea, he reviews the notions of predecessors: Wülner (1827), Hjelmslev (1935), and Jacobson (1936). He compares how different AKTIONSPORTEN, such as durativity, punctuality, and iterativity, interact with his event structure system, concluding that, in general, event structure does not tell much about the aktionsart of a verb. One nice part of this chapter is his explanation of why mass terms and indefinite plurals cannot occur as objects of termination, i.e. in an accomplishment construction:

Different descriptions of entities in reality influence the possibility to interpret them as objects of termination. When we say that someone ate sugar or an indefinite number of candies, nothing is expressed about the exact size of the quantity eaten. As such, these sentences do not indicate how to determine whether the event they express is finished. To do this, the entity denoted by the direct object must have undergone an identifiable change of state. A mass term and an indefinite plural however do not provide the information that makes it possible to identify this change of state in reality. This is so, because they do not denote entities that are delimited in space. (p.29)

Van Voorst begins chapter 3, *The Semantics of the Subject*, by showing how his theory differs from subject semantics in Fillmore (1968). Fillmore's Subject Hierarchy is as follows: If there is an Agent, it becomes the subject; otherwise, if there is an Instrument, it becomes the subject; otherwise the subject is the object. Van Voorst brings up data that show Fillmore's proposal to be inadequate:

- (5) (a) This knife cuts the meat well.
 (b) *Did mes snijdt het vlees goed
- (6) (a) This knife cuts well.
 (b) *Dit mes snijdt goed
- (7) (a) *This spoon eats the soup well.
 (b) Deze lepel eet de soep lekker. (p.46)
- (8) (a) *This spoon eats well.
 (b) Deze lepel eet lekker. (p.47)

Fillmore's formulation predicts the grammaticality of (7a). It does not explain the differences between the Dutch and English here. Van Voorst's notion of actualization explains the English data. He then goes on to argue that the grammatical Dutch intransitive data are in fact stative, and thus do not constitute a counterexample to Event Structure.

In order to exclude this Dutch data on the basis of stativity, he develops several lines of argument. First, the Dutch data are part of a larger set of data, since intransitive nonstative verbs can be made stative in a productive way: instruments, locations, and circumstances, as well as objects, may become the subject NP of statives, e.g.

- (15) (b) Dit papier schrijft niet lekker
 "This is bad paper to write on." (p.49)

In contrast to English, Dutch does not allow adverbs such as *without any effort*, which supposedly refer to "the effort needed to keep an event going", in sentences such as (28):

- (28) (a) *Deze sinaasappel pelt zonder enige moeite goed
 (b) This orange peels without any trouble (p.52)

Event Structure must therefore be phrased so as to take into account an important difference in subject selection between Dutch and English. Dutch does not allow a subject NP that denotes an entity that actualizes an event but is not the object of origin of it:

- (41) (a) 50 dollars will buy you a second-hand car
 (b) *Viftig dollar zal (je) een tweedehands auto kopen (p.56)
- (44) (a) This lotto ticket can win \$5,000
 (b) *Dit lot kan \$5.000 winnen (p.57)
- (47) (a) *De steen brak het raam
 (b) The stone broke the window (p.58)

So the event structure notion is that we have objects of actualization for English, and objects of origin for Dutch, where these are realized as subject NP's in transitive constructions.

The chapter concludes with some discussion of other authors' proposals concerning the nature of the middle. There is considerable emphasis on Keyser and Roeper (1984), and Lakoff (1965). Van Voorst concludes that the tests proposed by these authors have many faults.

Chapter IV takes on the issue of unaccusativity. Van Voorst calls intransitives with derived subjects unaccusatives, and those that have nonderived subjects unergative. He provides syntactic and morphological motivation for unaccusativity, discusses arguments for unaccusativity, and uses extensive data on resultative constructions to make some nice distinctions between unaccusativity and unergativity. Among interesting data he uses here to support his contention that constructions with unergative verbs express accomplishment and therefore contain an object of termination in event structure, are examples dealing with restrictions on Dutch participle usage: when unergative verbs are accompanied by the participle *uit* "out" or by a directional PP, they can be used in a participle construction, as follows:

- (55) (a) *de gelachen man
 the laughed man
 (b) de uitgelachen man
 the outlaughed man
- (56) (a) *de gelopen man
 the walked man
 (b) de naar Amsterdam gelopen man
 the to Amsterdam walked man (p.87)

Van Voorst concludes the chapter by stating that based on arguments of the chapter, the following sentences all have derived subjects, since they contain an object of termination.

- (66) (a) The bomb exploded
 (b) De bom explodeerde
- (67) (a) He ran to the bus station
 (b) Hij holde naar het busstation
- (68) (a) He read up on sports
 (b) Hij is uitgewerk
 he is outworked
 "He finished working" (p.89)

Again, he uses this data to conclude that neither case role nor thematic role semantics are able to explain the nature of the subject NP in languages like English and Dutch, but Event Structure can. Among other writers, Keyser and Roeper (1984), Bresnan (1982), and Marantz (1981) have argued that the middle or medio-passive in English has a derived subject. Van Voorst's Event Structure Correspondence

Rule, on the other hand, predicts that only a subset of middle subjects is derived, that is, those that can appear in an accomplishment construction.

In the chapter on passivization and reflexivization, van Voorst argues that data from Dutch impersonal passive, and the English and Dutch personal passive, support his notion of Event Structure. According to van Voorst, the Dutch impersonal passive applies only to constructions that contain an object of origin, and that only nonstative nonaccusative constructions have such an object.

In English, pseudo-passivization shows similar phenomena. Van Voorst predicts that pseudo-passives are grammatical when they are based on an intransitive containing an object of actualization, e.g.

- (7) (a) They slept often in that waterbed
 (b) They looked often at this picture
- (8) (a) This waterbed is often slept in
 (b) This picture is often looked at (p.97)

And accomplishments, which contain an object of termination, do not give rise to a pseudo-passive:

- (9) The children ran suddenly into the room
 *This room was suddenly run into (p.98)

Interestingly, pseudo-passive is possible with motion verbs when a locative PP is used instead of a directional PP:

- (11) (a) You should not walk on this sidewalk
 (12) (a) This sidewalk should not be walked on.(p.98)

The pseudo-passive of (11) above is said to be possible because (11) contains an object of actualization rather than of termination, as in (7) and (8).

Van Voorst then turns to a discussion of English and Dutch personal passives, and shows that the presence of an object of origin or actualization (in English) allows for passive to apply with an intransitive construction. In generalizing that statement to include transitive constructions, he attempts to show that the subject of non-passivable transitive constructions does not denote an object of origin or actualization. To do so, he uses certain tests of adverbial selectional restrictions to demonstrate that those sentences are in reality stative, thus containing neither object of origin or actualization, since by definition the latter are restricted to a role in events only. Van Voorst takes his analysis of passive to refute Bresnan's (1982) view, as described in the LFG framework, that passive applies according to specifications for that rule on verbs in the lexicon. He likewise maintains that his analysis also works against the idea that the notion of activity is important in the applicability of passive, as was argued in Relational Grammar by Perlmutter (1978).

The chapter ends with a description of how the French reflexive fits in the theory of Event Structure. This section begins with a short review of some other views on the reflexive: Stefanini (1962), Burston (1979), pointing out difficulties with these approaches. Case or thematic roles such as agent and passive do not account for many cases of French reflexivization, e.g. with perception and recipient verbs:

- (50) (a) Il a entendu le bruit
 "He heard the noise"
 (b) Jean-Paul a reçu une lettre de sa mère
 "Jean-Paul received a letter from his mother"
- (51) (a) Le bruit s'entend si tu mets ton oreille ici
 "The noise can be heard if you put your ear here"
 (b) Autrefois, les paquets se recevaient au bureau de poste
 "Before, parcels were received at the post office" (p.109)

The subjects in (50a-b) can scarcely be construed as agents, nor are the direct objects patients.

Nor can the notions of agent and patient or active and passive accurately characterize reflexives such as those in (52):

- (52) (a) La chambre s'est nettoyée en 5 minutes
 "The room was cleaned in 5 minutes"
 (b) Le reste du vin s'est bu en un clin d'oeil
 "The rest of the wine was finished in the blink of an eye" (p.109)

Within the framework of Event Structure, van Voorst analyzes all French reflexive constructions as consisting of an event and its "ultimate reference point", but no object of origin. Some reflexives are seen as containing an object of termination. The notion of ultimate reference point is one he introduces in this chapter with little discussion, instead referring the reader to a section back in chapter 2 that is primarily devoted to the proposals of other writers regarding the nature of events. Here the notion of ultimate reference point is used where there is no apparent object of termination.

In chapter VI, entitled Involvement, van Voorst explores the semantic primitive of "involvement", showing how it predicts such things as unergative intransitive and unaccusative intransitive. By "involvement", he means whether the entities represented by subject and direct object NP's are "fully involved in an event". For example, the entity denoted by the direct object of perception verbs is not involved in the event of perceiving it. In *He saw Peter on the bridge*, the entity *bridge* does nothing that relates to its being seen, it merely is visible to the viewer. Nor is the entity affected by being perceived.

In the case of subject NPs, there are also differences in involvement. In *He broke the vase*, where we have what van Voorst classifies as a causative, *break*, the sentence says little about the subject NP's role in the event. In contrast, in *He ate a carrot*, the role of *he* is clear. Van Voorst formalizes this semantic notion of involvement as follows:

An NP is marked [+involved] when the meaning of the verb allows clear inferences about the way in which the entity denoted by it is involved; in all other cases the [-involved]-feature is assigned.

Van Voorst's prediction concerning unergative intransitive is that only verbs with the following involvement pattern allow unergative intransitive.

NP	V	NP
+inv	eat	+inv
	drink	
	read	

Thus

(9) (a) He was drinking beer

+inv +inv

(b) He was drinking (p.126)

(12) (a) He felt the wind in his hair

+inv -inv

(b) *He felt (p.127)

(14) (a) The painting dominated the whole room

-inv -inv

(b) *The painting dominated (p.127)

For van Voorst, unaccusative intransitive describes verbs that can change from transitive to intransitive, as in (18–19):

(18) He opened the door

(19) The door opened (p.128)

Others have argued that the possibility of having the kind of alternation in (18–19) above is related to an agent–patient alternation in subject position. Van Voorst maintains that verbs like *open* can work the way they do because they are accusatives (they have an object of termination), not because they have patient subjects. In his feature system, unaccusative intransitive is possible with verbs having the involvement pattern as follows:

NP	V	NP
-inv		+inv

And indeed, the [+inv] V [+inv] pattern does not allow unaccusative intransitization:

(22) (a) Martha was reading the newspaper

(b) *The newspaper was reading (p.124)

Some of these verbs, such as *open*, may occur in a different involvement pattern, e.g. [+inv] V [+inv]. If used in this way, unaccusative intransitive is not possible:

(24) (a) He opened the bank account

(b) *The bank account opened (p.129)

Likewise, the involvement semantics explains why achievement verbs do not allow an accomplishment reading. Achievement verbs occur with a [–inv] direct object. And Van Voorst's prediction regarding the possibility of unergative and unaccusative intransitive is confirmed here as well, as shown by (30–32):

(30) (c) He reached the top of the hill

(31) (c) *He reached

(32) (c) *The top of the hill reached (p.130)

There follows some interesting discussion of Saksena's (1980) argument that case role notions cannot explain the semantic differences behind case markings in Hindi, where causes in causative constructions are marked by the dative/accusative morpheme *-koo* or by the instrumental *-see*. Saksena introduces a notion of affectedness to explain this; *-koo* always marks NPs affected by the verb activity in an event, whether or not that NP is indirect object, patient, or experiencer. Van Voorst finds that Saksena's affectedness primitive patterns out the same way as his own involvement system, making the same predictions regarding unergative intransitive as does Van Voorst's involvement analysis.

In chapter 7, van Voorst compares event structure with various proposals by Reichenbach (1947), Hornstein (1981), and Bouchard (1947) regarding tense interpretation of sentences, and he attempts to combine his event structure model with Reichenbach's framework. In his concluding chapter, van Voorst considers implications of event structure theory for the notion of GOAL as a thematic role, as implicit in Gruber (1976) and Jackendoff (1975), and discusses the role of prepositional phrases with event structure.

DISCUSSION

Let us look in detail at a few aspects of van Voorst's notion of event structure. The distinction between verbs of activity, verbs of achievement, and verbs of accomplishment is central to his theory. Not a few questions arise in connection with the definitions of these.

On page 20 he states: "Achievements like states can be distinguished from the other two verb types in that they do not allow continuous tenses, as demonstrated in (8) *He was reaching the top". Of course, the example is less than convincing here, since "He was reaching the top, when an eagle made an unfriendly swoop at him" is fine. Similarly, Dowty (p.21) is quoted as maintaining that "*Know the answer!" is ungrammatical, i.e. the acceptability of the imperative is one of Dowty's tests for the state–event distinction. Again, though van Voorst states that "Dowty's test distinguishes activity verbs from other verbs rather than states from events, if we follow the definition for these notions given under my analysis" (p.21), he doesn't say whether he agrees or disagrees with the choice of data; plainly, making a slight modification in the sentence produces the very natural imperative "Know the answers!"

The author observes (p. 41) that

...we will not find achievement verbs with particles or directional PPs either, if the above is correct. These verbs, however, may occur with a particle, but then, interestingly, their meaning changes from an achievement verb into an activity that is in addition, an accomplishment.

"He saw me out" is not an achievement, but it denotes the activity of the entity denoted by the subject NP. "He saw many paintings in New York" refers to the perception alone.

But note (101):

(101) The dentist saw 20 patients today

Certainly this is not restricted to perception, being in fact ambiguous. So here we have *see* acting as an "activity", albeit perhaps not an "accomplishment", without there being any particle or directional PP.

Likewise, the perception verb *hear*:

(102) a. He heard me
b. He heard me out

Sentence (102b) does seem to have "not just perceiving something" but "acting at the same time", though much less so than does the sentence *He saw me out*.

Attempting to classify verbs in terms of the semantic typology proposed by van Voorst encounters another problem. When achievements and accomplishments are used in a progressive in English, or e.g. an imparfait in French, don't they have both stative and activity characteristics? Certainly, the pair of sentences in (46)

(46) a. He made a chair
b. He was making a chair (p.37)

are a test of the nature of the structure [make a chair] but they also illustrate that one needs both the frame and the appropriate filler in order to get a telic construction.

In (59a).

(59a) He wrote the comments (p.136)

van Voorst maintains that the semantic feature of involvement determines that because the direct object NP is the object of termination, the sentence implies that the subject entity creates the comments. In (59b),

(59b) He wrote the comments down (p.136)

the event ends in the state of the comments being *down* (on paper), thus implying that the writer didn't create the comments himself. Now, if someone writes a slogan on a wall, and it may be a well-known one such as "semper fi", he might be asked whether he is the one who "wrote that". And similarly, he might deny that he "wrote that". The distinction introduced by the particle seems to work with "writing down" on paper, but not, for example, on walls, since "I didn't write it on" seems to display

a rather unnatural deletion from "I didn't write it on the wall". Quite obviously, the meaning is that he didn't write these words on the wall. The statement doesn't (necessarily) address itself to the question of whether he wrote (created) it.

Another example of this kind of thing might be where a statement could be written by hand in a book and even identified there, where an inquiry as to its authorship would not be phrased as "Did you write down?" but rather "Did you write that?" The thing written might for example be a well-known quotation often attributed to a historical personage, as in "A Penny Saved is a Penny Earned". The same kind of difference seems to appear with verbs like, e.g. *remain* and *stay*, in phrases like *remain at the hotel* +/- time expression, *stay at the hotel* +/- time expression, where a sentence containing the time expression seems to be interpretable as a kind of event.

One might take issue with certain aspects of van Voorst's description of the nature of events and entities involved in events. He defines an event as follows: (8) "An event takes place and it is located in the [+involved] entity(ies) that make up its structure: the subject NP and/or the direct object NP." (p.124) Notice that this statement makes use of syntax in the definition of an event. It also makes use of the semantic notion "takes place", which is rather vague.

The definition of the delimiters of events, objects of origin/actualization and termination, is unfortunately based on real physical objects:

What is different from most approaches is that these notions are related to objects in reality. Events are delimited by objects in space and not by the beginning and end of a time segment. (p.28)

Attempting to relate language to objects in reality runs into problems of reference. Nonexistent objects such as *the philosopher's stone* or *a purple dragon* or the entity mentioned in Russell's sentence *The King of France is bald* do not then fit in the theory, and yet they occur in sentences with direct objects and subjects: "Scotland Yard ruled out the local hen's teeth as the cause of the mysterious mark on the tree." Van Voorst is very explicit on this point: "It is the object in physical space that the object of origin or actualization has established a relation with: the event starts out from the object of origin..." (p.42) This would seem to exclude abstract nouns from the theory, yet they also serve as objects of actualization and termination. M.J. Cresswell (1985:99) writes

In this book I am interested only in modeling the way natural language talks about the world. In natural language we talk about many things that give lots of philosophers the willies. We talk not only of concrete individuals but also of events, processes, states, numbers, conditions, tendencies, and points of view.

By a natural extension van Voorst's definitions would also seem to exclude all manner of verbs such as "expect", "recommend", "forget", "remember", "deny", and "save", at least in many of their uses. They can all be used with direct objects in sentences which do not satisfy the definition provided by van Voorst. In order to make them workable, I think that his definition of objects (whether of origin, actualization, or termination) would need to be rewritten so as to accept various kinds of abstractions. As Cresswell (1985:164) says,

In saying that everything is a thing, I am being unabashably Platonistic. It seems to me that, in dealing with the semantics of natural language, this is right. For I think that we do speak as if all these things existed, and I follow Emmon Bach (1983) in assuming that the illuminating way to study natural language is to ask what sorts of entities it presupposes...

Furthermore, how does van Voorst's definition in terms of objects in reality fit with the use of questions and the negative? On one reading, there is no object of termination in a sentence like (103):

(103) They didn't paint a picture

Moreover, there can be interesting reversals of sense when the negative is combined with some time expressions, as in (104):

(104) a. Bill didn't write his essay
b. Bill didn't write his essay for an hour

There are a number of other sentence types that do not fit within van Voorst's theory. According to his Event Structure Correspondence Rule, object of termination are realized as direct objects. He provides no other means for the production of direct objects, and seems to accept a loose, informal idea of what constitutes a direct object. Although in allowing for derived subjects of unaccusatives, for example, he is admitting levels of structure, he doesn't discuss the structure V NP where NP is apparently in a role that would have to be characterized differently, e.g. *fly United Airlines, play the Lions, British Air buys Boeing* (where the meaning is *...Boeing airplanes*). Accounting for these examples would necessarily bring in some other version of semantic roles. One wonders how van Voorst would handle these; certainly the theory would have to include some additional rules of deletion or interpretation.

The author puts forward his theory as being a part of universal grammar. One might ask how we are to account for French constructions like *payer le repas, chercher un livre, demander le stylo*, where we see entities realized as direct object NPs; in English these would be realized as PrepPs. These examples come from one of the languages Whorf referred to as Standard Average European; already there are differences that are difficult to handle with the theory. The determination of what constitutes an object of termination would have to take into account conceptual systems different from our own. Consider "He bought Bill and Sandra an airline ticket and flew them back." In some languages, of course, one just cannot fly *people* anywhere.

Van Voorst also says, "My notion of object of termination is restricted to the direct object. This one and the subject NP are the only phrase categories that influence aspectual readings of sentences." (p.35) On p.41, though, we are told that particles and directional PPs also denote the state that makes the entity denoted by the direct object an object of termination. The addition of these two categories introduces certain complexities into the theory. The use of particles to express state as a kind of completer is only one of the ways particles function in English; cf. the following:

(105) a. He broke me up
b. *He broke me

(106) a. They broke up the street
b. *They broke the street

(105a), of course, has an entirely different meaning than (105b), rather than simply indicating completion. Likewise with (106), where (b) is ungrammatical. Similarly, in French reflexives like (107),

(107) Il se brosse les dents

one can wonder which is the object of termination, *se* or *les dents*?

The state that is described as a "tail" in resultative constructions is not really an object, as indicated in the author's description on p. 136. In resultatives, it is not in fact the direct object which is in a certain sense the object of termination of an event. It is rather the state that results from the combination of these elements that could be said to be the object of termination of such an event. But these constructions are much more complex than his Event Structure can deal with.

The distinction between events and statives is crucial to van Voorst's theory. Since stative constructions are deemed to have no objects of termination, certain data potentially problematical for event structure are accounted for if it can be shown that they are in fact constituents of stative constructions.

In discussing subject NPs in intransitive constructions, van Voorst runs up against some problematical data.

(9) a. Dit mes smijdt goed
b. This knife cuts well. (p.47)

but the transitive counterpart in (d) is ungrammatical:

(12) a. *Dit mes snijdt het vlees goed
b. This knife cuts the meat well. (p.48)

To solve this, he argues that such sentences as (12b) above are stative and do not therefore constitute a counterexample to the notion that the Dutch subject denotes an object of termination. By van Voorst's definition, of course, only events are delimited by an object of origin (or object of actualization in English), or by an object of termination.

The author gives the following test to indicate "the criterion of countability".

(42) a. *There is a having of John of a book.
b. *There is an owning of John of a book.

These sentences are ungrammatical for reasons other than he gives. The ungrammaticality of the above two sentences demonstrates little; putting his other sentence types in this frame produces no better sentences.

(108) a. *There is a drawing of Bill of the circle
b. *There is a reaching of Bill of the top
c. *There is a walking of Bill

His reflexive rule (p.112) predicts that reflexivization of stative verbs is impossible. However, his example here of a grammatical sentence (62b),

- (62b) Cette femme se domine facilement
That woman can be dominated easily. (p.114)

certainly has aspects of stativity relating to his definition of that property, where he says "An object is in a state when it has a contingent property or stands in a contingent relation of some kind".(p.104) The definition is taken from Nordenfelt (1977). By contingent relation Nordenfelt means: "a property (relation) which does not belong to its bearer as a logical consequence of the simple fact that the bearer is an object of a particular kind." (p.104) Van Voorst explains: "Examples of these properties or relations include existence, location, classmembership, quality, possession." (p.104) But it would seem that a sentence like "La banque se trouve dans la rue Voltaire" is an example of a locational use, thus stative, yet reflexive.

On p. 103 he says "Stative verbs cannot appear in the progressive form". As an example of this prohibition he cites (35a):

- (35a) *He is having a red car.

But he provides no principled way to distinguish between (35a) and sentences such as (109):

- (109) a. He is having problems.
b. He is having a bad dream.

Furthermore, he seems to contradict himself, since he classifies the verb *own* as an event verb. But by some of his criteria, including that of acceptability with the progressive form, *own* is more appropriately analyzed as being stative. Yet *own* passivizes; passivization, according to van Voorst, requires an object of origin or actualization.

There is a failure to understand the compositional nature of these phenomena. The author defines *to swim* as an event because it "take place", whereas *to have a swim* does not, as supposedly shown in (38a-b):

- (38) a. The diver swam effortlessly in the lake.
b. *I had effortlessly a swim in the lake.

He explains thus:

Sometimes the differences between states and events are hard to perceive. Often it is after the insertion of adverbs of the class *with a lot of pleasure* etc. that we can see whether we are dealing with a state or an event... *To own* occurs in constructions expressing an event; *to have* does not when we follow my approach. (p.104)

He's patently wrong in trying to maintain that (38b) is a state rather than an event. Obviously his "effortlessly" test is not workable. Yet he takes it as conclusive proof of the stativity of "to have a swim", in spite of the obvious evidence in data like (110):

- (110) a. ?Bill has a swim
b. Bill has a swim, then he plays a round of golf.
c. Bill is having a swim.

In (a) sentence when used alone has a funny sound, unlike in (d):

- d. Bill has a car.

If (9a) were stative, it should sound as good as (110d). The author himself provides us some explanation for this; later in the book he mentions that the present tense in English cannot be used to talk about activities going on at the moment of speech. They *may* be used for customary activities, and (110b) above is probably more acceptable because it more clearly implies custom.

Van Voorst himself provides another argument against considering *to have a swim* stative, in his discussion of the value of count adverbs as a test for distinguishing between (a) and (b) below on the basis of event versus stative. He discounts the count adverb test, as well as the definition of events as things that "take place", because of his *effortlessly* test.

- (43) a. He swam in the lake 3 times while in the park
b. He had a swim in the lake 3 times while in the park

He should rather have reached the conclusion that the count adverb does not distinguish because both (a) and (b) are events! Comparative evidence shows that: try translating these two sentences into French!

On page 153 he says: The English present tense cannot express accomplishment ... nor nonaccomplishment if it is not in the progressive form." This conflicts with his analysis of *own* as not being stative (pp.98-100). "He owns that green car" can certainly "mean that the event is happening at the moment of speech." Secondly, what about scene-settings? It is true, of course, that these things occur in discourses as a kind of abstraction, but they do describe what is happening *within* the story, at least.

- (111) a. A writer phones a politician and says..."
b. A guy comes into the office and says..."

Van Voorst seems to realise that more needs to be said about this question of present tense use, for he says in a note on p.162:

The present tense is used sometimes to describe an ongoing event. This is the case in (a), which is taken from Goldsmith and Woestschlager 1982.

(a) And now I take the flask of sodium nitrate and pour the contents into this beaker; now I light the Bunsen burner and heat it to a boil.

These sentences can be analyzed, however, as expressing a state rather than an event.

Once again, when faced with data problematical to his hypothesis, van Voorst uses stativity as a convenient solution. But these putatively stative sentences nonetheless have the same syntactic form as do events, with their objects of origin/actualization and object of termination. Little discipline is left in the theory if it so easily allows for the exclusion of intractable data.

The author avoids a considerable problem in connection with statives by excluding generics from consideration in the theory. But we must ask ourselves: can't generic statements ascribe non-contingent properties, thus by definition possessing a stative nature in some sense? Here again, we have a situation where constructions display subjects and objects paralleling many of those appearing in event sentences. Van Voorst emphasizes on more than one occasion that his approach to semantics "aims at finding semantic primitives that are relevant to grammar, or that tie in with grammatical phenomena." (p.139) His analysis of event structure and statives is particularly open to criticism with regard to this criterion of relevance to grammar.

His attempt to give a unified account of the French reflexive using the notion of event structure is only partially successful. The proposal he makes is to analyze the French reflexive as containing no object of origin, only what he calls an "ultimate reference point", and sometimes an object of termination. The ultimate reference point is necessary for van Voorst because he wants to find some entity to represent things as different as are the subjects and objects in sentences as disparate as (47a-c):

- (112) a. Je me lave
 b. Je m'irrite
 c. La maison se construit. (p.107)

There are a number of problems here. Contrary to what he says, as in "There is always the meaning content introduced by each reflexive that there is an unspecified object of origin, whatever its exact nature may be." (p.113) This is fine, for sentences like *Le lait s'aigrit* or *Le ballon se gonfle*, but he's not willing to acknowledge that it doesn't work for *Paul s'est levé*, where *Paul* would seem to be both an object of origin and of actualization. Since he doesn't mention objects of actualization in connection with the French reflexive, he's apparently not trying to skirt this issue by introducing the origin vs. actualization distinction, as he does in chapter 2, in discussing the nature of English and Dutch subjects. In any case, one finds it hard to accept his "unifying account" of the reflexive. The phenomenon is simply more complex than he is willing to admit. The French reflexive data displays three rather distinct patterns:

- a. where subject NP is naturally viewed as an agent
 b. where subject NP seems not to be an agent
 c. where subject is in a focus role

Now, (b) and (c) might plausibly be combined in one category in his "ultimate reference point", but putting (a) in the same category greatly reduces its explanatory significance.

In his chapter on Tense, van Voorst uses the tense interpretation of the French reflexive as independent evidence for his hypothesis that the reflexive lacks an object of origin. After analyzing the French preposition *en* used with a time expression (*in* + time) as an "adverb that refers to the end of an event", he produces two reflexives in sentences containing *en* and *dans* (160):

- (57) a. Il se lavera en 5 minutes
 He will wash in 5 minutes
 =it will take him 5 minutes to wash

- b. Il se lavera dans 5 minutes
 He will wash in 5 minutes
 =He will start washing himself 5 minutes from now

These two seem at first to be counterexamples since according to his rule of reflexivization, "If there is no object of origin, an adverb of the type *in X minutes* can never lead to the interpretation that the event begins after a certain time..."(p. 159) These recalcitrant data are dealt with thus: the adverb *dans X minutes* is analyzed as an adverb of the type that attaches to the event as a whole, such as *yesterday*, rather than one that attaches to the event structure of a sentence. Such an interpretation may be plausible, but it is weakened by the argument van Voorst brings to support it. Comparing the following data,

- (60) a. Dans une heure, il mangera encore
 He will still eat an hour from now
 b. Dans une heure, il se lavera encore
 He will still wash himself an hour from now. (p.160)

he says, "the adverb *encore* implies that the event is going on before the point in time denoted by the adverb *dans une heure*." (p.160) In English the adverb *in an hour* is said to refer to the very beginning, or the end, of the event:

- (61) a. *He will still drink in an hour
 b. *He will still wash himself in an hour

(61a-b) are supposed to be taken as ungrammatical because the use of both *still* and *in an hour* implies that the event is going on before the point in time expressed by *in an hour*. The different grammatical judgments between French and English here are rather meaningless. *Encore* is a particularly poor choice of data to support his hypothesis, since, as is well-known, the French word *encore* is ambiguous, having as it does the two meanings *still* and *again*. One should also question van Voorst's statement that in English, "Usage of the adverb *in an hour* refers to the very beginning, or the end, of the events."(p.161) One might object that, at least with some verbs, it is not only the end of the event that is expressed, but the event and its duration:

- (113) a. He ate that whole pie in 5 minutes
 b. He painted a picture in five minutes.

I conclude my critique of the substance of Van Voorst's book with some general remarks concerning his methodology and argumentation.

As is often the case, the choice of data appears to be selective. The kinds of verbs discussed tend to be ones that involve physical actions, to the exclusion of a whole range of other verb types that don't seem to fit neatly in the theory. The extensive analysis of French reflexives proves interesting and relevant, but perhaps less important than would be a consideration of how the event vs. situation distinction in the French usage of imparfait and passé composé relates to events vs. states in the author's theory.

Van Voorst's definition of the event in terms of objects in reality encounters numerous difficulties, as mentioned in the discussion above, and would require a reformulation of the kinds of entities allowed. As Cresswell (1985:69) asks,

What is a thing? Obviously, anything at all is a thing. I do not mean only physical objects but anything our language can talk about: numbers, sets, properties, events, attitudes, attitudes of mind, and the like.

Similarly, van Voorst's definition of syntactic subjects and direct objects ignores the complex nature of these phenomena. They are used in a somewhat simplistic manner as a central part of the Event Structure Correspondence framework, with little attention devoted to the many problematical aspects of their nature and description.¹

One wonders why there is no reference to the work of Kuno on the primitive of empathy and its grammatical effects, and no mention of Barwise and Perry's work on Situation Semantics, where the notions of event and situation are rather extensively studied.

In regard to linguistic argumentation, his notion of partial realization of a linguistic phenomenon would merit considerable skepticism, allowing as it does differing degrees of applicability:

Every nonstative sentence is a complete or partial realization of event structure. Reflexivization represents a partial realization of Event Structure, just like unaccusatives. (p.118)

The lack of definite determining principles of applicability would seem to restrict opportunities of falsification of the theory.

The many faults of this book notwithstanding, it is still a worthwhile purchase for anyone interested in grammatical theory. Van Voorst gives the reader a wealth of pertinent and interesting data, as well as many useful references to theories of other researchers. His discussions of areas such as unaccusativity shed light on important issues, supply many nice tests for judging various primitives and properties, and even, in limited areas, seem to provide convincing proof of his claims. He deserves praise for his innovative proposal to base a theory of eventness on the physical world rather than the dimension of time. He is courageous in giving us a whole series of precise predictions of grammatical phenomena predicated on his theory.²

¹ Cf. Miller (1986) and Perlmutter (1982) for discussion of the nature of subjects and objects.

² Herewith, for the convenience of the reader, a list of a number of the author's predictions:

– Accomplishment always comes with a direct object that is not a mass noun or an indefinite plural, i.e. it always comes with an individuated NP. Different case forms, morphemes or determiners may influence the nature of NPs in terms of individuation (p.44).

– A subset of middle subjects is derived, namely those that can appear in a construction expressing accomplishment. Middles that do not occur in such a construction are predicted to have a nonderived subject ... the middle-subject in the former case denotes an object of termination, and the subject in the latter case an object of actualization (p.91).

– A construction can be passivized when it contains an object of origin or actualization (p. 102).

– The reflexive in French is possible with almost any verb including perception and recipient verbs (p.109).

– It is quite common to consider intransitivization a process that depends on the lexical idiosyncracies of transitive verbs. This is implicit in studies done within the Lexical Functional Grammar framework

Some of the difficulties described in this review can doubtless be explained as a matter of presentation; the essence of the theory does seem to be worth pursuing. In particular, correlative evidence from many languages of different types would support the theory, and the book provides, implicitly, a whole program for further research in these ideas in other languages. Van Voorst's work represents a stimulating contribution to linguistic theory.

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such as Bresnan (1982), which was discussed in Chapter 2. My approach does not predict unergative intransitive using verb idiosyncracies (p. 128).

– Unaccusative like unergative intransitive is predictable on the base of Involvement Semantics. This means that it is not necessary to take refuge to lexical specification (p.129).

– An achievement verb combined with a resultative predicate will never end up having the involvement pattern of causative verbs like *to break*, etc. (131).

– If all sentences in a language must contain an affected role ... it cannot have stative transitive and intransitive constructions. And if a language cannot have [–inv] direct objects, it cannot have transitive achievement verbs and transitive statives (p. 141).

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