

**Alessandro Zucchi**

**The Language of Proposition and Events**

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Reviewed by *Klaus von Heusinger*

This book provides a clear introduction to the problem of nominalization, an updated syntactic analysis, and an enriched semantic treatment. Zucchi develops a particular kind of situation semantics in order to resolve some distributional facts that cannot be explained in syntactic terms. The book consists of seven chapters which alternately treat syntactic or semantic topics: chapter 2, 5 and 7 are on syntactic issues, whereas chapters 3, 4, 6, and 7 treat semantic phenomena.

In the first chapter Zucchi gives a systematic overview of the differences in meaning and distributional facts of three types of nominals: derivational nominals, as *performance* in (1), *ing<sub>of</sub>*-nominals, as *performing-of* in (2), and gerundive nominals, as *performing* in (3). He compares them with *that*-clauses, in (4), and the sentential counterparts in (5):

- (1) the performance of the song
- (2) the performing of the song
- (3) his performing the song
- (4) the fact that he performs the song
- (5) he performs the song

There is a clear distinction between nominals of type (1)-(2) and gerundive nouns of type (3) which goes back to the observation made by Vendler (1967). The first two types of nominals have a number of properties in common with nouns like *man*. They can follow determiners and adjectives (*the beautiful performing of the song*), but they cannot be modified by auxiliaries and modals (*\*the have performing of the song*). Therefore, Zucchi assumes that these nominals are N rather than V-nodes and that they are lexically generated. Derived nouns of type (1) must be listed in the lexicon in order to explain their irregular appearance. However, the *ing<sub>of</sub>*-nominals of type (2) exhibit such a regular correspondence to the verbal forms that he assumes a lexical rule which derives them from the correspondent verbal lexical entry. Gerundive nominals of type (3) exhibit complementary syntactic distribution and are assumed to be derived by a phrasal rule. We find a similar opposition in the semantics of these nominals. Nominals of types (1)-(2) refer to events, whereas gerundive nominals of

type (3) denote propositions similar to the *that*-clause in (4). Zucchi closes the chapter with a summary of the central concern of the book which is to explain the relation between the syntactic and semantic properties of nominals and their related verbal counterparts.

In the second chapter, Zucchi systematically develops the important syntactic arguments concerning the different lexical representation of nominals of type (1)-(3). In addition, he discusses the occasionally contradictory evidence underlying different types of representation. He assumes that derived nouns, like *performance*, are represented in the lexicon independently from the corresponding verbs. The discussion whether *ing<sub>of</sub>*-nouns of type (2) are generated by a lexical or a syntactic rule is quite confusing. Zucchi seems uncertain himself. In fact, he opens the discussion of the representation of *ing<sub>of</sub>*-nouns with the following statement (p. 36): "What is the right analysis? Are *ing<sub>of</sub>*-nouns lexically generated, or are they generated by a syntactic rule? I should say right away that I have no answer to this question, since the evidence is not one-sided, (...)". Yet, he summarizes the discussion somehow more conclusively (p. 44): "The conclusion seems to me to be that the argument structure of *ing<sub>of</sub>*-nouns, like the analysis of phrasal verbs, fails to provide evidence for a syntactic derivation of *ing<sub>of</sub>*-nouns." He also provides a detailed discussion of the syntactic aspects of gerundive nominals of type (3). He concludes with the assumption that they must have a structure in which an NP node governs a VP node (p. 57): "The NP-over-VP analysis of English gerundive nominals seems to me to yield a better account for English gerundive NPs."

In the third chapter, Zucchi describes the meaning of nominals of type (1)-(3) in a situation semantics à la Kratzer. He distinguishes between events (also called eventualities or situations), on the one hand, and propositions, on the other, where propositions are sets of (possible) situations. The meaning of the verb *perform* is a function from pairs of individuals *a* and *b* to sets of possible situations such that *a* performs *b*. An event is defined as a relation between individuals and situations. The event that is denoted by a derived noun like *performance* is a function from a pair of individuals *a* and *b* to a situation *s* such that *a* performs *b* in *s* and *s* is a minimal situation where such relation between *a* and *b* holds. An *ing<sub>of</sub>*-noun, like *performing* in (2), denotes the same function. However, this function is directly connected with the corresponding verb meaning by a construction rule *f* which interprets the lexical derivation rule from the verb stem to the *ing<sub>of</sub>*-noun. The denotation of the gerundive nominal in *the soprano's performing the song* denotes the proposition that the soprano performs the song, i.e. a set of possible situations, such that for every situation it holds that the soprano performs the song. Zucchi shows that this difference in denotation contrasting (1)-(2) to (3) can explain certain facts involving semantic selection of expressions like *is sudden*, *report*, *is surprising* etc. The rest of the chapter is dedicated

to the implementation of a formal framework based on Kratzer's situation semantics and to refining the analysis with respect to temporal contexts, telicity, conjunction, and individuation of event nominals.

In the fourth chapter, Zucchi naturally discusses some alternatives to his approach. The most important rival is the Davidsonian semantics of events. Davidson (1980) proposed to analyze action verbs as expressing relations between individuals and events, rather than as functions from individuals into situations as in Zucchi's theory. The Davidsonian approach gives a clear analysis of nominalization and adverbial modification. Zucchi shows that he can do the same with his version of situation semantics. During the course of his argument he mentions a very interesting controversy: should entailments of adverbial modifications (*he is in the bathroom at nine* entails *he is in the bathroom*) be syntactically characterized either in the logical representation, as in the Davidsonian approach, or should they follow from the interpretation of the logical form? Zucchi ends the discussion with the remark that the former claim can be questioned and, therefore, it is no strong argument for the Davidsonian theory. However, he then hastens to add that his approach can do the same. After having worked hard through the very subtle argumentation, the reader feels some kind of emptiness and frustration when he or she learns that the argument is not important at all.

In the fifth chapter, Zucchi gives a very clear presentation of the traditionally open question whether the *by*- and *of*-phrases are adjuncts or arguments of the event noun in (6) below. The following three sets of data are crucial in the discussion: To begin with, (6)-(9) show that both phrases are optional, but the *by*-phrase is "parasitic" on the occurrence of the *of*-phrase, as is shown by the ungrammaticality of (8). In addition, the optionality of the *of*-phrase is restricted by the subcategorization of the corresponding verbal stem. Since *dine* is intransitive, the *ing<sub>of</sub>*-noun cannot take an *of*-phrase in (11). Finally, in some cases the *of*-phrase is obligatory as shown in (12) and (13).

- (6) the destruction of the city by the enemy
- (7) the destruction of the city
- (8) \*the destruction by the enemy
- (9) the destruction
- (10) \*the dining of the apple
- (11) \*John dined the apple
- (12) the handing of the letter
- (13) \*the handing

Zucchi discusses three positions. First, in accord to a view that goes back to Dowty (1986), the *by*- and the *of*-phrase are both analyzed as adjuncts. Second, following an alternative view attributed to Grimshaw (1988), the *of*-phrase is viewed as an argument and the *by*-phrase as an adjunct. Third, Zucchi, presenting his own proposal, posits that both phrases are arguments. As Zucchi argues, if both phrases are adjuncts optionally modifying an event noun, the ungrammaticality of (8) and (10) remains unexplained. The optionality of the *of*-phrase, in (9), gives evidence against the second view, according to which only the *of*-phrase is an argument and the *by*-phrase an adjunct. Instead, Zucchi assumes that both phrases are arguments, i.e. they are lexically determined by the event noun. In this way he can explain the ungrammaticality of (10). He further stipulates two *implicit satisfaction rules* in the lexicon that consume first the *by*-phrase and second the *of*-phrase. By rule-ordering he explains the data in (6)-(9), but he does not give an explanation for data in (13). Despite some good evidence, he does not convincingly show that his approach is superior to Grimshaw's analysis. Rather, it seems to me that the latter position has more evidence on its side than Zucchi's, because the data suggest that there is a categorial difference between the two phrases under consideration. Indeed in a footnote, Zucchi himself refers to an earlier work, where he acknowledges a difference between the two phrases. He summarizes this view (p. 173, fn. 21): "There, I suggest that the difference between the *by*-phrase and the *of*-phrase with respect to optionality may be accounted for by assuming that the argument corresponding to the *by*-phrase is implicitly satisfied syntactically rather than lexically."

In the sixth chapter, Zucchi refines the semantics of nominals given in chapter 3 in two ways. First, he discusses the *ambiguity hypothesis* according to which the nominals of type (1) and (2) are ambiguous between an event interpretation and a propositional interpretation. After a series of arguments for, and counter arguments against this theory, he accepts the ambiguity hypothesis (p. 204): "The conclusion reached here is that there is some evidence for the hypothesis that derived NPs and *ing<sub>of</sub>*-NPs are ambiguous between event denotation and propositional denotation." This ambiguity has a semantic nature and is triggered by a lexical rule. The second modification concerns the distribution of gerundive nominals of type (3) such as *the soprano's performing the song*. This nominal cannot be an argument of predicates like *believe, know, is true* etc. despite the fact that they are prototypical propositional predicates. Zucchi explains these phenomena by refining the concept of propositions. He introduces *states of affairs* and postulates that gerundive nouns denote states of affairs rather than propositions (p. 208): "The solution to the distribution problem advocated here trace the illformedness of (58) back to a semantic cause: gerundive NPs like (7) denote states of affairs and predicates like *believe, know, is true, is false*

semantically select for propositions but not for states of affairs." The seventh and last chapter presents a study to the *infinitivo sostantivo* in Italian. The book closes with the references and a helpful index.

Zucchi has given an expert study of the problems of nominalization in English. His well organized book reflects the actual discussion on the syntax and semantics of nominals. Unfortunately, he does not always achieve his goal to "explicate the relation between the syntactic and semantic properties of nominals" (p. 28). Although the layout of the book shows accuracy, one notices the limitation of the author's text editor: the headline order (chapter and title of the chapter) changes non-deterministically and German Umlauts are not represented. Furthermore, minor mistakes, errors, and mismatches between references in the text and in the reference section should have been eliminated by a good editorial supervision. Despite these critical comments, the book provides a valuable and actual introduction to the problem of nominalization with a refined treatment of their semantics.

#### References

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