

Chapter 1

Verb meanings and argument structure

When children have acquired the meaning of a verb, they know the possible states or events it describes. But is that all there is to know about the meaning of a verb? When verbs appear in phrases and sentences, they rarely come alone. Mastering the use of verbs requires knowledge of the company they ask for. Most verbs come with arguments, some obligatory, others optional. Do we know what arguments a verb takes when we know the verb's meaning?

We will see in the chapters to come that in order to answer this question, we have to distinguish between the meanings of the verb stems themselves and the semantic contribution of verbal inflection. With many detours I will explore the sometimes surprising consequences of the idea that voice inflection is responsible for the introduction of external arguments, and that as a result, external arguments are not true arguments of their verbs. All by itself, this proposal is by now not news anymore. But so far, it hasn't developed much beyond a mere idea in linguistic theorizing. We still do not know how external arguments are matched up with the right kind of verbs, for example, nor what the repercussions on theories of argument structure are. Shouldn't such an idea at least lead to an explanation of the major voice alternations we observe - the different kinds of passives and middles, that is? Most importantly, crucial properties of verbal projections are now expected to be different, \square and dramatically so. For example, there is no longer a problem with quantifier phrases in object position. That oldest of all puzzles in logical

semantics has quietly disappeared. Subjects and direct objects are now expected to have sister constituents of the same semantic types. No longer can a type mismatch force direct objects to leave their base positions, then. If direct objects move to higher positions at all, a different force must be invoked to drive them. That kind of conceptual shift will take time to get used to. Too much capital has already been invested on apparent type mismatches of quantifier phrases in direct object positions. Too many apparent consequences have already been derived.

In syntax, a verb's arguments are tracked by verbal agreement morphology. Chomsky 2000 has suggested that verbal agreement features provide syntactic scaffolding for meaningful inflectional heads. In the context of the present essay, Chomsky's proposal would make us expect a tight connection between voice inflection and overt or non-overt verbal agreement morphology. What exactly would force such a connection? And what would it imply? Is it true that verbal agreement features merely provide meaningless syntactic scaffolding for notionally significant inflectional heads? Or could they have meanings of their own?

If we want to even start thinking about such issues, we have to be willing to think about the meanings of verbs in non-traditional ways. The verbs we see – surrounded by their arguments and with all their inflections tucked on – might not be the verbs that are ultimately fed to the semantic interpretation component. As semanticists, we have to find a way to unveil the meanings of bare verb stems. Only then do we have a chance to gauge the semantic contribution of verbal inflection. We have to solve what Sandro Zucchi called

“the problem of indirect access”¹. If we, like Zucchi were interested in the semantics of English tense and aspect, for example, we would have to formulate hypotheses about the meaning of uninflected, tense- and aspectless forms, even though we might never encounter those forms in reality. We have to develop experimental techniques, then, that allow us to infer the properties of bare verb roots. Some of the chapters in this book will rely on the use of such techniques. They will allow us to observe the properties of verbs during the very early stages of a syntactic derivation, crucially before any functional structure is built. We’ll find that during those early stages, verbs still lack external arguments.

The first formal semanticists inherited their beliefs about verb denotations from their logician ancestors. Events had no part in those beliefs. The denotation of a verb like **purchase**, for example, was taken to be a binary relation between individuals. The relation would be true of the pair consisting of us and those slippers, for example, just in case we purchase them. According to this view, information about the number and kind of verb arguments is part of a verb’s denotation, but the traditional insight that verbs describe events or states is gone. The importance of events and states for the semantics of verbs was eventually given theoretical recognition in the work of Donald Davidson. With the return of states and events, the question whether or not verb denotations include information about the number and kind of a verb’s arguments came back as well. It was now no longer true that, by their very nature, verb denotations had to carry all information about a verb’s argument structure.

1. Zucchi 1999.

According to Davidson 1967, a sentence like (1) below makes a statement about the existence of a past event which is a purchase of those slippers by us, and which takes place in Marrakesh.

(1) **We purchased those slippers in Marrakesh.**

The logical form of (1) would be (1'):

(1') $\exists e[\text{purchase}(\text{those slippers})(\text{we})(e) \ \& \ \text{in}(\text{Marrakesh})(e)]$.

In (1'), 'purchase' is a three-place predicate. Apart from an event argument, it has an argument denoting the agent and another one denoting what was purchased, the 'theme' or 'object' of the purchase. That is, the subject and the direct object in (1) correspond to arguments of the main predicate in the logical representation (1'), while the locative argument 'Marrakesh' is introduced by a secondary predicate, the preposition 'in'. The way Davidson reconciled the traditional view that verbs describe events or states with the logician's way of thinking about verb denotations is by adopting the logician's view and add an extra argument, the event argument. As a result, verb meanings determine a verb's arguments while also characterizing a set of events or states. Bringing events back into semantic theory immediately solved some longstanding puzzles with adverbial modification. Since then,

events have been shown crucial for the semantics of perception reports, causal constructions, aspectual operators, and plurality².

Most of the past successes of event based analyses of linguistic phenomena do not depend on Davidson's particular view on the relation between verbs and their arguments. Davidson's distinction between arguments and adjuncts was questioned by Castañeda right after Davidson's talk³, and has been given up in the work of Parsons⁴. Both Castañeda and Parsons let agent and theme arguments be introduced by independent predicates as well. Consequently, the verbs themselves express mere properties of events or states. For Parsons, the independent predicates are two-place predicates denoting general thematic relations. On this proposal, inspired by Panini and Fillmore's case grammar ⁵, (1) has the logical form (1'')

(1'') $\exists e[\text{purchase}(e) \ \& \ \text{agent}(\text{we})(e) \ \& \ \text{theme}(\text{those slippers})(e) \ \& \ \text{in}(\text{Marrakesh})(e)]$

(1'') says that there is an event that is a purchase, whose agent is us, whose theme are those slippers, and which takes place in Marrakesh. Some terminology will be useful. (1') uses what Dowty 1989 calls the 'ordered-

2. Higginbotham 1983; Hinrichs 1985; Parsons 1985, 1990; Bach 1986; Krifka 1986, 1987, 1992, 1998; Schein 1986, 1993; Lasersohn 1988, 1990, 1995, 1998; Landman 1996, 1998, 2000, and many others.

3. Castañeda 1967.

4. Parsons 1990 and earlier work.

5. Fillmore 1968.

argument method' for the association of arguments with their verb. In (1") we see what Dowty labels the 'neo-Davidsonian method'. On the neo-Davidsonian method, verbs describe events or states and arguments are associated with their verbs via secondary predicates that denote general thematic relations like 'agent of', 'theme of', etc.

Which mode of argument association is right for verbs in natural languages? Are there empirical reasons for picking one or the other option? Before trying to answer these questions, we have to reflect on what kind of questions we are asking. The theories of Davidson and Parsons are meant to be theories of logical form, where a logician's or philosopher's logical form is not the same as a syntactician's Logical Form or LF, a level of syntactic representation. For a logician or philosopher, the logical form of a sentence is an expression of a logical language that captures those features of the sentence that account for certain types of inferences. Neglecting differences of opinion relating to assumptions about the psychological reality of logical representations, Davidson's and Parsons' logical forms are akin to the semantic or conceptual structures of Bierwisch, Jackendoff or Levin and Rappaport⁶.

Parsons 1995 emphasizes that the theory presented in Parsons 1990 is a "proposal for the logical forms of sentences, unsupplemented by an account of how those forms originate by combining sentence parts"⁷. In other words, Parsons' theory is a theory of logical form that is not committed to particular claims about argument association in the syntax. Scholars who agree that a

⁶ See Bierwisch 1983, 1989, Jackendoff 1983, 1990, Levin & Rappaport-Hovav 1996, Rappaport-Hovav & Levin 1998, Speas 1990, Wunderlich 1997, and many others.

⁷ Parsons 1995, 650.

verb's arguments are associated by the ordered argument method in the syntax, for example, might still disagree about the mode of association for the arguments of the logical or conceptual counterpart of that very same verb. Here is an illustration of what such a disagreement would be about.

Quarrels without syntactic consequences	
a.	purchase $\lambda x \lambda y \lambda e [\text{purchase}(e) \ \& \ \text{theme}(x)(e) \ \& \ \text{agent}(y)(e)]$ 'e is a purchase with theme x and agent y'
b.	purchase $\lambda x \lambda y \lambda e [\text{purchase}(x)(e) \ \& \ \text{agent}(y)(e)]$ 'e is a purchase of x with agent y'
c.	purchase $\lambda x \lambda y \lambda e [\text{purchase}(y)(e) \ \& \ \text{theme}(x)(e)]$ 'e is a purchase by y with theme x'
d.	purchase $\lambda x \lambda y \lambda e [\text{purchase}(x)(y)(e)]$ 'e is a purchase of x by y'

Figure 1

In the table above, I displayed four different lexical meaning assignments for the English verb **purchase**⁸. All four proposals agree that **purchase** is a three-place predicate in the syntax. The event argument is the highest argument, the agent argument comes next, and the theme argument is at the bottom. What distinguishes the four views is their assumptions about the arguments of the logical-conceptual predicate 'purchase'. For a classical

8. If necessary, I will use boldface to distinguish between the English verb **purchase** and its logical or (lexical) conceptual counterpart 'purchase'.

Davidsonian, it would be a three-place predicate, as in option (d). For a neo-Davidsonian, it would be a predicate with just one argument, the event argument, as in option (a). Options (b) and (c) have mixed modes of association in logical-conceptual structure, a theoretical possibility. In all four cases, the syntactic behavior of the verb is expected to be the same, assuming that syntactic operations have no access to logical-conceptual representations.

Following up on earlier work (Kratzer 1994, 1996), I will argue in this essay that some neo-Davidsonian argument association is present in the syntax of verbs. Not all of a verb's arguments are syntactically associated by the ordered argument method. Most importantly, I am going to present evidence that agent arguments and other external arguments are associated by the neo-Davidsonian method in the syntax. On this proposal, the English (inflectionless) verb (stem) **purchase**, for example, is a predicate without external argument. Here are the major options for lexical meaning assignments that remain after the agent argument has gone:

Severing the external argument from its verb		
a.	purchase	$\lambda x \lambda e [\text{purchase}(e) \ \& \ \text{theme}(x)(e)]$ 'e is a purchase with theme x'
b.	purchase	$\lambda x \lambda e [\text{purchase}(x)(e)]$ 'e is a purchase of x'
c.	purchase	$\lambda e [\text{purchase}(e)]$ 'e is a purchase'

Figure 2

On proposals (a) and (b), syntactic argument association is asymmetric. The theme argument is, but the agent argument is not a syntactic argument of the verb stem **purchase**. On proposal (c), **purchase** only has an event argument. Proposal (c) might be right for certain types of verbs - those whose transitivity is derived in the syntax - but **purchase** doesn't seem to be one of those.

As for proposal (a) in figure 2, the question arises whether there is ever any genuine lexical decomposition at all, that is, decomposition of lexical items at logical-conceptual structure that is not matched by parallel decomposition in the morphology or syntax. The issue is controversial and divides the major approaches to lexical semantics. Hale and Keyser 1993, for example, argue for a lexical theory where all decomposition of lexical items is reduced to syntactic decomposition. What this might mean is stated most radically in Hale and Keyser 1999, 2002, where the argument structure of a verb is

literally identified with the syntactic structure it projects. An approach like Hale and Keyser's is incompatible with possibility (a) in figure 2 above, which has genuine thematic decomposition at logical-conceptual structure. Interestingly, in the following chapters, we'll see evidence that speaks against the existence of a general, all-purpose, thematic role like 'theme' or 'object', hence against possibility (a) as spelled out in figure 2. All by itself this does not mean that there couldn't be other, more specialized, thematic roles that introduce direct object arguments at logical-conceptual structure, of course. That is, all by itself, evidence against a general 'theme' or 'object' relation does not imply that there couldn't be any kind of logical-conceptual predicate introducing theme arguments in a neo-Davidsonian way. So other possible object relations will eventually have to be considered, too, and I will start to do so in chapter 3.

Compelling evidence for properties of logical-conceptual representations is very hard to obtain, a point that Jerry Fodor and Ernest Lepore have been making over the years⁹. I don't think the task is impossible, though. For example, I consider Schein's Argument, which I will discuss in the following chapter, a compelling argument for neo-Davidsonian association of external arguments at logical-conceptual structure. However, Schein's argument is also an excellent illustration for just how much sweat it takes to construct such arguments. They do not come your way on a leisurely walk.

A rich source of evidence for logical-conceptual decomposition is cross-linguistic comparison of lexicalization patterns, another laborious technique, which is used in Hale and Keyser's work, in Talmy 2000, and in many other

9. Fodor & Lepore 1998, 1999, and references mentioned there.

studies on lexical semantics. There is no good reason to think that it shouldn't be possible to reconstruct hypothesized universal logical-conceptual representations by comparing the ways they are sounded out in typologically diverse natural languages. The methodology followed is not too different in spirit from the comparative reconstruction techniques developed in historical linguistics. An unknown form is inferred by thinking about the general principles that would be able to produce the observed variety of forms from a common ancestor. If the grammars of different natural languages are different ways of sounding out universal logical-conceptual structures, a view implicit in theories ranging from Generative Semantics to Minimalism, we expect there to be principles for how to sound out those structures, possibly involving intermediate levels of syntactic representation. Be this as it may, there must be a point on the path from logical-conceptual representations to their pronounced counterparts where linguistic variation comes in. Complex predicates at an earlier stage of the derivation might surface as single lexical items in some languages, for example. Two or more adjacent inflectional heads might be merged into a single affix. Some stretches of an input structure might not have to be sounded out at all. This last possibility has fascinated syntacticians since the very beginnings of generative grammar, and has led to theories of empty pronouns, ellipsis, and zero-affixation.

Properties of logical-conceptual representations might also be unveiled by exploring the expected consequences of hypothetical constraints for the predicates that can appear at that level of mental representation. Constraints that have promise here, I believe, are not constraints whose violation would shut down our minds and produce mental blackouts. I am not thinking of a calculus of thinkable concepts. I am interested in constraints for 'natural denotations', denotations that children might posit for

basic lexical items without being given explicit definitions or instructions. I will explore the consequences of one such hypothetical constraint, the Cumulativity Universal, which was originally proposed by Manfred Krifka and has since been pursued extensively by Fred Landman. The version of the Cumulativity Universal that is relevant here has it that the denotations of basic predicates at logical-conceptual structure are cumulative from the very start. If there is a basic logical-conceptual predicate 'red', for example, that is true of my hat and your scarf (two singularities), then the Cumulativity Universal says that that very same predicate is also true of the sum of my hat and your scarf (a plurality). Cumulativity extends to relational predicates. If the predicate 'buy', for example, is cumulative, then whenever it relates, say, some action of yours to your scarf, and some action of mine to my hat, it also relates the sum of our buying actions to the sum of what we each bought. Suppose there was independent support in favor of the Cumulativity Universal. This would be of great importance for us since, as we will see shortly, the Cumulativity Universal immediately disqualifies the 'theme' or 'object' relation and a significant number of other object related thematic relations from being possible denotations of thematic role predicates at logical-conceptual structure, and thus at any level of syntactic representation. I will use this fact to argue that, in all likelihood, there are verbs whose direct objects are not neo-Davidsonian at any level of mental representation.

The Cumulativity Universal is far from being uncontroversial. I will thus launch a detailed defense of it in chapters 4 and 5. It will be a long and complicated argument, fed by the work of many of the key players in this popular field of investigation. The argument will be of interest beyond the issues of argument association and semantic universals, however, revealing

many not at all obvious consequences of Davidsonian event semantics including some relating to the placement possibilities of quantifier phrases and adverbials within a verb's extended projection. Last not least, the discussion of cumulativity might shed some light on the nature of verbal number agreement, and thus ultimately help us understand the connection between voice and verbal agreement. Like many longwinded arguments, then, that one too, will open up unexpected vistas into new and uncharted terrains that will guide subsequent excursions.

Returning to argument association in the syntax, what kind of facts could give us information about the way arguments are linked to their heads in that central component of the grammar? Optionality of arguments is a possible diagnostic for neo-Davidsonian association, as pointed out in Dowty 1989. Dowty notes that some event nouns do not show any real subcategorization, and suggests that this could be explained by assuming that in contrast to verb arguments, the arguments of those nouns are associated by the neo-Davidsonian method in the syntax. Here is the example he considers:

- (2)
- a. **Gifts of books from John to Mary would surprise Helen.**
 - b. **Gifts of books from John would surprise Helen.**
 - c. **Gifts of books to Mary would surprise Helen.**
 - d. **Gifts from John to Mary would surprise Helen.**
 - e. **Gifts from John would surprise Helen.**
 - f. **Gifts of books would surprise Helen.**
 - g. **Gifts to Mary would surprise Helen.**
 - h. **Gifts would surprise Helen.**

Not all event nouns behave like eventive **gift**. A number of authors, including Lebeaux 1986 and Grimshaw 1990, have observed that certain deverbal event nouns must realize the verb's direct object, as long as they preserve the original eventive interpretation of the verb. Example (3) is Grimshaw's, with minor adjustments¹⁰.

- (3) a. * **The constant assignment is to be avoided.**
b. **The constant assignment of unsolvable problems is to be avoided.**

What is it that distinguishes the noun **gift** from the noun **assignment**? It seems that the crucial difference is that in contrast to eventive **gift**, the meaning of eventive **assignment** is predictably related to the meaning of the verb it is derived from. An assignment of unsolvable problems is no more and no less than an event of assigning unsolvable problems. On the other hand, gifts of books to Mary are not just events of giving books to Mary. The books have to be gifts for Mary to keep. The noun **gift**, then, is not compositionally derived from **give**, and I suspect that this is why eventive **gift** does not have to preserve the argument structure of **give**.

If verbs have the arguments they do because they mean what they do, preservation of a verb's meaning entails preservation of its 'argument structure'. If lexical items must syntactically realize whatever arguments they have (except possibly the event argument¹¹), verbs have to realize their

¹⁰. Grimshaw 1980, p. 50.

¹¹. Whether event arguments do or do not have to be realized in the syntax is an interesting empirical question that I will leave open in this essay. We would have to

arguments, even when they are part of a nominalization - as long as the nominalization is compositional. The fact that **assign** must realize a direct object when it is part of a compositional event nominalization, then, suggests that having such an object is part of its meaning. If this is the correct explanation for the ungrammaticality of 3(a), there are consequences for external arguments as well. If external arguments were true arguments of their verbs, they, too, should have to be obligatorily realized in compositionally derived deverbal constructions. Compositional event nominalizations do not seem to have to realize the verb's external argument, however. Not overtly, that is. The situation is more complicated. In (3), the verb's external argument could still be realized as an implicit impersonal pronoun, as in the case of verbal passives:

- (4) **Too many unsolvable problems were assigned.**

According to Baker, Johnson and Roberts 1989, the presence of a verb's external argument in verbal passives is diagnosed by the fact that verbal passives do not allow a self-action interpretation of the verb. We have, for example:

- (5) a. **The children are being dressed.**
b. **The climbers are being secured with a rope.**

5(a) is not compatible with a situation where the children are dressing themselves, and 5(b) excludes a scenario where the climbers are securing

investigate anaphoric possibilities and the interaction between event, time, and situation arguments. Since I will be moving in the lower regions of the hierarchy of inflectional heads in this essay, I cannot seriously address this very important issue.

themselves with a rope. Suppose, as some have claimed, that verbal passive constructions include an implicit external argument that functions like an impersonal pronoun. 5(a) and (b) could now be likened to 6(a) and (b) respectively, and the sentences under (5) could be argued to lack a self-action interpretation for the same reasons as the sentences under (6) do.

- (6) a. **They are dressing the children.**
b. **They are securing the climbers.**

If this kind of reasoning is accepted¹², we should investigate whether compositional event nominalizations exclude a self-action interpretation of the verbs they are derived from. To find the right test cases, we have to look for nominalizations of verbs that readily admit a self-action interpretation¹³. Verbs of caring for the body¹⁴ are prime candidates. Those verbs only seem to have event nominalizations ending on **-ing**, however. As illustrated in 7(a) and (b), nominalizations ending on **-ing** do not permit a self-action reading:

- (7) a. **The report mentioned the painfully slow dressing of the children.**
b. **The article praised the expeditious securing of the climbers.**

¹². See chapter XX for more discussion of this point.

¹³. Note that mere compatibility with a reflexive pronoun is not sufficient to diagnose a self-action interpretation. See chapter XXX for extensive discussion.

¹⁴. See Levin 1993, p. 35 for a list of ‘caring for the body’ verbs. In English, some of those verbs do not require a reflexive pronoun when used to describe self-actions.

Since the embedded sentences in 7(a) and (b) are incompatible with self-action, we can conclude that event nominalizations of the kind illustrated in (7) require the implicit realization of the verb's external argument, just as verbal passives do. We should look for other deverbal constructions, then. There is at least one where the verb's external argument does not seem to be even implicitly present. Compare the following two sentences:

- (8) a. **The climbers are secured with a rope.**
b. **The climbers are being secured with a rope.**

8(a), which can be interpreted as an adjectival passive, is compatible with the climbers having secured themselves. On the other hand, 8(b), which must be a verbal passive, requires the climbers to be secured by somebody else. Following our earlier reasoning, it looks like adjectival passives are deverbal constructions where the verb's external argument can be missing. The crucial question, then, is whether or not this construction is compositional. In chapters XXX, we will look at adjectival passives in more depth and will see that, contrary to common beliefs, the meanings of adjectival passives are derived in a completely compositional fashion¹⁵.

If the verb's external argument is not obligatorily present in adjectival passives, we might be tempted to weaken the requirement that lexical items must syntactically realize all of their (non-event) arguments. Maybe there is an operation that eliminates or 'suppresses' external arguments under certain conditions, a mechanism that has traditionally been assumed to be part of 'passivization'. Within an event semantics, another possible

15. See also Kratzer 2000.

explanation is available, however. External arguments might be neo-Davidsonian in the syntax, hence might not be true arguments of their verbs at all. If this was so, we might be able to account for the occasional absence of a verb's external argument without having to give up the hypothesis that lexical items must realize their (non-event) arguments wherever they occur.

I will slowly build a case for neo-Davidsonian association of external arguments in the syntax. We will then have to figure out what it is that forces the presence of a verb's external argument in just the right range of constructions. What will gradually emerge in the course of our investigation is a new perspective on voice alternations and passives. It's not that some mishap befalls external arguments that makes them fade or disappear when their verb is passivized. When external arguments are missing, I suggest, we are at a stage of the syntactic derivation where they are not yet there. We just haven't yet projected enough functional structure. The same kind of explanation will be given for cases where external arguments have to be there, but aren't yet able to be fully there. They might have to be realized by an unpronounced impersonal pronoun or a prepositional phrase, for example. In those cases, the story will go, not enough functional structure has been projected to give those arguments what they need to appear as full-fledged DPs.

Reduced relatives can serve as a first illustration motivating the suggestion that external arguments enter as we are projecting more structure. In German, we have contrasts like the following:

- (9) a. **Die schön gekämmten Kinder**
The nicely combed children
(Compatible with self-action)

- b. **Die gestern gekämmten Kinder**
 The yesterday combed children
 'The children who were combed yesterday'
 (Incompatible with self-action)

8(a) is, but 8(b) is not compatible with the children having combed themselves. Using Baker, Johnson, and Roberts' diagnostic, we can conclude that an external argument must be present in 8(b), but not necessarily in 8(a). 8(a) has a manner adverb, 8(b) comes with a temporal adverb. Temporal adverbs must precede manner adverbs in German, showing that they occupy a higher position than manner adverbs:

- (9) a. **Ich hab' dich gestern schön gekämmt.**
 I have you yesterday nicely combed.
 I combed you nicely yesterday.
- b. * **Ich hab' dich schön gestern gekämmt.**
 I have you nicely yesterday combed.

The same conclusion can be drawn from the topicalization contrasts in 10(a) and (b):

- (10) a. **Schön gekämmt hat er dich nicht.**
 Nicely combed has he you not.
 'He didn't comb you nicely yesterday.'
- b. * **Gestern gekämmt hat er dich nicht.**
 Yesterday combed has he you not.
 'He didn't comb you yesterday.'

Manner adverbs can, but temporal adverbs cannot be topicalized along with the verb. The adverb in 8(b), then, seems to require more verbal structure to

be projected than the adverb in 8(a). Whatever that extra structure is, it obligatorily brings along the external argument.

Schein 1993 presents data of a very different kind in support of neo-Davidsonian association of verb arguments. In a nutshell, what Schein does is confront us with a reading of a type of sentence for which, according to him, appropriate logical representations can only be derived if verb arguments are neo-Davidsonian not only at logical-conceptual structure, but also in the syntax. In the following chapter, I will critically examine Schein's case. The result of my investigation will be that Schein's examples do indeed provide evidence for neo-Davidsonian association of verb arguments, but only for external arguments, and only for logical-conceptual structure, not for the syntax. Arguments for the syntactic independence of external arguments have to come from a different source: the properties of nominalizations and participles, and the range of possible voice alternations, for example.