

Nominalizations: A Probe into the Architecture of Grammar Part II: The Aspectual Properties of Nominalizations, and the Lexicon vs. Syntax Debate

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Abstract

In this paper I will present two approaches to the aspectual properties of nominalizations by comparing lexical and syntactic approaches to one another. In addition, I will highlight some open questions in this area.

1. Introduction

In this part, I will sketch two approaches to the aspect sensitivity observed in 5.2 and 5.3 in part I, by comparing a lexical approach to a syntactic one, in its different instantiations. The lexical framework will be the one put forth by Lieber (2004), while recent work within Distributed Morphology (DM), as well as work by Borer (2005), and Fabregas (Forthcoming based on Ramchand 2008), will be the representatives of the syntactic framework. I will first introduce the basic assumptions made by the lexical approach and the various syntactic approaches and then highlight how each of them can capture the above facts. The reason for choosing these models has to do with the fact that a) explicit solutions to the empirical observations discussed in the previous paper have been phrased within these frameworks and b) they do share some common ground concerning event classification that makes it easier to compare them to one another.

2. A Lexical Treatment of Aspect Sensitivity

Let me summarize the main observations in section 5 of part I. Across languages, we find two patterns of interaction between nominal affixes and aspect: on the one hand, we find nominalizations that are sensitive to a particular inner aspectual verbal base. On the other hand, we find nominalization patterns that trigger aspectual shifts, similar to what we know from the verbal domain (e.g. progressive).

How can different theoretical frameworks account for these phenomena? In the following, I will first discuss Lieber's lexical morphology, and then turn to syntactic treatments of the nominalization facts.

2.1. LIEBER (2004): MORPHOLOGY AND LEXICAL SEMANTICS

The main aspect of Lieber's model that is of interest to our discussion is the claim that all affixes make a semantic contribution to their bases. The idea is that if derivation creates novel lexemes extending the morphologically simplex lexicon, derivational suffixes will cover the same semantic spaces as simple lexemes. In particular, co-indexation is

employed, which is a mechanism which ‘allows us to integrate the referential properties of an affix with that of its base’ (Lieber 2004: 45) and corresponds to the integration of different parts into a single referential unit.

The primitives of word formation are thus bases and affixes, and Lieber argues that the lexical semantic representation of lexemes (and of affixes, at least to a certain extent) is composed of two parts: a semantic/grammatical *skeleton* and a semantic/pragmatic *body*. The distinction *skeleton-body* roughly parallels the one proposed in Levin and Rappaport Hovav (2003) between event structure template and root (cf. the next sub-section) and is therefore an optimal instrument for representing the lexical decomposition of verb meaning in a way that is comparable to syntactic approaches. Lieber's model employs distinct features, which can be used both in an equipollent and a privative way to cross-classify ontological and semantic classes. The two features she proposes are [$\pm$ material], defining 'substances/things/essences' and [$\pm$ dynamic], identifying 'situations' (terms referring to nouns and verbs/adjectives, respectively). In addition, following Williams (1981), Lieber assumes that all nouns contain a Referential (R)-argument; this is the external, non-thematic argument of nouns that expresses the variable contributed by the noun.

As an illustration of how this system works, consider the noun *writer* (based on Lieber 2004: 68). *-er* forms denote concrete dynamic nouns and impose no semantic restriction on the argument of the base with which it is linked. The co-indexation principle in (1) always links the affixal R argument to the highest base argument. In the case of *writer*, the *-er* derivative absorbs the thematic interpretation of the verbal base argument, namely an agent:

- (1) In a configuration in which semantic skeletons are composed, co-index the highest non-head argument with the highest head argument. Co-indexation must be consistent with semantic conditions on the head argument, if any.
- (2) writer
 [+material, dynamic ([i], [+dynamic ([i], []))]
 -er write

2.2. ASPECTUAL SENSITIVITY IN LIEBER'S SYSTEM

In Lieber's system, the feature $\pm$ dynamic distinguishes between states and events. Lieber, following Verkuyl (1993), assumes that telicity does not arise in the lexicon but at a higher level of syntactic–semantic composition. Thus, as Lieber's system is designed to capture lexical facets, the only distinction among EVENTS she marks out is between SIMPLE ACTIVITIES and events implying a CHANGE of position or state. The relevant feature introduced to make this distinction is IEPS, Inferable Eventual Position or State. [+IEPS] verbs denote a change of state or position along a directed Path (as in the case of inherently directed motion verbs, or other inchoative/unaccusative verbs), while [–IEPS] verbs refer to dynamic situations associated with a random Path (as in the case of manner of motion verbs).

Melloni (2007) offers a comprehensive discussion of this system and demonstrates how one can model Italian nominalizations by building on Lieber's insights (see also Uth (2008) for French). First of all, Melloni argues that nominal affixes share a similar skeleton and are semantically interchangeable, although each of them is (idiosyncratically) associated with a verbal base. In particular, the event suffix skeleton is as in (3):

- (3) [material, dynamic ([], <base>)]

We saw in the previous part that certain affixes in Italian are sensitive to the type of base verb involved. Melloni draws a three-way distinction between Italian affixes: (i) there are affixes that inherit the inner aspect properties of the base verb, e.g. *-zione*; (ii) affixes that modify the inner aspect of the verb, e.g. *-ata*, and (iii) those that show a particular preference for a certain inner aspect class, e.g. *-enza*. Let us consider the first case here. If a verbal skeleton contains [+IEPS] (or other features), it is expected that the corresponding nominal will also preserve the content of this featural specification, as in (4):

- (4) *costruzione* ‘construction’
 [–mat, $\pm$ dyn ([_i]_E, [+dynamic, +IEPS ([_i]_{E1=E2}, [], [D-PATH]))]
-zione_E costruire

But *-enza* attaches only to stative verbs. A way to express this sensitivity would be to suggest that this affix has to be classified as [–dynamic], and hence is only compatible with [–dynamic] bases.

Concerning *-ata*, one could argue that it functions as a bounding operator, i.e. contributes lexical information to the base it attaches to.

3. Syntactic Approaches to Aspectual Sensitivity

All syntactic approaches to nominalization (would) propose that what was described here as outer aspect sensitivity could be captured by making use of an Aspect Phrase in the syntax, i.e. the locus of $\pm$ bounding operators. But how is inner aspect syntactically represented? Let us consider some alternatives here.

3.1. DISTRIBUTED MORPHOLOGY

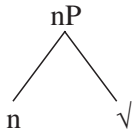
DM is a morphological theory that holds that syntax creates complex objects out of two different types of morphemes, *Roots* and *functional morphemes*, corresponding for the most part to the lexical and functional categories of syntactic theory. The Roots are assumed to be category-neutral. They are categorized in syntactic structures by *category-defining* functional heads: *v*, *n*, *a*, etc., to yield ‘verbs’, ‘nouns’, ‘adjectives’.

For the most part, work on nominalization within DM seeks to explain the observations made by Chomsky (1970) concerning form and idiosyncrasy, see Embick (Forthcoming), Marantz (1997), Harley and Noyer (1999). However, Alexiadou (2001, 2009) and Harley (2009) point out that the DM system should be adapted to capture the distinction introduced by Grimshaw (1990). Naturally, it should also offer an explanation for the observations made in section 5.2 and 5.3 in part I. In what follows, I show how this can be carried out.

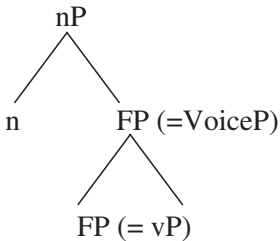
First, the distinction between gerunds and derived nominals is negotiated on the basis of the height of attachment of the nominalizing head. There are two possibilities, either *n* attaches directly to the root (5), or it attaches on top of functional categories that introduce arguments (6) (to be specified below). Root attachment is responsible for idiosyncratic form and interpretation (Embick Forthcoming), ‘high’ attachment forms e.g. gerunds. See also the similar-in-spirit analyses of nominalizations in Abney (1987), Piccolo (1991), van Hout and Roeper (1998), and Borsley and Kornfilt (2000). Note that high attachment can be variable, i.e. the number of functional projections below the nominalizing head is not fixed, thus accounting for the different sub-types of nominalizations across languages (see the aforementioned references and recent work by

Alexiadou, Iordachioaia & Soare (to appear), and Alexiadou, Iordachioaia & Schäfer (to appear)):

(5) *n* is Root-attached:



(6) *n* is not Root-attached:

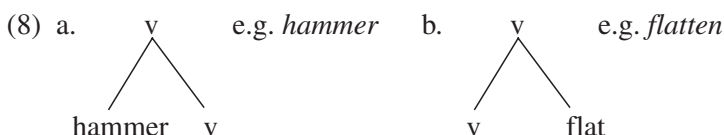


In Alexiadou (2001), the height of attachment was responsible for the distinction between AS and R nominals: (5) was the structure for R-nominals, while (6) was the one for AS nominals (for recent modifications, see Alexiadou 2009; Harley 2009).

DM approaches do not posit aspect-related projections for the introduction of arguments, as is the case in e.g. Borer (2005) and Travis (forthcoming). Concerning the external argument, more recent DM papers rely on the so-called Voice hypothesis of Kratzer (1996), which says that VoiceP is the locus of introduction of the external argument (see Alexiadou et al. (2006), and Alexiadou et al. (2009) for nominalizations). Concerning the internal argument, it is assumed that either this is introduced by particles/PPs (Marantz 2005) or by small clauses in the case of change of state verbs, Embick (2004).¹ Roughly, the representation of a verbal structure is as in (7), based on Alexiadou et al. (2006):

(7) [VoiceP [vP [Root]]]

The presence of argument structure within nominals can only follow from the presence of functional layers that introduce such arguments, which are identical to those of verbs. What about the inner aspect distinction? Inner aspect classification is partly determined on the basis of a sub-classification of roots into manner and result ones (see Levin and Rappaport Hovav 2003 and subsequent work) and mostly on their point of merge (Embick 2004; Roßdeutscher Forthcoming). Specifically, there are two ways in which roots combine with *v*, shown in (8a–b): (i) (manner) roots such as *hammer* are merged as modifiers of *v*; in this case, we have a mono-eventive/activity structure. (ii) (Result) roots such as *flat* are merged as complements of *v*. In this case, we have a bi-eventive, telic structure.²



3.2. SYNTACTIC REPRESENTATIONS OF EVENT STRUCTURE

Borer (2005), similarly to linguists working within DM, assumes that word formation manipulates items which are not associated with any formal grammatical information concerning category or argument structure. Borer labels them Encyclopedic items (EIs). An EI is a category-less, argument-less concept, although its meaning might give rise to certain expectations with respect to a felicitous context. EIs receive a category specification in a particular context. Concerning nominalizations, Borer (2005) argues that AS nominals are derived from the presence of a nominal structure above an argument structure event complex, e.g. as in (9):

(9) [N -ation/-ing [E(vent)P/Aspect of QuantityP [Lexical domain ... L.]]]

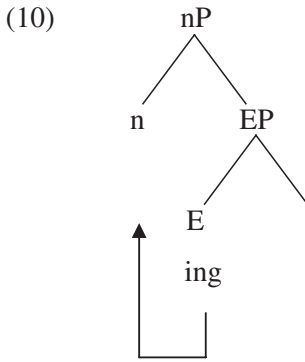
In (9), ASPQ as well as EP are verbalizers, while R-nominals are derived from the presence of a nominal structure directly above the EI.

Borer's analysis of nominals is based on a theory of verbal aspectual classes that can be summarized as follows: as EIs do not in and of themselves have arguments, by assumption, argument structure, an event complex, emerges through functional syntactic structure, which has the effect of 'verbalizing' a lexical domain. Two such functional heads are of importance: ASPQ ('quantify aspect') and Event. A DP in Spec,ASPQ is assigned a *subject-of-quantity* interpretation, in essence equivalent to an interpretation associated with undergoing a structured change (telicity). The second one is EventP, which comes in different flavors. For instance, eventive verbs, e.g. activities/accomplishments, would include an EP interpreted as a process, while it would denote a state for stative verbs. In Spec, EP a DP is assigned the role of an e.g. *originator* (of a non-stative event).

A proposal similar in spirit has been put forward by Ramchand (2008) who identifies the relevant projections for the introduction of arguments as follows: a) *initP* introduces the causation event and licenses the external argument ('subject' of cause = INITIATOR); b) *procP* specifies the nature of the change or process and licenses the entity undergoing change or process ('subject' of process = UNDERGOER); c) *resP* gives the 'telos' or 'result state' of the event and licenses the entity that comes to hold the result state ('subject' of result = RESULTEE).

3.3. ACCOUNTING FOR INNER ASPECTUAL SENSITIVITY IN NOMINALIZATION IN SYNTACTIC MODELS

As syntactic approaches to verb classification assume that the particular event interpretation of the verb arises through the different layers in its functional constitution, one could assume that the English nominalizer *-ing*, that this realizes one of the inner Aspect heads, namely process; this would explain its inner aspect sensitivity of. See (Borer 2001, 2005), Fabregas (Forthcoming) for proposals along these lines. This would mean, however, that the affix would have to move to n, as illustrated in (10), because the whole construction is nominal. As Borer argues in detail, *-ing* is first projected within the domain of inner aspect (EP, her process head) and then moves to n, as it is inherently nominal to check N/D features.



A similar analysis could be phrased in Ramchand's system, see Fabregas (Forthcoming), who argues that nominalizing affixes could spell out any of the three verbal heads in Ramchand (2008), thereby giving rise to different interpretations that are sensitive to inner aspect, prior to movement to a nominal head. In particular, *-ing* could be seen as realizing both process and initiator.

A problem that arises with the movement analysis has to do with the simple fact that, in languages such as English, there are special affixes realizing inner aspectual heads and these appear inside the nominalizer, e.g. *-ify*, see (10) (Alexiadou 2009; Harley 2009). On a strong decomposition view, *-ing* should realize some other, additional, head, and the only movement that takes place is the movement of the v-complex to the nominal head:

(11) humid-if-y humid-if-ying

In DM-based approaches, the solution that has been proposed is as follows: *-ing* is a nominal head, *n*, that selects a VP (VoiceP-vP- Root complex) of a particular inner aspect. That *-ing* nominals contain Voice is evidenced by the following test discussed in Kratzer (2003):

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

As the embedded sentences in (12a) and (12b) are incompatible with self-action, we can conclude that event nominalizations of the kind illustrated in (12) require the implicit realization of the verb's external argument, just as verbal passives do, see Kratzer (2003) for details.

The inner aspect classification is the result of the v-Root combination. Activities involve a manner root being merged as a modifier of *v*, while telic predicates involve a stative root being merged as the complement of *v* (within a ResultP; see Embick 2004 for details).

How does the inner aspect sensitivity of the affix come about? To this end, the nominal structure must 'copy/see' the information within the VP. The structure of noun phrases contains, in addition to DP, a number of functional projections (see Alexiadou et al. 2007 for an overview), specifically a NumberP (Ritter 1991) and a Classifier Phrase ((Borer 2005), Picallo (2006)) among others. It has been argued that the nominal projection that 'copies' the aspectual information is ClassifierP. In particular, Alexiadou et al. (2010, to appear), following the idea that verbal inner aspect corresponds to the nominal classifier, as argued for by Fassi Fehri (2005), have proposed that the nominal system sees

the inner aspect classification under a [$\pm$ count] feature on ClassP, which then feeds pluralization. ClassifierP is the projection that provides information about the mass vs. count character of the nominal. The feature [+count] is meant to provide precisely the syntactic specification of a nominal as being [+countable]. The authors take this feature to be available for both events and common nouns: it is present on telic AS nominals and on count nouns, which are capable of undergoing pluralization, an issue I will be discussing in the next section.

The status of the ClassP has been controversially discussed in the recent literature. Borer (2005) has argued that it hosts plural morphology, while Picallo (2006) suggests that it hosts gender and declension class information. But if *n* makes the structure nominal, gender/class information should be on *n*. This suggests that ClassP (or AtomP in Chierchia (2008) or AspP in Wiltschko (2009)) is the locus of the semantic distinction mass vs. count. This implies that the features in ClassP have to match those within the VP, via an Agree-like mechanism (Alexiadou Forthcoming), but cf. Kleemann-Krämer (2009) for a different analysis.

4. Some Remarks on Number and Aspect

Mourelatos (1978) was among the first to observe that nominalizations derived from telic predicates can be pluralized, while those derived from atelic ones cannot be pluralized and behave like mass nouns. Grimshaw (1990) suggested that all AS nominalizations are mass and hence cannot pluralize, but Borer (2005), Meinschaefer (2005), Roodenburg (2006), Melloni (2007), and Alexiadou et al. (2010) have all confirmed Mourelatos's observation.

In terms of the nominalizations we are interested in, this suggests that *-ing* of/mixed nominals as well as e.g. *-m-* nouns in Greek do not pluralize, which is indeed borne out. This was discussed by the aforementioned authors and is illustrated in (13).

- (13) a. There were three late arrivals of a train.
 b. There was (*a) pushing of the cart by John.
 c. There was one pushing of the cart to New York by John.

However, there are other types of nominalizations that do not pluralize, e.g. the English gerund, and this cannot be attributed to the fact that it is based on a particular kind of predicate, as it is blind to the inner aspect properties of the base, see (14):

- (14) John's pushing(*s) the cart to New York

In this connection, it is important to recall Chomsky's discussion of gerunds. As he pointed out, gerunds seem to lack nominal internal structure, as they cannot be modified by adjectives, cannot be introduced by determiners, and lack plural morphology. This suggests that gerunds lack ClassP and NumberP and contain only aspect, realized by *-ing*. But then this implies that the gerund *-ing* is actually different from the nominalizer *-ing*. The gerund *-ing* realizes an aspect head, while the nominalizer *-ing* heads *n*. But why should that be so?

I will turn to that in the next section. Before doing so, however, let me address the Number/Aspect incompatibility. Our question is if *-ing* instantiates progressive aspect in the gerund construction, why should that be incompatible with Number? First of all, Number is a nominal property, so it can only apply to structures that contain *n*. As gerunds lack *n*, they cannot be marked by Number. Second, Number and Aspect contribute similar semantic information: plural Number states the entity is more than one

(cumulative); progressive aspect that the activity is ongoing. In systems such as Jackend-off's (1991), this similarity is captured by the feature [$\pm$ boundedness]. See also Engelhardt (2000).

Hence the following picture emerges, which constitutes an important result in the study of nominalizations: there are significant similarities between nominal NumP and verbal AspP (which are similar in introducing $\pm$ boundedness) and between ClassP and inner aspect. The interaction between nominal and verbal projections in nominals indicates that similar features have a similar distribution within internal projections across categories. This first supports the parallelism hypothesis concerning DPs and CPs in its modern instantiation beginning with Abney (1987) and second provides us with important evidence concerning the division of labor between the two types of projections.

(15) illustrates the projections that could be relevant for nominal structure, based on Alexiadou (Forthcoming), Alexiadou, Iordachioaia & Soare (to appear), Alexiadou, Iordachioaia & Schäfer (to appear):

- (15) a. [DP ([NumberP [ClassP [nP [VoiceP [vP] [Root
 b. [DP [AspectP [VoiceP [vP [Root

5. Open Questions

In this section, I will briefly highlight issues that, in my opinion, either have not been successfully accounted for/implemented or constitute domains that we do not fully understand.

First, consider the issue of Case within derived nominals. Three paths have been pursued in the literature, but none of our implementations comes close to the richness of the work and the progress that characterizes our understanding of Case in the verbal domain. One is that the arguments of the derived nominal are assigned structural Case from the nominal functional projections within the DP, e.g. Class or Number (or Agr_{gen} in Siloni 1997). A second view suggests that Case on internal arguments of derived nominals is assigned similar to Case on internal arguments of their related verbs; the internal argument surfaces with genitive, as the nominalization affix absorbs accusative (van Hout and Roeper 1998). A third way is to assume that nouns inherently Case-mark their arguments. Clearly, the third view is not maintainable in a syntactic approach to nominalization.

But if Case in nominals should make use of the tools that have been put forth for verbal arguments within the minimalist program (Chomsky 1995), it is not clear how the first two proposals can be implemented, cf. Pesetsky and Torrego (2004) for an attempt. What are the phase heads in the nominalization? D? n? What about the heads below and above n? Is a possible solution the claim in Marantz (1991) that case realization is a morphological property of the clause as a whole? Features such as nominative, accusative, and genitive do not belong to the computational system, which sees only the formal feature [+Case]. Spelling out this Case feature as nominative or accusative or genitive is a matter for PF. Genitive is the default form within the nominal domain (or the n phase). If Aspect is responsible for the assignment of accusative, as it is often assumed, could Class or Number be the relevant projections for genitive assignment?

Baker and Vinokurova (forthcoming) have recently argued that both the Marantz view and the Chomskian view on Case via Agree are correct. In Sakha, a Turkic language they discuss, they argue that dative and accusative are dependent cases (cf. Marantz 1991), while nominative and genitive are assigned by the functional heads T/I and D, respectively, via Agree. See also the contributions in Kornfilt and Whitman (Forthcoming).

Consider also the ambiguity observed by Grimshaw (1990) between AS and R nominals in connection with the observation that atelic AS nominals become R nominals under pluralization. Is this a typical case of coercion, as Harley (2009) argues? Or do we have to assume that R-nominals are root nominalizations (see Borer 2003; Alexiadou 2001; but cf. Alexiadou 2009 and Harley 2009 for a different view)? What does number do exactly?

I mentioned in the previous section that only things that can be atomized surface with plural morphology. For derived nominals, the relevant domain for determining singularity would be the VP level. But these nouns contain a VP layer that has cumulative reference. Assuming that cumulativity is akin to plurality would lead us to postulate that a plural form cannot further pluralize. The only way to turn the predicate into an atomic/+count one would be at the VP level, which is only possible if we add material that provides an endpoint (see (15)). In case this does not happen, the ClassP is marked [-count] and as a result no plural morphology can surface. A [+count] specification shifts the interpretation of the input noun to a countable one; but for the nP to be countable it must be void of argument structure, because only under that structure can the noun be viewed as an entity. Is it then the introduction of unit/singularity at the ClassP level that is responsible for the shift in interpretation (see Alexiadou *Forthcoming*, Borer *forthcoming* for further discussion)?

Moreover, all analyses that assume n/N heads to be involved in nominalization also implicitly assume, as Borsley and Kornfilt (2000) argue, that once nominal layers are introduced above the verbal layers, the projection cannot change again into a verbal one. But why should that be so? Does it relate again to phase status of n? Could this be derived from general principles of grammar?

A final issue: why does the noun not obligatorily occur with arguments? Or, in other words, if arguments are not contained within the base, but are rather introduced by functional layers, this being obligatory for the root when it becomes a verb,³ why is it optional for the root when it becomes a noun? Does it have to do with Tense and finiteness, in the sense that verbs cannot appear without temporal reference?

6. Conclusion

In this paper, I have focused on some recent observations concerning the interpretation and aspectual properties of nominalization. As was the case with the first part, part II has only reviewed some core issues concerning the phenomenon at hand, concentrating on only a restricted number of possible analyses of the core data.

As a general conclusion, our concern and preoccupation with nominalizations is indicative of a deeper issue, namely that of the division of labor between the syntactic component and the Lexicon. It is the area where the modularity question keeps being raised: why should there be two sorts of mechanisms in grammar for combining atomic units of structure and meaning, one operating within words and one operating between words in sentences?

As was the case with participle formation, see e.g. Wassow (1977), Kratzer (2000), Anagnostopoulou (2003), and Embick (2004), a series of arguments were presented for nominalizations in favor of a syntactic approach. This clearly does not mean that the debate has been settled. But it does suggest that we now have richer descriptions and perhaps a deeper understanding of word formation processes.

Rich syntactic analyses of nominalizations are often confronted with the ‘accusation’ that they re-introduce ideas found in Lees (1960) or in the literature on generative

semantics, as Newmeyer (2008) critically observes. But is this really the case? The crucial characteristic of these early approaches was the appeal to a sentential base from which the nominalization emerged via certain transformations. This is not the current understanding of the syntax of nominalization. Current understanding suggests that we use the same machinery we have to derive words as we do to derive sentences (merge and move), but the two do not stand in any derivational relationship with one another. The noun is not quite like the verb, simply because the units that participate in its composition differ from those that participate in the composition of the verb in ways that future work will make more precise.

Short Biography

Artemis Alexiadou's research interests lie in theoretical and comparative syntax with special focus on the interfaces between syntax and morphology and syntax the lexicon. Her books include *Adverb Placement* (Benjamins 1997), *Functional structure in nominals* (Benjamins 2001), *Noun phrase in the generative perspective* (co-authored with Liliane Haegeman and Melita Stavrou, Mouton de Gruyter 2007). She is currently Professor of Theoretical and English Linguistics at the University of Stuttgart. Before coming to Stuttgart, she has held research positions in Berlin and Potsdam, taught at the University of Tübingen, and has been a Heisenberg Fellow at MIT, Princeton and University of Pennsylvania. She holds a BA from the University of Athens, an MA from the University of Reading, and a Ph.D. from the University of Potsdam.

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Notes

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¹ In early DM work, it was assumed that the internal argument was introduced by the root.

² As Embick notes, on this view, verbalized adjectival Roots, like flat in *flatt-en*, and resultative secondary predicates, like flat in *John hammered the metal flat*, appear in different structures. In the latter, *hammer* merges with *v*, as its modifier, while *flat* is the complement of the *v* head. When the root merges with *v*, it specifies the means according to which the state is achieved.

³ Here I abstract away from the issue of genericity. As Mittwoch (2005) shows, in habitual sentences a large range of verbs permit unspecified objects to be dropped. For instance, objects can be absent in verbal constructions even with core transitive verbs (i), which normally cannot appear without their internal argument.

(i) The sewing instructor always cuts $\emptyset$ in straight lines.

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