ARGUMENT STRUCTURE FOR THE 21ST CENTURY

NOMINALIZATION

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WHY STUDY NOMINALIZATION?

- As nouns and the verbs they are derived from are (morphologically & semantically) related, we need to understand this complex relationship.

- We further need to understand how the mixed verbal and nominal properties of nominalizations come about and how deverbal nouns differ from verbs.

- By doing so, we probe into the building blocks of meaning.

- Importantly, we test and enrich theories of argument structure (AS), as the question of whether or not nouns like verbs have AS is an issue of controversy.
Some Consensus

- Nominalization is not a unified process
  - variation in patterns within and across languages, e.g. *Remarks on Nominalization*, discussing Lees's (1960) empirical domain: English gerunds and derived nominals

- Numerous studies of typologically diverse languages:
  - There is a lot of variation when it comes to the amount of nominal and verbal properties characterizing different nominalizations
  - Typically, as Chomsky (2020: 28) notes, one category of nominalizations is unproblematic, but applying the same mechanisms to all types of nominalizations is challenging/controversial
SOME QUESTIONS ABOUT AS

- **Question I:**
  Does AS in nominals emerge differently than in the verbal domain?

- **Question II:**
  Why need arguments not be present in nominalization?

- **Question III:**
  Why are nominal arguments encoded differently from verbal arguments, e.g. PPs/genitives?
SOME ANSWERS

- **Answers to Question I (emergence of AS):**
  - NO: some version of the VP within nominals hypothesis, event structure in nominalization
  - YES: irrespectively of whether or not there is a verbal source in the nominalization

- **Answers to Question II (obligatoriness of AS):**
  - Grimshaw (1990): once we concentrate on a particular type of nominals, presence of AS obligatory

- **Answers to Question III (encoding of arguments):**
  - passive like structures
  - nominal structure responsible for the different encoding of (certain) arguments
Recall Ramchand's contribution earlier

The view that nouns lack ordered arguments rejects


There must be at least one argument XP in the syntax per subevent in the event structure

In light of Ramchand's discussion, it is important to address the question of whether or not nouns just like verbs may express events of certain complexity, which in turn means that they are subject to the same principles guiding the emergence of AS
Nominals are three-way ambiguous

- Nouns denoting complex events (CENs), *the examination of the students*, like verbs have AS: they denote events which can be broken into aspectual subparts
- Nouns denoting simple events (SENs) such as *trip* and *race* do not have AS
- Result nominals (RNs) can be both derived or non-derived and do not have AS
- Contrast between nouns that have AS (ASNs) and those that do not (RNs including both SENs and RNs) (Zubizarreta 1987, Borer 1993)
<table>
<thead>
<tr>
<th>RNs</th>
<th>ASN</th>
</tr>
</thead>
<tbody>
<tr>
<td>No obligatory arguments</td>
<td>Obligatory arguments (where relevant)</td>
</tr>
<tr>
<td>No necessary event reading</td>
<td>Event reading</td>
</tr>
<tr>
<td>No agent-oriented modifiers</td>
<td>Agent-oriented modifiers</td>
</tr>
<tr>
<td>Subjects are possessives</td>
<td>Subjects are arguments</td>
</tr>
<tr>
<td><em>by phrases</em> are non-arguments; in Spanish, selects de</td>
<td><em>by phrases</em> are arguments; in Spanish, selects <em>por</em> where typically licit</td>
</tr>
<tr>
<td>No event control (implicit argument control)</td>
<td>Event control (implicit argument control)</td>
</tr>
<tr>
<td>No aspectual modifiers</td>
<td>Aspectual modifiers such as for three hours; in three hours</td>
</tr>
<tr>
<td>Modifiers like constant and frequent only with plural</td>
<td>Modifiers like frequent may occur without plural</td>
</tr>
<tr>
<td>Post-nominal genitives possible</td>
<td>Post-nominal genitives impossible</td>
</tr>
<tr>
<td>Pluralize, allow one, a, that determiners</td>
<td>Do not pluralize, do not allow one, a, that determiners</td>
</tr>
<tr>
<td>May be predicates</td>
<td>may not be predicates</td>
</tr>
</tbody>
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Grimshaw's diagnostics, adapted from Alexiadou & Borer (2020: 11)
- SENs: problematic, as they denote events but lack AS, Borer (2013), Moulton (2014)
- Diagnostics do not hold cross-linguistically or within a language:

(2) I heard of repeated **killings** of unarmed civilians.
- This criterion needs to be relativized to take (a)telicity into consideration: nominalizations of atelic predicts resist pluralization
- Cross-linguistic differences with respect to plurality, Roedenburg (2010)?
SOME ISSUES

- Nominals more flexible than predicted by this typology
  (Grimm & McNally 2013, their examples below, Lieber 2016):
  - *aspectual PPs with synthetic compounds*
  (3) Rosenblatt and co-authors (1987) also reported that at least 40 mg/L ClO\textsubscript{2} gas treatment for one hour... (COCA)
  - by phrases in the absence of an internal argument
  (4) How does a country recover from 40 years of destruction by an unchallenged tyrant? (Newsweek)
1. We sharpen the notion event complexity, as in Ramchand's contribution.
2. We re-consider SEN formation (Alexiadou 2009, Harley 2009, Borer 2013) and SEN semantic composition (lack of sub-event complexity, Moulton (2014));
3. We re-consider the relationship between Aktionsart and Number and between nominal and verbal layers in nominals.
5. We study other languages, as of and by are independently allowed in English nominals, e.g. *a book by Chomsky, a tale of two cities* (Alexiadou 2001, Borer 2013, Fabregas 2014; Greek, Hebrew, Spanish).
HOW DOES AS EMERGE IN NOMINALS?

- The verbal/complex event substructure hypothesis:
  - Only nominalizations that have a complex event structure can have arguments
  - The complex internal structure of verbs, along the lines of Ramchand's presentation, is included within nominals
  - Those nominalizations that have arguments do so because they contain verbal layers that realize this event complexity, as in Harley's contribution

WHAT ABOUT RNS?

- Nouns that lack aspectual subparts may combine with other nouns
- Several proposals in the literature on possession and relational nouns
  (e.g. Barker (1995), Partee & Borschev (2000); syntactic research following Kayne (1993); Baker (2003), Den Dikken (2006), Adger (2013), Myler (2016) and many others)

(5) John's dog ≠ the building's construction
- Genitives in ASNs differ from possessors, Grimshaw (1990: 97):
(6) *The construction was the building's. vs. The dog is John's.
A STRUCTURE FOR ARGUMENTS IN NOMINALS

adapted from Alexiadou & Borer (2020: 9);

FP1/FP2 neutral with respect to labelling; phrasal layers as opposed to complex N-V head, Wood (2020)
- Basic units of word formation, roots in combination with functional heads
- Nominalization involves combination of layers introducing arguments (and maybe other functional layers) with nominalization affix at the n/N layer or with D (for clausal nominalization)
- Hierarchical representation of argument positions correlating with the hierarchical position of the subevent they are related to; Roots do not introduce arguments
ARGUMENTS IN NOMINALS

- **FPI_{ex.Arg} and FP2_{int.Arg} both present in nominalization:**

  (8) John's destroying the manuscript shocked his publisher.

- **Only FP2_{int.Arg} present in nominalization:**

  (9) The destruction of the manuscript shocked the publisher.

- **Neither FPI_{ex.Arg} nor FP2_{int.Arg} present in nominalization, not an ASN:**

  (10) Hurricane Dorian leaves a terrible destruction in Bahamas.
  
  (https://www.washingtonpost.com)
(11) *The Functional Nominalization Thesis*

Nominal properties of a nominalization are contributed by a nominal functional projection. The nominalization has verbal properties below the nominal functional projection, nominal properties above it.


- 'a nominal functional head selects a verbal projection and “closes off” the verbal properties of the structure: It is verbal below that point and nominal above.'

(Kornfilt & Whitman 2011: 1298)
HEIGHT OF AFFIXATION

- Functional sequence
  \[(12) \ CP > TP > \text{AspectP} > \text{FP1} > \text{FP2}\]

- Height of nominalization affix leading to a rich typology of nominalizations, cf. Hoekstra's (1986) idea of different levels of projection; in addition to argument introducing heads, other functional categories may be present
  - Low vs. high nominalizations
  - High nominalizations = several verbal properties, include Aspect, TP or even CP
  - Low nominalizations = fewer verbal properties, include maybe both FP1 and FP2 or only FP2
CORRELATIONS

- The more verbal the properties, the more likely it is that both FP1 and FP2 will be present (functional sequence in (12))
- The less verbal the properties, the less likely it is that both FP1 and FP2 will be present
- Rich literature on diagnostics detecting verbal and nominal properties (determiners, types of modifiers, case patterns etc.)
HEIGHT AND ARGUMENTS

- Presence and encoding of arguments correlated with amount of verbal/nominal properties
- High nominalizations: both arguments present, external arguments may bear genitive, internal bears accusative (English gerunds, Abney 1987)
- Low nominalizations: maybe only internal arguments present, these bear genitive (English derived nominals)
External arguments

- as PPs: process of nominalization involves some change in valency, cf. Williams (1981)
  - nominalization as passivization
  - nominalization as subject to an unaccusativity requirement

- as genitives: related to D layer, Abney (1987)

Internal arguments as genitives: genitive is default nominal case (Marantz (1991), Baker (2015); absence of external argument)
The study of different types of nominalizations furthers our understanding of word formation processes and the building blocks of meaning.

It is an important testground for theories of word formation and AS.

In conclusion:

- If arguments are introduced hierarchically in association with event complexity in the verbal domain, nouns derived from verbs are built on the basis of the same building blocks.
- In addition, grammar has further mechanisms in place to introduce nominal satellites in the absence of event complexity.
REFERENCES


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