# Allosemy & complex-heads: architectural problems

Node-by-node late insertion at LF, or 'contextual allosemy', is a difficult-to-motivate revision to the morphosyntax-semantics interface. It faces technical, conceptual, and empirical challenges.

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Deverbal nominals like *collection* are systematically ambiguous between eventive meanings (COLLECTING) and referential readings (here, COLLECTED OBJECTS).

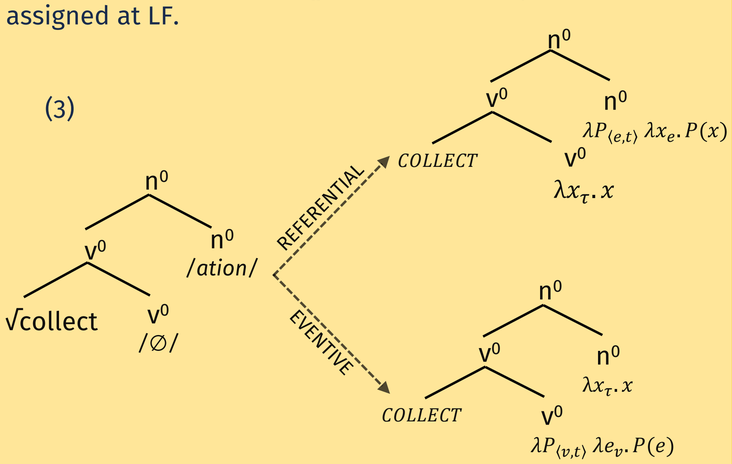
(1) John's frequent collection of butterflies disrupted his studying.

(2) John's collection of butterflies contains over 30 species.

The meanings are not always related! (e.g. *transmission* = *SENDING* or *SENT THING* or *CAR GEARBOX*)

Wood (2023) argues both meanings have the same syntactic structure (3), but *all* the heads are subject to 'allosemy': the root, $n^0$, and $v^0$ heads can get different interpretations assigned at LF.

(3)




(Some details abstracted for space! Ask us more about root-interpretation.)

- Event reading occurs when *v* gets an "event" alloseme and *n* gets ∅-alloseme.
- Referential reading occurs when *n* gets "entity" alloseme and *v* gets ∅-alloseme.

∅-allosemic nodes are deleted ("pruned") at LF, making $x^0$ and √ local for alloseme-selection of the root.

## Allosemy leads to empirical and theoretical problems.

We focus here on Wood's proposals because they are the most explicit, but they generalize to other's (e.g., Benz (2023)).

***References***

**Benz (2023).** The syntax of the content reading in German nominalizations.
**Borer (2013).** *Structuring Sense: Volume III: Taking Form.*
**Chomsky (1995).** *The Minimalist Program.*
**Halle & Marantz (1993).** *Distributed Morphology and the Pieces of Inflection.*
**Harley (2014).** *On the Identity of Roots.*
**Wood (2023).** *Icelandic Nominalizations and Allosemy.*

## Allosemy is importantly *un*like allomorphy under Vocabulary Insertion

Late Insertion at PF is motivated by *blocking effects* (Halle & Marantz, 1993). There is no such motivation at LF.

Alternative readings are available.

**Halle & Marantz (1993) on Vocabulary Insertion**

$T_{pst}$ / √sing __ → ∅, *-ed* elsewhere
√sing / $T_{pst}$ → *sang*

***CORRECTLY* blocks *sanged***

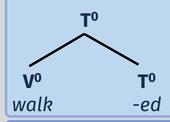
**Harley (2014) on LF Late Insertion**

$\sqrt{}_{77}$ → VOMIT / [$_{vP}$ *v* [[ __ ] [$_{PP}$ *up*]] ]
LIGHT BLANKET / [$_{nP}$ n [ __ ] ]
THROW elsewhere

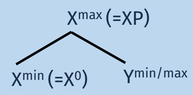
***INCORRECTLY* blocks "Great throw$_{ball}$!"**
(Harley herself has (weaker) arguments against LF-elsewhere)

## Complex Head (CH) formation is incompatible with Bare Phrase Structure

There is no property "head"/"phrase" that is represented in Bare Phrase Structure.




In X-bar theory, phrase structure nodes are complex symbols of category and "bar-level": <N, 0>, <N, 2>, etc.




In BPS, head/phrase are defined *relationally*. If X projects, X is a head, and non-projecting X ($X^{max}$) just *is* a phrase.

There is no way to define an operation as forming a complex head: bar-level is not a part of the representation.

This is a deeper problem than incompatibility with the Extension Condition (Chomsky, 1995).

BPS was instrumental in enabling "syntax-all-the-way-down". Requiring bar-levels to be explicitly represented weakens the phrase-structural foundations for S-A-T-W-D.

## Derivational morphology tends not to (de)compose

| | | |
|---|---|---|
| $[\![n]\!]$ = | $\lambda x_\tau . x$ | Null meaning |
| = | $\lambda P_{\langle e,t\rangle} \lambda x \exists e . Px \,\&\, x = e$ | Simple Event |
| = | $\lambda P_{\langle e,t\rangle} \lambda x \exists s . Px \,\&\, x = s$ | Simple State |
| = | $\lambda P_{\langle e,t\rangle} \lambda x . Px$ | Simple Entity |
| = | $\lambda P_{\langle e,t\rangle} \lambda x \exists e . Px \,\&\, res(x,e)$ | Result |
| = | $\lambda P_{\langle e,t\rangle} \lambda x \exists e . Px \,\&\, loc(x,e)$ | Location |

Language is **reverse compositional:** one can work **back** from the meaning of the whole to the meaning of the parts.

Wood's theory (left) claims *examination* has compositional structure: *exam* receives a meaning, $ine_v$ receives a meaning, $ation_n$ receives a meaning.

It seems empirically wrong to assign meaning to categorizing heads themselves, at least in the same way we would to Tense, Det, etc.

A model which treats derivational morphology as type-shifters is inadequate to model lexical meaning.

Is the difference between $_N$*hammer* and $_V$*hammer* just whether HAMMER(x) ranges over things or events? What about *head? back? transmission?*

It **seriously** damages compositionality to interpret (if only to prune) an *arbitrary* amount of material around the root before the root can be given a meaning.

## Locality of allosemy is empirically vacuous

Allosemy is claimed to be local: allosemes are selected with the first categorizing head.

| | | |
|---|---|---|
| [ $_{nP}$ [√mešk] | a] | → BEAR |
| [[[ $_{nP}$ [√mešk] iuk] | as] | → SMALL BEAR |
| [[[ $_{nP}$ [√mešk] ėn] | as] | → RACCOON |
| [[[[ $_{nP}$ [√mešk] ėn] iuk] | as] | → SMALL RACCOON/*BEAR |

**In a straightforward reading of the theory, this admits of counterexamples (Borer, 2013).**

| | | |
|---|---|---|
| | [$_{nP}$ [√edit] or] | → PERSON WHO EDITS |
| [$_{nP}$ | [$_{nP}$ [√edit] or] ial] | → OPINION PIECE |
| [$_{vP}$ [$_{nP}$ | [$_{nP}$ [√edit] or] ial] ize] | → GIVE OPINION |

But once LF-pruning of semantically vacuous heads is introduced, the predictions become unclear.

What could count as semantic vacuity other than allowing later material to interact with lower material directly?

The counter-examples (left) could just be analyzed as having ∅-meaning *or* and *ial*, allowing *–ize* to select the alloseme for √edit.

Marantz (2013) responds that the counter-examples are cases of homophony, not polysemy. It is unclear how to test which polyseme has been selected locally.

## Variation and learnability

A natural alternative to allosemous heads is the presence/absence of covert meaningful verbal structure. The verbal extended projection is present in eventive nominals, but absent in referential ones.

Wood argues that such verbal structure does not exist in Icelandic nominalizations – hence, they have complex heads, not VP-(related-)layers.

But such structure is well-motivated for derived nominals in other languages, as Wood himself says.

Languages would then have to vary in how they make eventive nominals: via allosemy or via layers of verbal structure.

How is this variation explained? This does not seem reducible to idiosyncratic properties of heads.

How does the learner choose between the two options? Is this a genuine parameter?

## Conclusions

- Language-specific nominalization mechanisms face Plato's Problem
- The empirical import of allosemy is unclear
- PF-LF are disanalogous: allosemy is not like allomorphy