

Heads and history

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HEADLEX

Warsaw, 28 July 2016

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Grammaticalization

Grammaticalization 'consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status' Kuryłowicz (1965)

- reduction in semantics
- reduction in "size"
- loss of independence
- ...

- Noun to Preposition

- (1) Proto-Germanic **tila* 'goal'
- (2) *das Ziel* 'the goal' (German)
- (3) *åka till Warsawa* 'go to Warsaw' (Swedish)
- (4) *till sjöss* 'to sea.GEN' (Swedish)

Types of category in LFG

Lexical category	Functional category	Non-projecting category (\hat{X})
full semantics: have PRED feature	“weak” semantics: no PRED feature	may have full semantics
projects to X''	projects to X''	does not project
	“extension” of lexical category: functional co-head	adjoins to X^0

Functional category posited when a feature is associated with a structural position, generally only C, I and D assumed (Kroeger 1993, Börjars et al. 1999)

See Toivonen (2003) on non-projecting category

Types of category in (HPSG)

Full head	Transparent head	Weak head
full semantics: CONTENT feature	“weak” semantics no CONTENT feature	“weak” semantics: no CONTENT feature
projects to X''	projects to X''	does not project
combines with X''	combines with X''	combines with X'' (or X')
	contributes all but CONTENT feature	contributes only MARKING feature: shares HEAD features with complement

See Tseng (2002), Abeillé et al. (2006) (assume full head with “weak” semantics), Przepiórkowski (2013), for ‘transparent head’ see Flickinger (2008) and for earlier category MARKER (Pollard & Sag 1994: 44–6)

Heads in LFG vs heads in HPSG

	LFG			HPSG		
	Lex	Funct	N-Pr	Full	Full _{trsp}	Weak
own lex sem	+	-	+/-	+	-	-
"borrows" lex sem	-	+	-	-	+	+
projects	+	+	-	+	+	-
combines with	XP	XP	X	XP	XP	XP(X')

Types of prepositions in Swedish

- prepositions with full semantics
- (5) Oscar åkte tåg **till** Stockholm.
O travel train to S
'Oscar traveled by train to Stockholm.'
- prepositions marking grammatical relation
- (6) Oscar gav boken **till** läraren.
O gave book.DEF to teacher.DEF
'Oscar gave the book to the teacher.'
- "particles"
- (7) Oscar sparkade **till** däcket.
O kicked to tire.DEF
'Oscar gave the tire a kick.'

- prepositions with full semantics

till P (f PRED) = 'till <OBJ>'

- preposition marking grammatical relation

till P (f PCASE) = $OBL_{Recipient}$

give P (f PRED) = 'give <SUBJ, OBJ, OBL_{θ} >'

VP → V ... PP
 $\uparrow=\downarrow$ ($\uparrow(\downarrow PCASE))=\downarrow$

Types of prepositions in LFG

- particle

Swedish particle *till* is aspectual marker (Toivonen 2003: 142)

till \hat{P} (*f* ASPECT TELIC) = -

(*f* ASPECT DYNAMIC) = +

(*f* ASPECT DURATIVE) = -

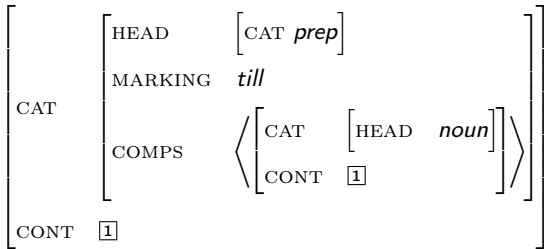
Particles can also have PRED feature

- preposition with full semantics

CAT	<table style="border-collapse: collapse;"> <tr> <td style="padding-right: 10px;">HEAD</td> <td><i>prep</i></td> </tr> <tr> <td style="padding-right: 10px;">SUBJ</td> <td>$\langle \text{NP}_{\boxed{1}} \rangle$</td> </tr> <tr> <td style="padding-right: 10px;">COMPS</td> <td>$\langle \text{NP}_{\boxed{2}}[\text{acc}] \rangle$</td> </tr> </table>	HEAD	<i>prep</i>	SUBJ	$\langle \text{NP}_{\boxed{1}} \rangle$	COMPS	$\langle \text{NP}_{\boxed{2}}[\text{acc}] \rangle$
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CONT	<table style="border-collapse: collapse;"> <tr> <td colspan="2"><i>allative-till</i></td> </tr> <tr> <td style="padding-right: 10px;">FIGURE</td> <td>$\boxed{1}$</td> </tr> <tr> <td style="padding-right: 10px;">GROUND</td> <td>$\boxed{2}$</td> </tr> </table>	<i>allative-till</i>		FIGURE	$\boxed{1}$	GROUND	$\boxed{2}$
<i>allative-till</i>							
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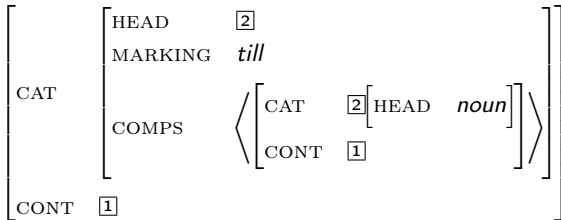
Pollard & Sag (1994) 'predicative preposition', Tseng (2000, 2002)

- preposition marking grammatical relation



'non-predicative' (Pollard & Sag 1994),
'transparent' (Flickinger 2008),
full head with "weak" semantics (Abeillé et al. 2006)

- weak head



cf 'non-oblique' prepositions (Abeillé et al. 2006),
'minor preposition' (Van Eynde 2004)

Infinitival markers in Germanic

Grammaticalization:

allative preposition > purposive marker > infinitival marker

(Haspelmath 1989)

Not necessarily mirrored by structural change

Infinitival marker in German

- *zu* cannot be separated from the verb
- (8) Er hat versprochen (bald) zu (*bald) kommen.
he had promised soon INF soon come
- *zu* can be part of the verb
- (9) Sieben Tipps um wirklich munter aufzustehen
seven tips in order to truly cheerful up.INF.stand

Giusti (1991), Berman (2003)

Infinitival markers in English

- *to* can be separated from the verb, but not by much

(10) *to* boldly go where no man has gone before

(11) To really understand this situation you need to be an
experienced politician.

Pullum (1982), Ernst (1992), Koster & May (1982), Falk (2001)

Infinitival markers in Swedish

- *att* can be separated from the verb, even by whole phrase

- (12) Hon njöt av **att** efter många år åter **känna** fast mark
 she enjoyed of INF after many years again feel solid ground
 under fötterna.
 under feet.DEF
 ‘She enjoyed feeling solid ground under her feet again after many years.’
- (13) **Att** fastän hon bara kunde ha stängt dörren efter sig
 INF although she only could have closed door.DEF after REFL
stanna och **lyssna** på vad han hade att säga visade sig vara ett
 stay and listen on what he had to say showed REFL be a
 dåligt beslut.
 poor decision
 ‘To stay and listen to what he had to say, even though she could have simply closed the door behind her, turned out to have been a poor decision.’

- negation and negated objects obligatorily occur between *att* and the verb

(14) Hon gjorde sitt bästa för (*inte) **att** inte **somna** (*inte).
 she did REFL.POSS best for not INF not fall asleep not
 'She did her best not to fall asleep.'

(15) Känslan av **att** ingenting **kunna** göra (*ingenting) skrämmer
 feeling.DEF of INF nothing be able do nothing frightens
 mig.
 me
 'The feeling of not being able to do anything about it frightens me.'

Platzack (1986), Christensen (2007), Beukema & den Dikken (1989)

Infinitival markers in Germanic

- structurally there are (at least) three types of infinitival marker
- the source is the same
- semantically, we can assume they are similar
- in LFG: C vs I vs V
- in HPSG: always a weak head, may combine with different categories

Romance prepositions

- two prepositions *à/a* 'at, to' and *de/di* 'of'
- both co-occur with both NPs and VPs

(16) Il va à Paris (Fr)
he go.PRES.3SG A Paris
'He goes to Paris.'

(17) Comincia a ballare (It)
begin.PRES.3SG A dance.INF
'He begins to dance.'

Romance prepositions

- (18) los discos de mi primo (Sp)
the discs DE my cousin
'my cousin's discs'
- (19) O Pedro gosta de tocar flauta (Port)
The Pedro like.PRES.3SG DE play.INF flute
'Pedro likes to play the flute.'

Romance prepositions

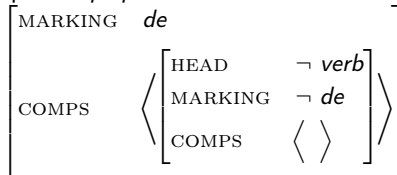
Abeillé et al. (2006) distinguish two binary contrasts:

- oblique vs non-oblique
- semantically 'vacuous' vs semantically 'full'

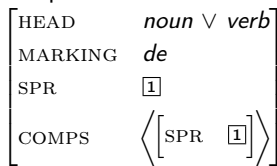
- 'oblique' *à/de* phrases have the distribution of PPs - i.e. the items are full heads
- 'non-oblique' *à/de* phrases have the distribution of NPs/VPs, i.e. the items are weak heads

Romance prepositions

oblique *de*: *prep-word* &



nonoblique *de*: *weak-head* &



(Abeillé et al. 2006: (72) and (75))

From nominal to verbal

Over time we find evidence of:

- nouns evolving into prepositions
- prepositions evolving into complementizers
- prepositions evolving from lexical ('full semantics') to grammatical ('weak' semantics)

From nominal to verbal

But not:

- complementizers evolving into prepositions

Why not?

- because non-finite forms start out as nominal, whereas there is no corresponding shift involving nominalization of finite forms
- this is not a property to be attributed to UG but to the content of these constructions

From nominal to verbal

- from LFG perspective these changes are:

lexical head > functional head (P) > functional head (C)

- from HPSG perspective these changes are:

lexical head > weak head (P) > weak head (C)

Minimalist analyses

- P and Case: prepositions like *de/di* and *à/a* treated as exponents of Case as well as being case-signers
- functional vs lexical prepositions: 'functional' includes all uses of 'simple' prepositions to, at, on, etc while lexical covers (Cinque 2010)
- prepositions as probes, where probe is [– interpretable] (Kayne 2004)
- cartography/nanosyntax: involves a proliferation of heads including silent ones like PLACE Svenonius (2008)
- 'Prepositional complementizers do not form a constituent with the infinitival IP they are associated with' (Kayne (1999: 50), but see Borsley (2001))
- prepositional complementizers occupy slots within CP/IP: *de/di* in Fin head (Rizzi 1997)

- relevance of diachronic data for theory construction
 - change has directionality
 - change happens in small steps
 - change can happen separately in different dimensions
- requirements of a model
 - granularity of formal representation must capture steps of change
 - the relation between steps should be captured as part of the representation
 - different dimensions of linguistic information represented separately, but linked by correspondence rules

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Grammaticalization

Types of category in
LFG and HPSG

Prepositions in the
nominal domain
till in Swedish

Prepositions in the
verbal domain
Infinitival markers
in Germanic

Path from nominal
to verbal domain

Romance
prepositions

Conclusions

References

Thank you!

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