

The pseudopassive: a Lexical Functional approach

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1 Introduction

1.1 The phenomenon

- Some languages (English, Norwegian, Prince Edward Island French, . . .) allow prepositional verbs (verbs that take a PP complement) to be passivized, promoting the object of the preposition to subject, and leaving the preposition itself stranded:

(1) English:

- a. The welfare state is relied on (by many people)
- b. This pen was written with (by T. S. Eliot)

(2) Norwegian:

- a. De må bli passet bedre på
they must be looked better after
'They must be better looked after'

- b. Sengen ble sovet i
the.bed was slept in
'The bed was slept in'

(Lødrup 1991:118,120)

- As we can see from the (b) sentences, prepositional objects in what have traditionally been analysed as adjunct phrases also appear to be valid candidates for promotion, not just those in argument phrases.
- The 'PPs' in these examples really are headed by prepositions, not particles:

- (3) a. But our Mighty God changes not... / [On Him] we can rely
(<http://faithpoetry.com/faith9/godchangesnot.shtml>)
- b. * [Up Susie] we called

- (4) a. Beowulf pulled off Grendel's arm
 b. Beowulf pulled Grendel's arm off
- (5) a. Our hero dealt with the monster
 b. * Our hero dealt the monster with
- This phenomenon is cross-linguistically rare, even in languages which allow prepositions to be stranded as part of a long-distance dependency (e.g. in a *wh*-question):

- (6) French:
- a. * Qui as-tu parlé de?
who have-you spoken of
 'Who did you speak about?'
- b. * Jean a été voté pour
John has been voted for
 'John was voted for'

- (7) Danish:
- a. Hvem har Peter snakket med?
who has Peter talked with
 'Who has Peter talked with?'
- b. * Han blev grinet af
he was laughed at
 'He was laughed at'

(Truswell 2008:135)

- There is lexical variation within languages which permit pseudopassivization:

- (8) a. Fred could be counted on
 b. * Both capital and interest were consisted of (by the repayments)
- (9) a. The neighbour's noise was put up with
 b. * My sister wasn't gotten along with
- (10) a. Our goal was lost sight of
 b. * The secretary was lost patience with
 c. * His motives were cast doubt on

(Kim 2009)

- Implicational universal:

- (11) If a language permits pseudopassives, it also permits preposition stranding in long-distance dependencies (*wh*-questions, relative clauses, etc.; call this p-stranding).

- There are languages with p-stranding but no pseudopassive, but no languages with pseudopassive but no p-stranding. (And of course there are languages—the majority, in fact—with neither.)
- Alsina (2009:47) presents this information graphically:

(12)

		P-stranding by LDD	
		yes	no
Pseudopassive	yes	English, Norwegian	
	no	Icelandic, Swedish	French, other Romance languages

1.2 Research questions

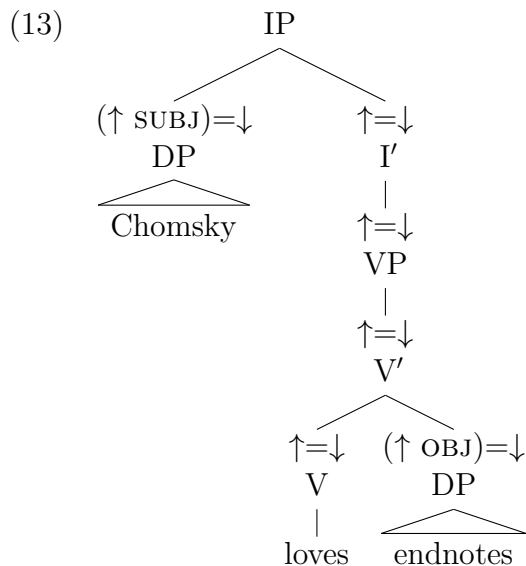
- General questions:
 1. What are the restrictions on the pseudopassive (specifically in English, but maybe also in other languages)?
 2. Is the supposed implicational universal between the pseudopassive and preposition stranding by LDD real?
 3. Is there an explanation for the construction's cross-linguistic rarity?
- Formal questions:
 4. How do we best represent this construction in the languages which permit it?
 5. How do we differentiate, within languages that allow pseudopassivization, those verbs which permit it and those verbs which do not (i.e. how do we formalise the answer to question 1?)?

2 The framework: LFG and Glue

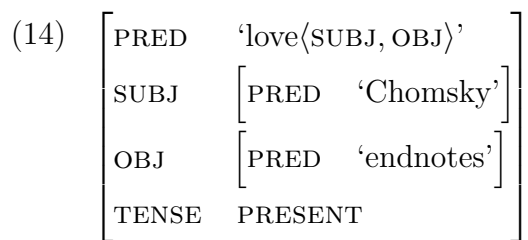
2.1 Lexical Functional Grammar

- Lexical Functional Grammar (LFG; Kaplan & Bresnan 1982; Bresnan 2001; Dalrymple 2001; Falk 2001) posits different structures for different aspects of analysis.

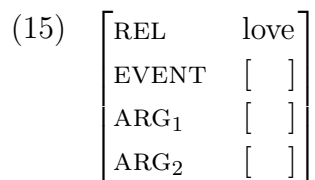
- C(onstituent)-structure for *Chomsky loves endnotes*:



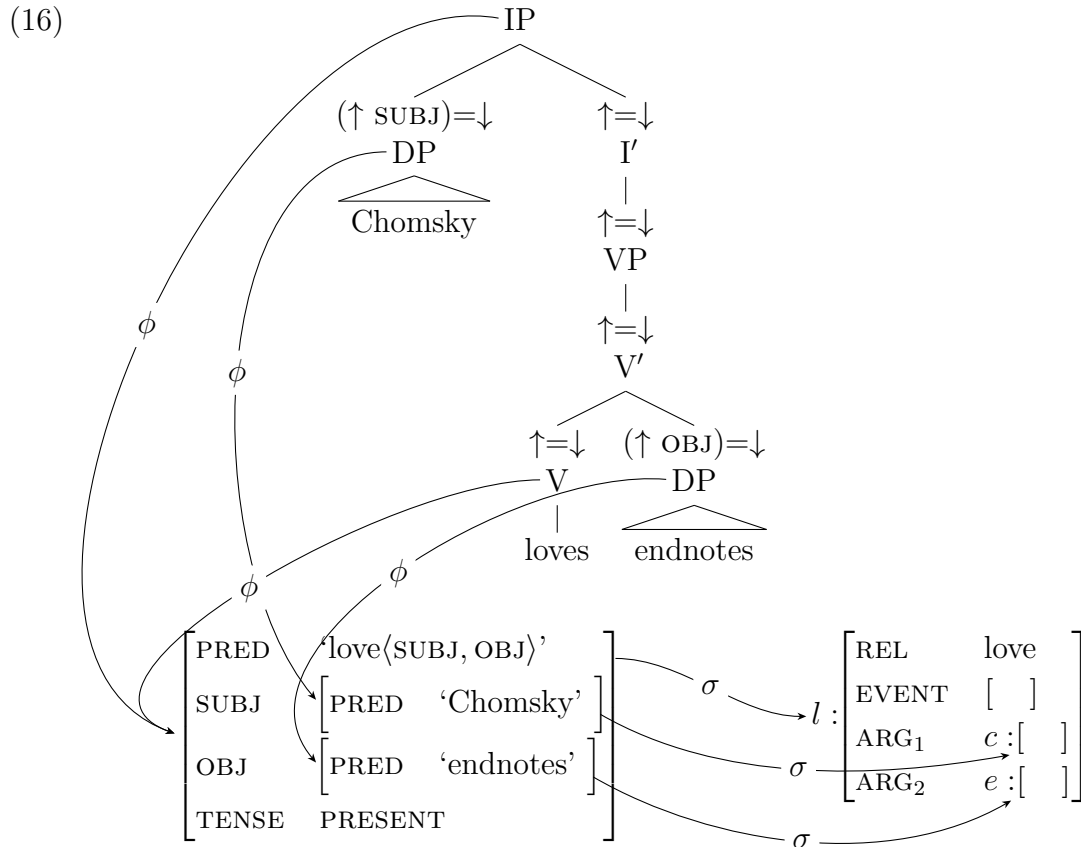
- F(unctional)-structure:



- S(emantic)-structure (following Asudeh & Giorgolo 2012):



- The projection architecture:



2.2 Glue semantics

- Glue semantics (Glue; Dalrymple 1999, 2001; Asudeh 2005, 2012) is a theory of semantics often used with LFG.
- It treats meanings as contributions to a logical deduction, the conclusion(s) of which is(/are) the meaning(s) of the sentence. This makes it more flexible and less reliant on linear order than many other generative approaches to semantics.
- It uses a fragment of a particular kind of logic called *linear logic* (Girard 1987), which has the property of being *resource sensitive*, unlike classical/intuitionistic logic. That is, a premise must be used exactly once (it cannot be reused or discarded).

- Semantic contributions of lexical items have two parts: the meaning language side and the Glue side. For example:

- (17) a. $\lambda y \lambda x. \text{love}(x, y) : (\uparrow_\sigma \text{ ARG}_2) \multimap (\uparrow_\sigma \text{ ARG}_1) \multimap \uparrow_\sigma$
 b. $\text{chomsky} : \uparrow_\sigma$
 c. $\text{endnotes} : \uparrow_\sigma$

$$(18) \frac{\frac{\lambda y \lambda x. \text{love}(x, y) : e \multimap c \multimap l \quad \text{endnotes} : e}{\lambda x. \text{love}(x, \text{endnotes}) : c \multimap l} \quad \text{chomsky} : c}{\text{love}(\text{chomsky}, \text{endnotes}) : l}$$

3 Previous analyses

- Previous work often assumes a rule of *reanalysis* which combines a verb and preposition into some kind of complex verb (e.g. Hornstein & Weinberg 1981; van Riemsdijk 1978, who see this as a morphosyntactic process, or Bresnan 1982, who considers it a more abstract, functional operation).

$$(19) \quad V P \Rightarrow [V P]_V$$

- After this reanalysis, the object of the preposition is now the object of the complex verb, and so passivization can carry on as usual.
- Issues with this solution:
- Prepositional objects ought to behave like regular verbal objects following this reanalysis, but they do not (Alsina 2009:50–52):

- They cannot participate in heavy NP shift, unlike regular verbal objects:

- (20) a. I discussed ____₁ with Lorenzo [the problems he was having with deliveries]₁
 b. *I argued with ____₂ about such problems [the drivers' union leader]₂

- Prepositional objects behave differently from genuine verbal direct objects when it comes to the phenomenon of *subdeletion* (Bresnan 1973, 1977a,b):

- (21) a. Jane read more of these books than Sally read ____ of those books
 b. *Jane read from more of these books than Sally read from ____ of those books

- In gapping constructions like (22a), the verb can be deleted in the second conjunct, whereas the putative [V-P] verb cannot be ((22b) is ungrammatical without the preposition):

- (22) a. Frank called Sandra and Arthur ____ Louise
 b. Frank talked to Sandra and Arthur ____ *(to) Louise

- In the Norwegian pseudopassive, not only do the verb and preposition not need to be adjacent, in fact they cannot be:

- (23) a. De må bli **passet** bedre **på**
they must be looked better after
 ‘They must be looked after better’
 b. *De må bli **passet på** bedre
they must be looked after better

(Lødrup 1991:118)

3.1 Earlier work in LFG

- Some early accounts of the pseudopassive in LFG followed in the transformational tradition of reanalysis (e.g. Bresnan 1982), deriving complex predicates such as (24):

- (24) ‘rely-on⟨SUBJ, OBJ⟩’

- Many of the same issues as above.
- Later work (Lødrup 1991; Alsina 2009) sees the pseudopassive as a structure-sharing relation, much like raising verbs.

– Lødrup (1991:123) gives the f-structure in (26) for the sentence in (25):

- (25) Taket ble gått på
the.roof was walked on
 ‘The roof was walked on’

- (26)
$$\left[\begin{array}{ll} \text{PRED} & \text{‘gås’} \\ \text{SUBJ} & \left[\begin{array}{ll} \text{PRED} & \text{‘taket’} \end{array} \right] \\ \text{OBL}_{\text{LOC}} & \left[\begin{array}{ll} \text{PRED} & \text{‘på’} \\ \text{OBJ} & \end{array} \right] \end{array} \right]$$
-

- But why should the pseudopassive be so different from the regular passive (e.g. (27)), involving a structure-sharing relation?

- (27) *The cake was eaten*
- $$\left[\begin{array}{ll} \text{PRED} & \text{'eat'⟨SUBJ⟩'} \\ \text{SUBJ} & \left[\begin{array}{ll} \text{PRED} & \text{'cake'} \\ \text{SPEC} & \left[\begin{array}{ll} \text{PRED} & \text{'the'} \end{array} \right] \end{array} \right] \\ \text{VOICE} & \text{PASSIVE} \end{array} \right]$$

- What is more, why do we not observe the expected case identities (since structure-shared f-structures are token identical) (Mary Dalrymple, p.c.)?

(28) I.NOM rely on him.ACC

- (29) a. He.NOM is relied on
b. *Him.ACC is relied on

4 Some proposals/hypotheses

4.1 What are the restrictions on the pseudopassive?

- General claim in the literature is that unergative prepositional verbs (that is, those with agentive subjects) are more amenable to passivization than unaccusative ones. Hence the contrasts between *deal with* and *consist of*, or, more minimally, between (30a) and (30b):

- (30) a. The desk was sat on by the gorilla
b. *The desk was sat on by the lamp (Kim 2009)

- Generally true, but doesn't capture the whole pattern (how agentive is the subject of *rely on*? Does this explain the contrast between *NYC/This bed was slept in*?)

- The *affectedness condition* on subjects of passives (Bolinger 1977; Davison 1980; Goh 2003).

- (31) a. *San Francisco has been lived in by my brother
b. ?San Francisco has been lived in by many famous authors
c. This house has been lived in by many famous people

- (32) a. This bed has been slept in
b. *This bed has been slept under

- The *characterisation condition* (Davison 1980; Goh 2001, 2003; Huddleston & Pullum 2002; Kuno & Takami 2004):

- (33) a. * This statue was stood beside by John
b. No statue should be stood beside in this park

- Hard to say *no statue* is ‘affected’ by the VP.
- Rather, it is ‘characterised’ by it in some way. Cf. also:

- (34) a. * Seoul was walked around by his father
b. Seoul can be walked around in a day (Kim 2009)

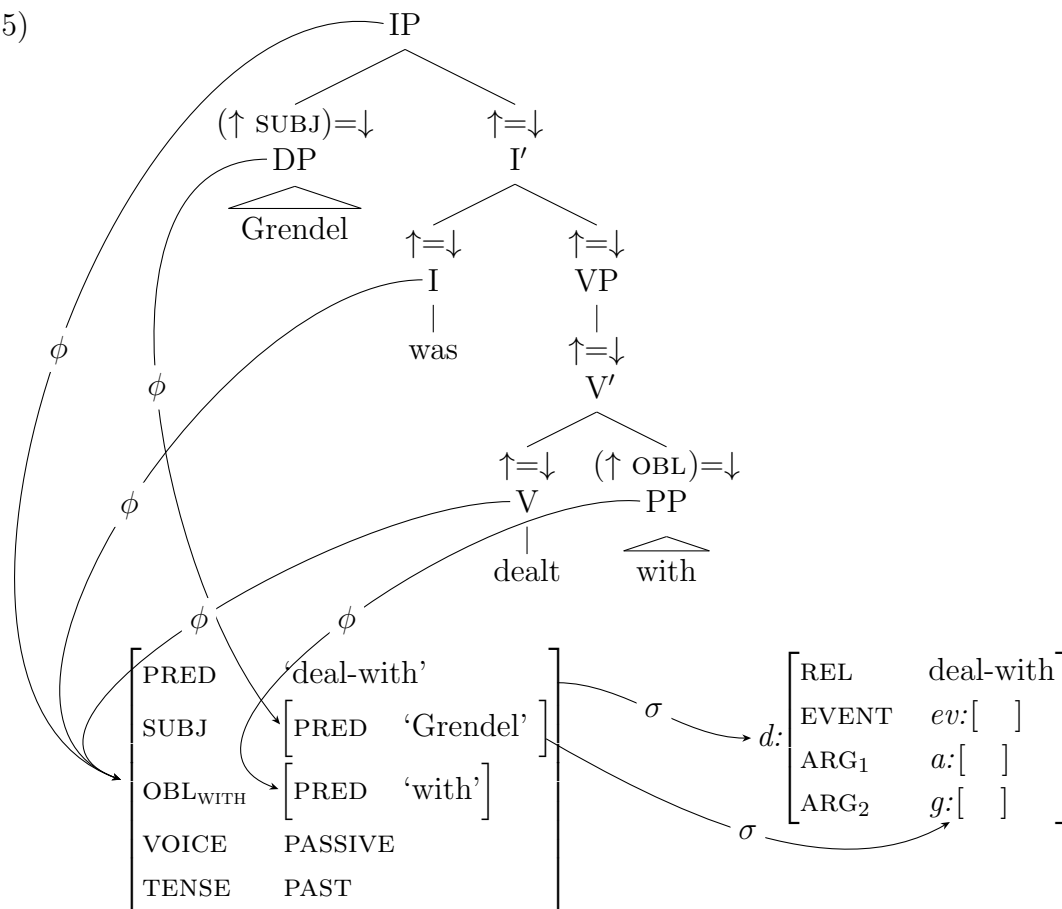
- (Though (34a) also falls foul of the affectedness condition.)

4.2 Formal considerations

4.2.1 Representation

- As in (35) (i.e. parallel to regular passive):

(35)



- Unusual to have an OBLique without an OBJect function. We need a solution to avoid this causing semantic problems.

4.2.2 Semantics

- There is a certain class of prepositional verbs which behave like regular transitive verbs.
- They select their preposition idiomatically, and no variation is possible:

(36) I dealt with/*without/*off/*on/*out/*from/*by/*of/... the problem

- Basic meaning constructor is just like a regular transitive:

$$(37) \quad \lambda y \lambda x. \text{deal-with}(x, y) : (\uparrow_{\sigma} \text{ARG}_2) \multimap (\uparrow_{\sigma} \text{ARG}_1) \multimap \uparrow_{\sigma}$$

- The preposition does not make a semantic contribution, and therefore must be bleached of meaning somehow.
- We want to avoid a proliferation of homophonous prepositions, some of which are meaningful and some of which aren't.
- Manager resource contributed by verb:

$$(38) \quad \lambda P \lambda x.x : [\text{preposition}] \multimap \text{vacuous function}$$

- Fleshed out:

$$(39) \quad \lambda P \lambda x.x : [\text{preposition}] \multimap (\uparrow \text{OBL OBJ})_{\sigma} \multimap (\uparrow \text{OBL OBJ})_{\sigma}$$

- Simplified structures and correspondences for *Dessert consisted of trifle*:

$$(40) \quad \left[\begin{array}{l} \text{PRED} \quad \text{'consist'} \\ \text{SUBJ} \quad \left[\begin{array}{l} \text{PRED} \quad \text{'desert'} \\ \text{PRED} \quad \text{'of'} \\ \text{OBJ} \quad \left[\begin{array}{l} \text{PRED} \quad \text{'trifle'} \end{array} \right] \end{array} \right] \\ \text{OBL} \end{array} \right] \xrightarrow{\sigma} \left[\begin{array}{l} \text{REL} \quad \text{consist-of} \\ \text{ARG}_1 \quad [\quad] \\ \text{ARG}_2 \quad [\quad] \end{array} \right]$$

- Contrast between unergative/unaccusative verbs corresponds to two different manager resources:

$$(41) \quad \begin{array}{ll} \text{a. } \lambda P \lambda x.x : [\text{preposition}] \multimap (\uparrow_{\sigma} \text{ARG}_2) \multimap (\uparrow_{\sigma} \text{ARG}_2) \\ \text{b. } \lambda P \lambda x.x : [\text{preposition}] \multimap (\uparrow \text{OBL OBJ})_{\sigma} \multimap (\uparrow \text{OBL OBJ})_{\sigma} \end{array}$$

- The output function of (41a) will still work in the passive, whereas the output function of the manager in (41b) will not, since it refers to a semantic resource that doesn't exist in the passive.
- At a first approximation, the semantic conditions can simply be predicated of the passive subject. The following meaning constructor can be introduced by the passive morphology:

$$(42) \quad \lambda P \lambda x.P(x) \wedge (\text{affects}(P, x) \vee \text{characterises}(P, x)) : \\ [(\uparrow \text{SUBJ})_{\sigma} \multimap \uparrow_{\sigma}] \multimap (\uparrow \text{SUBJ})_{\sigma} \multimap \uparrow_{\sigma}$$

5 Conclusion/Still to come...

- What is the status of adjunct NPs which are promoted to subject (e.g. *This bed was slept in*, *This pen was written with*)?
 - Has it attained some kind of argument status? (It is often instrumentals and locatives which are available for promotion in this way—do they have some special status?)
- What about prepositional complements more generally, including those whose preposition does contribute some meaning (*Tarkin was spoken to* does not mean the same as *Tarkin was spoken about*)?
- What of the typological claims? Is there a relation between preposition stranding by LDD and the pseudopassive? Could the gap in the table in (12) be just an accident? (So few languages have any kind of preposition stranding that the data are not overwhelming.)

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