The pseudopassive: not so phoney after all*

Jamie Y. Findlay jamie.findlay@ling-phil.ox.ac.uk

Linguistics Departmental Seminar Series SOAS 31 January 2017

1 Introduction

- Pseudopassive or prepositional passive?
- Subject in the passive corresponds not to the object of the *verb* in the active, but to the object of a *preposition*:
 - (1) a. Scott relies [on Logan].
 - b. Logan is relied on (by Scott).
- Outline:
 - Background.
 - What makes the prepositional passive look normal.
 - What makes it look special.
 - LFG analysis.
 - Conclusion.

2 Background

- For verbs like *rely (on)*, perhaps not so surprising: idiosyncratically selected semantically inert preposition, semantically unified transitive meaning, etc.
- But preposition need not be (uniquely) specified by verb:

^{*}This paper is based on work from my MPhil thesis (Findlay 2014b). I am indebted for that work to my supervisor Mary Dalrymple, and to many others from the Oxford community and the audience at HeadLex16 for helpful discussions and comments, especially Ash Asudeh, Louise Mycock, John Lowe, Anna Kibort, and Adam Przepiórkowski.

- Semantically contentful argument PPs:
 - (2) a. Scott spoke to/about Jean.
 - b. Jean was spoken to/about (by Scott).
- Adjunct(?) PPs:
 - (3) When I'm on the bus I don't like being sat next to.

 (https://twitter.com/spencernickson/status/654923013285126144)
 - (4) Charles Dickens' quill pen has been written with by me.

 (http://www.bustle.com/articles/117731-10-amazing-margaret-atwood-quotes-from-the-2015-texas-book-festival-from-the-future-library-project)
 - (5) To come back, and not get turned around for.... (Will.i.am on an episode of *The Voice*, 7 Feb. 2014)
- Huddleston & Pullum (2002:1433–1434) describe the first as Type I, and the second as Type II. We would like an explanation which carries over to both.
- If there is a subtype of Type II which involves adjuncts, this is a challenge to the passive as an *argument* alternation.
- Very productive, used with verb+preposition combinations that have surely not been lexicalised, including relatively recent neologisms:
 - (6) a. We can't bring you everything that is being blogged about. (COCA)
 - b. Sean was tweeted at by Molly Mesnick. (http://hollywoodlife.com/2013/03/12/catherine-giudici-sean-lowe-secret-engagement/)
 - c. This will definitely be facebooked on! (http://thenaturalnutritionist.com.au/coconut-oil-the-scoop/)

3 Ways the prepositional passive doesn't look so special

• The prepositional passive "has all the features of a canonical passive construction, except for one" (Alsina 2009:45), *viz.* that the subject corresponds to a prepositional, not verbal, object in the active.

3.1 Morphosyntax

- Same morphology, same auxiliary choices.
 - (7) a. A new experience; I got spat on today!

 (https://www.thestudentroom.co.uk/showthread.php?t=42557)
 - b. A new experience; I was spat on today!

3.2 Semantic-pragmatic constraints

- Large amount of literature on delimiting the class of predicates which can participate in the prepositional passive via non-syntactic restrictions. Usually focussed on properties borne or ascribed to the subject. But these are shared by the regular passive!
- **Affectedness:** Bolinger (1977:67): "the subject in a passive construction is conceived to be a true patient, i.e. to be genuinely affected by the action of the verb".
 - (8) a. * I was approached by the train.
 - b. I was approached by the stranger.

(Bolinger 1977:68)

- (9) a. * Seoul was slept in by the businessman last night.
 - b. This bed was surely slept in by a huge guy last night.

(Kim 2009)

- Not very formally explicit, however, and potentially so broad as to be meaningless (see the exchange in Householder 1978 and Bolinger 1978 for more on this).
- But in fact not broad enough?
 - (10) a. Such a dress can't be sat down in.
 - b. There the mistakes were, in their houses, pervading their lives, having to be sat with at every meal and slept with every night.

(Riddle & Sheintuch 1983:538)

- Role Prominence: Riddle & Sheintuch (1983:546): "all and only NPs whose referent the speaker views as being role prominent in the situation described by the passive clause occur as subjects of passive verbs".
- Schachter (1977:282): role prominence belongs to the NP whose referent the speaker views as "being at the center of events".
- Offers one explanation for the general ill-formedness of passives with first person byphrases:
 - (11) The cake has been eaten (*by me).
- "If a speaker is also the agent or experiencer, it is unlikely that he or she would view some other participant as role prominent" (Riddle & Sheintuch 1983:559).
- Role prominence no less vague than affectedness.
- Characterisation:
 - (12) a. * Seoul was walked around by his father.
 - b. Seoul can be walked around in a day.
 - (13) a. * This statue was stood beside by John.
 - b. No statue should be stood beside in this park. (Kim 2009)

- The VP gives a general or characteristic property of the subject—it characterises it.
- Might explain regular passives like (14), where the active voice object is not a patient:
 - (14) Spiders are feared by many people.

4 Ways the prepositional passive might look special

4.1 Adjacency

- One common observation: V+P must be adjacent in the passive, but not the active:
 - (15) a. We rely increasingly on David.
 - b. * David is relied increasingly on.
- However, others have pointed out this is inadequate (e.g. Tseng 2006); PP specifiers like *right*, *straight* or *clear* can intervene, for example:
 - (16) a. I've stood there [on the London Underground], heavily pregnant (and obviously so), and been looked straight through.

```
(https://londondigitalmum.wordpress.com/category/commuting-2/)
```

b. You've been walked right by. / A real nice guy, / Overlooked and shoved aside.

```
(Song lyrics: Take a Stand by Youth of Today)
```

- In fact, it is not too difficult to find a wide variety of adverbs between the verb and the preposition:
 - (17) a. The other thing that he sees in winter time is that a lot of the services are relied hugely on by other people in need over the festive season.

```
(http://www.thejournal.ie/sick-homeless-drug-users-ireland-christmas-1805324-Dec2014/)
```

b. Yerba mate is consumed in nearly 100% of Argentine households. It is considered a staple food, and is relied especially on by poor Argentines when food is scarce.

```
(https://www.tni.org/files/download/47_bowles_2013_0.pdf)
```

- c. Gas turbines have rapid transient response capabilities and, thus, will be relied increasingly on in markets with large intermittent sources.

 (Lieuwen et al. 2013)
- Context important—invented examples difficult to come up with.
- What about direct objects?
- Generally bad:
 - (18) a. They put some books on the table.
 - b. * The table was put some books on (by them).

- Acceptable with some idioms/light verb constructions:
 - (19) a. You have been taken advantage of.
 - b. Russia was declared war on (by Germany).
 - c. I've been made a fool of!
- In fact, acceptable more widely; "the only real restrictions are clarity and intent" (Bolinger 1975:65; see also Ziv & Sheintuch 1981):
 - (20) a. That city has been fought many a battle over.
 - b. He has been burned, stuck pins in, beheaded—all in effigy, of course.
 - c. To be whispered such dirty innuendos about was enough to break any girl's heart.
 - d. This tool has never been used for its main purpose—in fact, it's never been done anything with at all.
 - e. I don't like to be told lies about.
- Following Tseng (2006, 2007), I assume that there is nothing in principle, and certainly not in the syntax, ruling out the presence of direct objects or other intervening material in the prepositional passive.
- Truswell (2008:166–168): A certain parallel with the asymmetry of passives from double-object constructions in English:
 - (21) a. Kim gave Sandy a book.
 - b. Kim gave a book to Sandy.
 - (22) a. Sandy was given a book.
 - b. A book was given to Sandy.
 - (23) a. * A book was given Sandy.
 - b. * Sandy was given a book to.
- In symmetric languages, this contrast disappears:
 - (24) a. Jon vart gitt ei fele. Jon was given a fiddle. 'Jon was given a fiddle.'
 - b. Ei fele vart gitt Jon. *a fiddle was given Jon.*

'A fiddle was given Jon.'

(Åfarli 1992)

(25) a. Brevet ble klistret frimerker på. the.letter was glued stamps on 'The letter was pasted stamps on.'

(Lødrup 1991:127)

b. Jens ble gitt ei klokke til igår.

Jens was given a watch to yesterday.'

'Jens was given a watch to yesterday.'

(Truswell 2008:167)

4.2 Adjuncts in an argument alternation

- Certain apparent adjuncts, especially locatives and instrumentals, can participate in the prepositional passive:
 - (26) a. This broken shovel has clearly been shovelled with rather too enthusiastically.

(Truswell 2008:166)

b. The room had not been cleaned: the bed was slept in, wet towels were everywhere, and dirty dishes.

```
(https://www.tripadvisor.co.uk/ShowUserReviews-g293962-d2038179-
r123002330-Galle_Face_Hotel_Colombo-Colombo_Western_Province.
html)
```

- Notice, though, that it isn't all adjuncts:
 - (27) a. The Joneses left after dinner.
 - b. * Dinner was left after (by the Joneses).
 - (28) a. Lincoln died in this theatre.
 - b. * This theatre was died in (by Lincoln).
- Part of this is lexical: differences between unaccusative and unergative verbs (Perlmutter & Postal 1984; Kim 2009).
 - (29) a. The desk was sat on by the gorilla.
 - b. * The desk was sat on by the lamp.
- This applies to regular passives as well?
 - (30) a. Kim resembles Sandy.
 - b. * Sandy is resembled (by Kim).
- But in part this speaks to the problems of delimiting arguments and adjuncts (Needham & Toivonen 2011; Przepiórkowski 2016).
- Several suggestions which involve collapsing (subsets of) adjuncts and obliques into the same category, e.g. Zaenen & Crouch (2009), Przepiórkowski (2016).

5 Analysis

• The essential property of the prepositional passive (especially where the preposition is contentful, i.e. Type II) is that the clause's subject in the syntax corresponds to the stranded preposition's internal argument in the semantics.

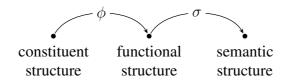


Figure 1: (Part of) the correspondence architecture

5.1 The regular passive

- Such questions of alignment between different levels of representation are easy to describe in the modular architecture of Lexical Functional Grammar (LFG: Kaplan & Bresnan 1982; Dalrymple 2001; Bresnan et al. 2016)—see Figure 1.
- Specifically, the mapping from grammatical functions to semantic argument positions involves the function σ from f- to s-structure.
- A version of Lexical Mapping Theory (LMT: Bresnan & Kanerva 1989; Kibort 2007; Findlay 2014a) provides links between the two structures. For example:¹

(31)
$$(\uparrow_{\sigma} ARG_1) = (\uparrow \{SUBJ | OBL_{AGENT} \})_{\sigma}$$

• The passive constrains these possibilities:²

(32) PASSIVE :=
$$(\uparrow \text{ VOICE}) = \text{PASSIVE}$$

$$(\uparrow_{\sigma} \text{ ARG}_{1}) = (\uparrow \text{ OBL}_{\text{AGENT}})_{\sigma}$$

$$(\lambda P \exists x. [P(x)] : [(\uparrow_{\sigma} \text{ ARG}_{1}) \multimap \uparrow_{\sigma}] \multimap \uparrow_{\sigma})$$

5.2 Expanding the passive template

• The information we need to add for the prepositional passive is that the subject of the clause at f-structure is the argument of the stranded preposition at s-structure, i.e. what we see in Figure 2.

(i)
$$\{(\uparrow_{\sigma} ARG_1) = (\uparrow \{SUBJ|OBL_{AGENT}\})|(\uparrow_{\sigma} ARG_1)_{\sigma^{-1}} = \emptyset\}$$

For a fuller and more detailed demonstration of the analysis than time allows today, see Findlay (2016).

¹Of course, grammatical functions need not be realised if some other mechanism, e.g. passive morphology, removes the need for them. I leave aside the optionality in the talk, but for those interested in the formalism, the mapping equation in (31) should actually look like (i):

²This is presented as a *template*, which is an abbreviation for a bundle of functional information. On templates, see Dalrymple et al. (2004). This version of the passive template is based on that in Asudeh & Giorgolo (2012). Once again, the mapping equation is simplified, since it ignores the possibility of the short passive.

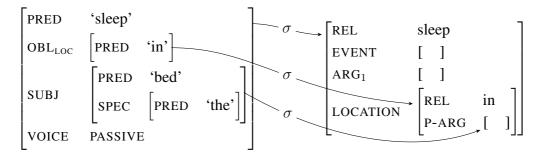


Figure 2: Mapping from f-structure to s-structure for The bed was slept in.

• P-ARG is the name of a feature at s-structure standing for the internal argument of the preposition. What we want to say is then the following:³

$$(33) \quad (\uparrow SUBJ)_{\sigma} = ((\uparrow OBL)_{\sigma} P-ARG)$$

• The passive template is thus augmented as follows:

```
(34) PASSIVE :=
(\uparrow \text{ VOICE}) = \text{PASSIVE}
(\uparrow_{\sigma} \text{ ARG}_{1}) = (\uparrow \text{ OBL}_{\text{AGENT}})_{\sigma}
((\uparrow \text{ SUBJ})_{\sigma} = ((\uparrow \text{ OBL})_{\sigma} \text{ P-ARG}))
(\lambda P \exists x. [P(x)] : [(\uparrow_{\sigma} \text{ ARG}_{1}) \multimap \uparrow_{\sigma}] \multimap \uparrow_{\sigma})
```

5.3 Type I

• Type I prepositional passives are the less problematic of the two, since the esoteric information can all be encoded locally, in a single lexical entry.

- (i) a. Victor has been spoken to about this.
 - b. * Victor has been spoken about this to.

In order to achieve this, we use the following, more detailed, description:

```
(ii) (\uparrow OBL_{\theta}) = \%STRDD-PREP

\neg(\uparrow OBL_{\theta}) <_f^{VP} \%STRDD-PREP

(\uparrow SUBJ)_{\sigma} = (\%STRDD-PREP_{\sigma} P-ARG)
```

 OBL_{θ} represents a disjunction over all OBL functions, i.e. (iii):

```
(iii) OBL_{\theta} \equiv \{OBL_{GOAL} | OBL_{LOC} | \dots | OBL_{TO} | OBL_{ON} | \dots \}
```

The first line of (ii) therefore picks some oblique and, using a local variable (Crouch et al. 2012), names it %STRDD-PREP. The second line then requires of this oblique that no other oblique f-precedes it within the VP. We need this 'relativised' version of f-precedence (Zaenen & Kaplan 1995) because fronted OBLs, which f-precede the stranded preposition in the general sense, do not result in ungrammaticality:

(iv) About this, Victor has been spoken to.

The final line gives the mapping equation from (33) relativised to the correct OBL.

³In fact, we need to limit the OBL in question to the *nearest PP* to the verb, to account for contrasts like (i):

(35)
$$rely$$
 V $(\uparrow PRED) = \text{`rely'}$
 $(\uparrow_{\sigma} ARG_2) = ((\uparrow OBL_{ON})_{\sigma} P\text{-}ARG)$
 $\lambda y \lambda x. rely_on(x, y) :$
 $(\uparrow_{\sigma} ARG_2) \multimap (\uparrow_{\sigma} ARG_1) \multimap (\uparrow_{\sigma} EVENT) \multimap \uparrow_{\sigma}$

• In the default case, the preposition's object will map to the P-ARG, while if the passive template is selected, it will be the clause's subject. Either way, that argument is identified as the second argument of the verb *rely* and passed to its semantics appropriately.

5.4 Type II

- If the PPs which participate in Type II prepositional passives are obliques, then no more need be said: the analysis will hold of them directly.
- The semantic-pragmatic constraints discussed above seem to be the ultimate arbiters of whether or not a given PP can participate in the prepositional passive.
 - (36) a. This bed has been slept in.
 - b. * This bed has been slept under.
- Passives with *slept under* are perfectly acceptable given an appropriate context:
 - (37) This heavy sheet is designed to be slept under.
- What is happening here, then, is not purely linguistic: beds are affected by being slept in but not by being slept under.
- But this is inextricably linked to our knowledge of the world—of how beds work and what happens to them when people sleep in them.
- This kind of real-world knowledge that has linguistic effects is precisely the sort of information discussed by Pustejovsky (1995) in relation to *qualia structure*.
- E.g. John began the book = John began to read/write the book.
- E.g. German: when a PP argument is separated from its noun predicator, the acceptability of the sentence is affected by whether the embedding verb and the noun form a contextually unmarked meaning or not (Grewendorf 1989):
 - (38) a. Über Syntax hat Hans ein Buch ausgeliehen. about syntax has Hans a book borrowed 'Hans has borrowed a book about syntax.'
 - b. * Über Syntax hat Hans ein Buch geklaut.

 about syntax has Hans a book stolen

 'Hans has stolen a book about syntax.' (De Kuthy 1998)
- Of course, we can imagine scenarios where other relations are appropriate: take a situation in which we are all sleeping in a dormitory, but the beds are all full, and so some of us are sleeping under the beds.

- (39) That bed is being slept under already.
- But this requires a more marked context to come off successfully.
- Really, relations that are available to the prepositional passive are simply those which are contextually relevant; it's just that some such relations are taken as the default, available even in the null context, which allows them to be used without a richer contextual background.
- Notions like affectedness or prominence, and, perhaps, the distinction between arguments and adjuncts, may in fact be epiphenomena, the result of Gricean-style inference interacting with knowledge about the kinds of relationships with the world which the referents of words enter into.

6 Conclusion

- The prepositional passive is only minimally different from the regular passive.
- A minimally sufficient analysis can be incorporated into existing analyses of the passive by simply adding the crucial information that sets the prepositional passive apart, namely the mapping from f- to s-structure.
- Further semantic and pragmatic constraints exist and can be encoded as and when needed, but ideally would be reducible to more basic principles.

References

- Alsina, Alex. 2009. The prepositional passive as structure-sharing. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG09 Conference*, 44–64. Stanford, CA: CSLI Publications. http://www.stanford.edu/group/cslipublications/cslipublications/LFG/14/papers/lfg09alsina.pdf.
- Asudeh, Ash & Gianluca Giorgolo. 2012. Flexible composition for optional and derived arguments. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG12 Conference*, 64–84. Stanford, CA: CSLI Publications. http://www.stanford.edu/group/cslipublications/cslipublications/LFG/17/papers/lfg12asudehgiorgolo.pdf.
- Bolinger, Dwight. 1975. On the passive in English. In Adam Makkai & Valerie Becker Makkai (eds.), *The first LACUS Forum 1974*, 57–77. Columbia, SC: Hornbeam Press.
- Bolinger, Dwight. 1977. Transitivity and spatiality: the passive of prepositional verbs. In A. Makkai, V. B. Makkai & L. Heilmann (eds.), *Linguistics at the crossroads*, Lake Bluff, IL: Jupiter Press.
- Bolinger, Dwight. 1978. Passive and transitivity again. Forum Linguisticum 3. 25–28.
- Bresnan, Joan, Ash Asudeh, Ida Toivonen & Stephen Wechsler. 2016. *Lexical-functional syntax* (2nd edn.). Oxford, UK: Wiley-Blackwell.
- Bresnan, Joan & Jonni M. Kanerva. 1989. Locative inversion in Chichewa: A case study of factorization in grammar. *Linguistic Inquiry* 20(1). 1–50.
- Crouch, Dick, Mary Dalrymple, Ron Kaplan, Tracy King, John Maxwell & Paula Newman. 2012. XLE documentation. Palo Alto Research Center (PARC), Palo Alto, CA. http://www2.parc.com/isl/groups/nltt/xle/doc/xle.html.
- Dalrymple, Mary. 2001. *Lexical Functional Grammar* (Syntax and Semantics 34). Stanford, CA: Academic Press.
- Dalrymple, Mary, Ronald M. Kaplan & Tracy Holloway King. 2004. Linguistic generalizations over descriptions. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG04 Conference*, 199–208. Stanford, CA: CSLI Publications. http://www.stanford.edu/group/cslipublications/cslipublications/LFG/9/lfg04dkk.pdf.
- De Kuthy, Kordula. 1998. Splitting PP arguments from NPs: an argument raising approach and its interaction with lexical semantics. In Tibor Imre Kiss & Walt Detmar Meurers (eds.), *Proceedings of the ESSLLI workshop 'Topics in Constraint-Based Germanic Syntax'*, Saarbrücken.
- Findlay, Jamie Y. 2014a. Mapping Theory without Argument Structure. Unpublished ms., University of Oxford. https://www.academia.edu/9055653/Mapping_Theory_without_Argument_Structure.
- Findlay, Jamie Y. 2014b. The prepositional passive: A lexical functional account. MPhil thesis, University of Oxford.

- Findlay, Jamie Y. 2016. The prepositional passive in Lexical Functional Grammar. In Doug Arnold, Miriam Butt, Berthold Crysmann, Tracy Holloway King & Stefan Müller (eds.), *Proceedings of the Joint 2016 Conference on Head-driven Phrase Structure Grammar and Lexical Functional Grammar*, 255–275. Stanford, CA: CSLI Publications. http://web.stanford.edu/group/cslipublications/cslipublications/HPSG/2016/headlex2016-findlay.pdf.
- Grewendorf, Günther. 1989. Ergativity in German. Dordrecht, NL: Foris.
- Householder, Fred W. 1978. Review of *The First LACUS Forum*. Language 54(1). 170–176.
- Huddleston, Rodney & Geoffrey K. Pullum. 2002. *The Cambridge grammar of the English language*. Cambridge, UK: Cambridge University Press.
- Kaplan, Ronald M. & Joan Bresnan. 1982. Lexical-Functional Grammar: A formal system for grammatical representation. In Joan Bresnan (ed.), *The mental representation of grammatical relations*, 173–281. Cambridge, MA: MIT Press.
- Kibort, Anna. 2007. Extending the applicability of Lexical Mapping Theory. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG07 Conference*, 250–270. Stanford, CA: CSLI Publications. http://www.stanford.edu/group/cslipublications/cslipublications/LFG/12/papers/lfg07kibort.pdf.
- Kim, Jong-Bok. 2009. Three types of English pseudo-passives: A lexicalist perspective. *Korean Journal of Linguistics* 34(1). 1–24.
- Lieuwen, Tim, Michael Chang & Alberto Amato. 2013. Stationary gas turbine combustion: Technology needs and policy considerations. *Combustion and Flame* 160(8). 1311–1314.
- Lødrup, Helge. 1991. The Norwegian pseudopassive in lexical theory. *Working Papers in Scandinavian Syntax* 47. 118–129.
- Needham, Stephanie & Ida Toivonen. 2011. Derived arguments. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG11 Conference*, 401–421. http://www.stanford.edu/group/cslipublications/cslipublications/LFG/16/papers/lfg11needhamtoivonen.pdf.
- Perlmutter, David M. & Paul M. Postal. 1984. The 1-advancement exclusiveness law. In David M. Perlmutter & Carol G. Rosen (eds.), *Studies in Relational Grammar 2*, Chicago, IL: University of Chicago Press.
- Przepiórkowski, Adam. 2016. How *not* to distinguish arguments from adjuncts in LFG. In Doug Arnold, Miriam Butt, Berthold Crysmann, Tracy Holloway King & Stefan Müller (eds.), *Proceedings of the Joint 2016 Conference on Head-driven Phrase Structure Grammar and Lexical Functional Grammar*, 539–559. Stanford, CA: CSLI Publications. http://web.stanford.edu/group/cslipublications/cslipublications/HPSG/2016/headlex2016-przepiorkowski.pdf.
- Pustejovsky, James. 1995. The generative lexicon. Cambridge, MA: MIT Press.
- Åfarli, Tor. 1992. *The syntax of Norwegian passive constructions* (Linguistik aktuell 7). Amsterdam, NL: John Benjamins.

- Riddle, Elizabeth & Gloria Sheintuch. 1983. A functional analysis of pseudo-passives. *Linguistics and Philosophy* 6(4). 527–563.
- Schachter, Paul. 1977. Reference related and role related properties of subjects. In Peter Cole & Jerrold M. Sadock (eds.), *Syntax and semantics 8: Grammatical relations*, New York, NY: Academic Press.
- Truswell, Robert. 2008. Preposition stranding, passivisation, and extraction from adjuncts in Germanic. *Linguistic Variation Yearbook* 8. 131–178.
- Tseng, Jesse. 2006. English prepositional passives in HPSG. In Gerhard Jäger, Paola Monachesi, Gerald Penn & Shuly Wintner (eds.), FG-2006: Proceedings of the 11th Conference on Formal Grammar, 147–159. Málaga, ES: CSLI Publications Online Proceedings. http://w3.erss.univ-tlse2.fr/textes/pagespersos/tseng/Pubs/FG06-tseng.pdf.
- Tseng, Jesse. 2007. English prepositional passive constructions. In Stefan Müller (ed.), *Proceedings of the 14th International Conference on Head-Driven Phrase Structure Grammar*, 271–286. Stanford, CA: CSLI Publications. http://web.stanford.edu/group/cslipublications/cslipublications/HPSG/2007/tseng.pdf.
- Zaenen, Annie & Dick Crouch. 2009. OBLs hobble computations. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG09 Conference*, 644–654. Stanford, CA: CSLI Publications.
- Zaenen, Annie & Ronald M. Kaplan. 1995. Formal devices for linguistic generalizations: West Germanic word order in LFG. In Mary Dalrymple, Ronald M. Kaplan, John T. Maxwell, III, & Annie Zaenen (eds.), *Formal issues in Lexical-Functional Grammar*, 215–240. Stanford University: CSLI Publications.
- Ziv, Yael & Gloria Sheintuch. 1981. Passives of obliques over direct objects. *Lingua* 54. 1–17.