

# Relative Clauses in HPSG

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## 1 Introduction

Relative Clauses (RCs) are prototypically sentential constructions which modify a nominal. The highlighted part of (1) is an example of one kind of English RC, modifying the nominal whose head is *person*.

(1) The person *to whom Kim spoke yesterday* claimed to know nothing.

Syntactically, this kind of RC consists of a preposed *wh*-phrase (*to whom*: a phrase containing a relative pronoun, in this case, *whom*), and a clause with a constituent missing: *Kim spoke \_\_\_\_ yesterday*. The preposed *wh*-phrase is understood as filling the gap associated with this missing constituent. Semantically, the content of the combined nominal plus RC is something like ‘the set of  $x$  where  $x$  is a person such that Kim spoke to  $x$ ’. Not all RCs have these properties of this kind of RC, but RCs like (1) provide a good starting point.

Relative clauses have been important in HPSG theory because they were the first place that a ‘constructional’ account was developed.

We begin by looking in more detail at the properties of examples like (1), then outline the two main approaches that have been proposed: Pollard and Sag (1994:ch5) (briefly), and Sag (1997), in more detail. We then look at other kinds of headed relative, and headless relatives, and conclude with a ‘clean up’ section that deals with matters we have not covered properly, and further references to the literature.

## 2 Overview

An overview of the issues that arise in relation to examples like (1) from an HPSG perspective, to set up the following discussion:

- relative clauses are adjuncts which combine with their nominal heads in a similar way to e.g. adjectives (i.e. in head-adjunct structures – we assume there will be discussion of this elsewhere)
- filler gap dependencies (i.e. unbounded dependencies, slash inheritance – assumed to be discussed elsewhere)
- the REL dependency (pied-piping)
- the semantics

## 3 Approaches

This section describes the main approaches to the analysis of simple cases like (1):

### 3.1 P&S

- Outline summary of the ‘empty relativiser’ analysis from Pollard and Sag (1994) for cases like (1)

### 3.2 Sag’s Constructional Approach

- Outline summary of the constructional analysis for cases like (1) in Sag (1997).

## 4 Other kinds of headed relatives

- *that* relatives (i.e. relatives introduced by ‘complementisers’ esp. the treatment of *that*, and similar e.g. French *que*, etc. are they complementisers or relative pronouns?)
- bare relatives (the person we saw)
- subject relatives (the person \*(who) saw us)
- non-finites (the person to see) – are these really relative clauses at all?
- non-restrictives
- resumptive pronouns instead of gaps in relative clauses

## 5 Headless (free) relatives

- Here we will describe approaches to headless (free) relatives, based on Müller (1997, 1999), Taghvaipour (2005), Yoo (2008), Borsley (2008), etc.
- internally headed and relative-correlatives (based mainly on P&S ch5)

## 6 Other issues/Open Questions

- This section is to clean up anything that has not been mentioned, and point out open questions and lines for future research – the general outline of Sag’s approach seems to have been accepted, but some questions are open (should be noted above)
- Examples of things that have not been mentioned will probably include: amount relatives, work on extraposition of relative clauses (e.g. Kiss (To appear)), aux-stranding relatives Arnold and Borsley (2010), interaction with anaphora Arnold and Borsley (2008); maybe discussion of cases where constructions resembling relative-clauses are not noun-modifiers (e.g. complement of superlative; in German, the *diejenige* class of determiners, clefts, ‘quasi-relatives’) – perhaps these other uses of RCs will turn out to deserve a separate section.
- What are the main issues for HPSG research on relative clauses?

## 7 Conclusion

## 8 Incomplete List of References

- Arnold, Doug and Borsley, Robert D. 2008. Non-restrictive Relative Clauses, Ellipsis and Anaphora. In Stefan Müller (ed.), *The Proceedings of the 15th International Conference on Head-Driven Phrase Structure Grammar*, pages 325–345, Stanford, CA: CSLI Publications.
- Arnold, Doug and Borsley, Robert D. 2010. Auxiliary-Stranding Relative Clauses. In Stefan Müller (ed.), *The Proceedings of the 17th International Conference on Head-Driven Phrase Structure Grammar*, pages 47–67, Stanford: CSLI Publications.
- Borsley, Robert D. 2008. On Some Welsh Unbounded Dependency Constructions. Essex Research Reports in Linguistics 57.4, Dept. of Language and Linguistics, University of Essex.
- Kiss, Tibor. To appear. Semantic constraints on relative clause extraposition. *Natural Language and Linguistic Theory*.
- Müller, Stefan. 1997. An HPSG-Analysis for Free Relative Clauses in German. In *Proceedings of Formal Grammar, Aix-en-Provence*, pages 179–188.
- Müller, Stefan. 1999. An HPSG-Analysis for Free Relative Clauses in German. *Grammars* 2(1), 53–105.
- Pollard, Carl J. and Sag, Ivan A. 1994. *Head-Driven Phrase Structure Grammar*. Chicago: University of Chicago Press.

- Sag, Ivan A. 1997. English Relative Clause Constructions. *Journal of Linguistics* 33(2), 431–484.
- Taghvaipour, Mehran A. 2005. Persian Free Relatives. In Stefan Müller (ed.), *The Proceedings of the 12th International Conference on Head-Driven Phrase Structure Grammar, Department of Informatics, University of Lisbon*, pages 364–374, Stanford, CA: CSLI Publications.
- Yoo, Eun-Jung. 2008. Transparent Free Relatives in English. In Stefan Müller (ed.), *The Proceedings of the 15th International Conference on Head-Driven Phrase Structure Grammar*, pages 274–293, Stanford, CA: CSLI Publications.