

On English Specificational Pseudocleft Sentences

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1 Introduction

- *Specificational pseudoclefts*: SPCs are copular sentences like (1) in which a *wh*-clause is equated with the focal phrase (the pivot) that corresponds to the gap in the *wh*-clause.

- (1) a. What he brought was a donkey.
b. What they are is silly.
c. What appeals to them most is a go on the swings.
d. What he then did was cut his finger.
e. What proves that your are wrong is that they weren't even there. (Higgins 1979:2)

- *Connectivity*: the pivot behaves as if it occupied the gap position in the precopular *wh*-clause.

- (2) a. What everyone_i proved -- was his_i own theory. (*Bound variable connectivity*)
b. What he didn't buy -- was any wine. (*NPI connectivity*)
c. What John_i is -- is a nuisance to him_{*i/j}. (*Binding Theory B connectivity*)
d. What he_{*i/j} is -- is a nuisance to John_i. (*Binding Theory C connectivity*)

- It is well known that specificational pseudoclefts (SPCs) are distinguished from predicational pseudoclefts, in that only SPCs exhibit connectivity effects (Akmajian 1970, Higgins 1979).

- (3) a. What Susan is is worthwhile. (*Predicational pseudocleft*)
b. *What he didn't have bothered anyone.
c. What John_i is surprised him_i/*himself_i.
d. What she_i claimed is typical of Susan_i.

- The main purpose of this paper is to investigate how SPCs in English can be accounted for in HPSG. This paper shows that SPCs must be handled by an integrated account of the syntactic, semantic, and pragmatic properties of the construction, and argues that the connectivity problems should be approached from such an integrated view.

2 Syntactic and semantic approaches to SPCs

2.1 Movement approaches

- The pivot and the position of the gap in the *wh*-clause is linked by syntactic movement (Bošković 1997, Meinunger 1998, and Heycock & Kroch 1999, 2002).

- Bošković claims that the pivot moves to the gap position at LF, and argues that a pseudocleft sentence is identified with the corresponding unclefted sentence at this level.
- Heycock & Kroch (2002) propose that SPCs have the same LF representation as non-copular sentences with the identical information structure. They assume obligatory “reconstruction” of the Focus constituent.

- (4)
- What she saw was two flamingos.
 - She saw [_F two flamingos].
 - [_F Two flamingos] she saw.
 - [_{FocP} [_{Focus} two flamingos_i] [_{Foc'} Foc⁰ [_{Ground} she saw t_i]]]

- Problems: i) In Bošković, it is not clear why the pivot must undergo such a movement. If something should be reconstructed at LF, it is the *wh*-phrase, not the pivot. ii) In Heycock & Kroch, it is not explained what precise mechanism derives the LF representation (4d) from (4a). Furthermore, given the same LF for (4a-c), it needs to be explicated why only (4a) has the specificational meaning. iii) Anti-connectivity effects stand against the key assumption of Bošković and Heycock & Kroch that a pseudocleft and its unclefted counterpart are identified at LF. (See section 5.)

2.2 Deletion-based QDT approaches

- *Question-in-disguise theory* (QDT) (Ross 1997, Schlenker 1998, 2003, Den Dikken et al. 2000): the precopular constituent is taken to be a question in disguise and the postcopular phrase, the answer to the question.
- A full answer form is posited at Spell-Out and LF as in (5), and the underlined form is assumed to be deleted at PF.

- (5) What John likes is John likes himself.

- This approach is appealing because it captures parallelism between SPCs and question-answer pairs (for example, uniqueness presupposition carried by a question and a precopular phrase in SPCs), and it can explain connectivity via syntactic relations within the unclefted sentence in the pivot.
- However, as will be discussed in section 5, this deletion-based QDT approach is undermined by some anti-connectivity effects (Sharvit 1999 and Cecchetto 2000).

2.3 Semantic approaches

- *Unconstrained-‘be’ theory* (Jacobson 1994, Sharvit 1999, Cecchetto 2000, 2001): this approach is based on the idea that a pseudocleft sentence is a true equative and the pre and post-copular phrases have the same denotation.
- In this approach, connectivity in SPCs is viewed as a purely semantic phenomenon that is not related to a structural condition like c-command. In Sharvit and Cecchetto, in particular, connectivity related to variable binding, binding theory, and NPI licensing is shown to arise from independent interpretive procedure or semantic constraints.
- We agree in vein with their conclusion that connectivity in SPCs can be accounted for in terms of semantics. However, it should be examined whether various syntactic behaviors of SPCs can be also reconciled with this approach. Syntactically, there is some evidence that a precopular *wh*-clause is an interrogative clause, rather than a free relative clause.

3 More on a question-answer-pair analysis of pseudoclefts

3.1 Similarities between SPC *wh*-clauses and interrogative clauses

- Pseudocleft clauses contrast to free relatives in that i) they license ‘what else’ just like embedded interrogatives, and ii) ‘whatever’ cannot be used in pseudoclefts and interrogatives, although it is free to occur in free relatives.

(6) a. I know/*ate what else she cooked.
b. What (else) she is going to cook is spaghetti flambé.

(7) a. I *know/ate whatever she cooked.
b. What(*ever) she cooked might not be stuffed peas.

- Although marginal, it is possible that multiple *wh*-phrases appear in SPCs, unlike in free relatives. ((8a) from Ross 1997, and (8b) from Den Dikken et al. 2000.)

(8) a. ?[Who ordered what] was [Tom (ordered) a beer and Jim a watermelon flip].
b. ?[What John gave to whom] was [a book to Mary a CD to Sue].

- Topicalization out of pseudoclefts is permitted as in interrogatives, which contrasts to the extraction possibilities in free relatives (Meinunger 1998).

(9) a. ?To Mary, what I wouldn’t give is any wine.
b. ?To Mary, what will you give?
c. *To Mary, what I gave caused a scandal.

3.2 Dissimilarities

- *Wh*-words in SPCs:

(10) a. Who told me about it was Jane.
b. Where he spends his summers is Chester.
c. How he cut his face was by trying to eat while shaving.
d. Why they did it was to impress Mary. (Higgins 1979:2)

(11) a. *Which hat John found was that one.
b. *Whose book John borrowed was Jane.
c. *How many books Jennifer read was five (books).

- No pied-piping

(12) a. *With whom he went to the movie was with Jane.
b. *About what he is thinking is about his new movie.

Cf. Pied-piping is impossible in free relatives as well.

(13) *With whom he went to the cinema has just entered the room.

3.3 SPC pivots as (elided) answers

- Possibilities of full answers

- (14) a. What John did was [he bought some wine]. (Den Dikken et al. 2000:43)
b. What I did then was I called the grocer. (Ross 1972)

- Scope of negation (Higgins 1979, Bošković 1997, Den Dikken et al. 2000)

- (15) a. Jane does not believe that he will graduate. (*ambiguous*)
b. Jane does not hold the belief that he will graduate.
c. Jane holds the belief that he will not graduate.

- (16) ?What Jane does not believe is that he will graduate. (\neq 15c)

- (17) a. ??What Jane does not believe is [she does not believe that he will graduate] (\neq 15c)
b. ?What does Jane not believe? That he will graduate. (\neq 15c)

- While we are sympathetic to the semantic explanations to SPCs connectivity, we still consider the question-in-disguise theory has merits that can be adopted.
- In our view, what is problematic with previous QDT approaches is the parallelism made only between SPCs and question-full-answer pairs, which is accompanied by phonological deletion. We argue that if we take into account *question-short-answer pairs*, the parallelism is more complete. (See section 5.)

4 Proposed analysis

4.1 *Be*-of-identity

- A number of studies has provided arguments for the analysis that specificational copular sentences are equatives, and the copular *be* in those sentences has the meaning of identity. (Partee 1986, Jacobson 1994, Sharvit 1999, Heycock & Kroch 1999, Schlenker 2003).
- Based on the arguments, we take SPCs to involve *be*-of-identity.
- How to equate the meaning of precopular elements with that of post-copular ones in HPSG representations? → In my analysis, the (resolving) answer to the precopular question is equated with the post-copular element.
- the lexical entry of *be* in SPCs

- (20) a. What did John do?
 b. Buy a book.
 c. He bought a book.
- (21) a. I believe that he bought a book.
 b. I don't know (what he did).
 c. BILL bought a book (... but I don't know what John did).
- (22) a. [What John did] was [buy a book].
 b. [What John did] was [he bought a book].
- (23) a. *[What John did] was [I believe that he bought a book].
 b. *[What John did] was [I don't know].
 c. *[What John did] was [BILL bought a book]. (Den Dikken et al. 2000:49)

6. The second element in the ARG-ST is specified as [IC +] in order to represent that a short answer is a main-clause phenomena, although it appears in an embedded context in SPCs. (See section 4.3.)
7. The requirement that the first ARG-ST element be [INT+] forces the precopular question to have an interrogative *wh*-phrase at the beginning. (See section 4.3 for details.)

- (24) a. *[John bought what] is a book.
 b. *[To whom John gave a book] is to Jane.

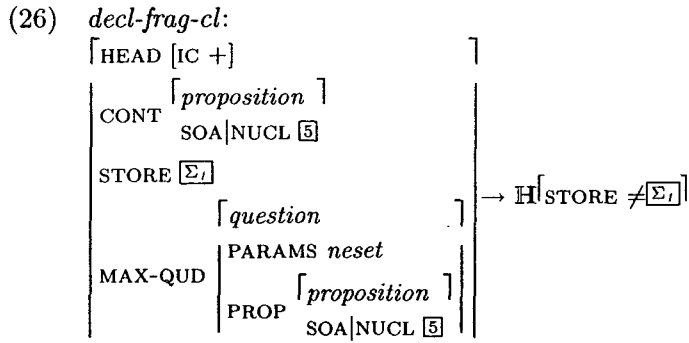
4.2 SPC pivots as short answers

- We take the post-copular part to correspond to the elided answer to a question. However, in contrast to Den Dikken et al. and Schlenker, it is not analyzed as involving phonological deletion. Instead, it will be analyzed in terms of *declarative-fragment-clause* (*decl-frag-cl*), which is proposed to handle short answers and reprise sluices in Ginzburg & Sag (2000).
- In Ginzburg & Sag, *decl-frag-cl* is a subtype of the type *headed-fragment-phrase* (*hd-frag-ph*) and *decl-cl*.²

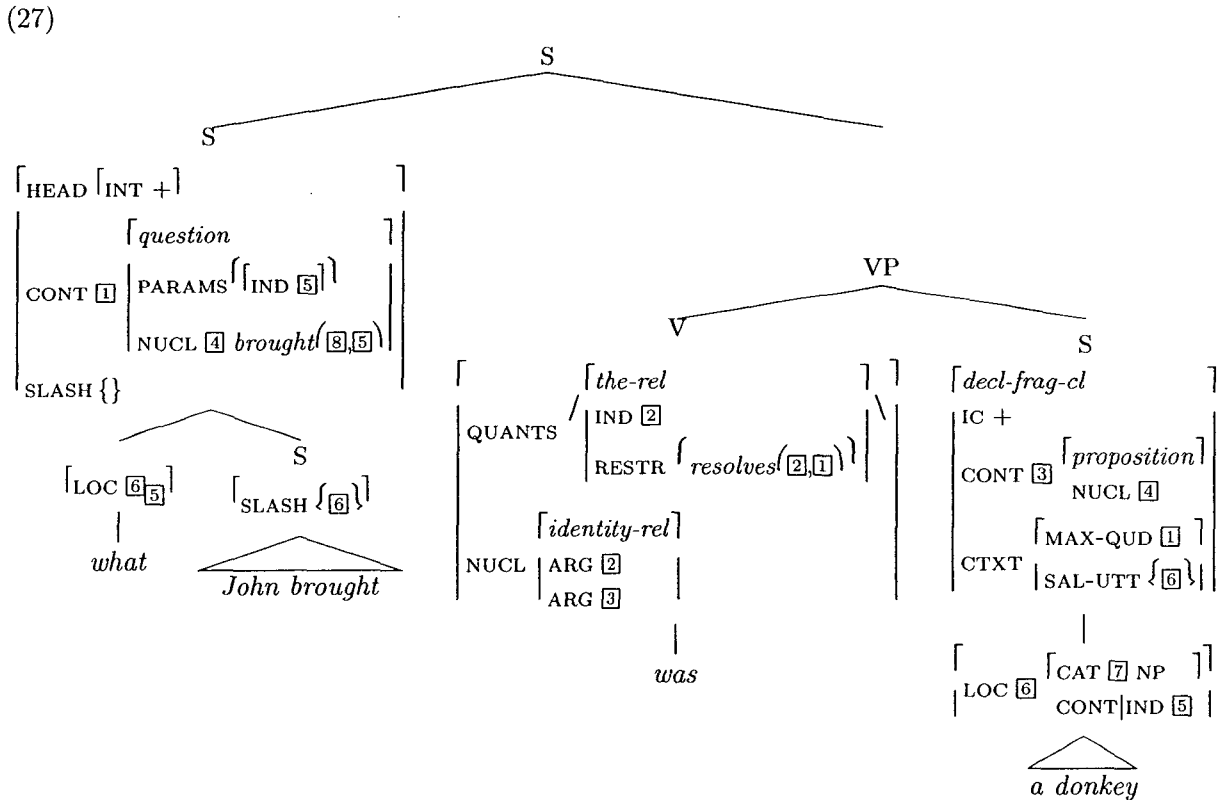
$$(25) \text{ } hd\text{-frag-ph:}$$

$$\left[\begin{array}{l} \text{[HEAD } verb\{\text{VFORM } fin\} \\ \text{SUBJ } < > \\ \text{SPR } < > \\ \text{CTXT|SAL-UTT } \left\{ \begin{array}{l} \text{[CAT } \boxed{1} \\ \text{CONT|IND } \boxed{2} \end{array} \right\} \end{array} \right] \rightarrow \mathbf{H} \left[\begin{array}{l} \text{CAT } \boxed{1} \\ \text{CONT|IND } \boxed{2} \end{array} \right]$$

²For the type *hd-frag-ph*, we don't pose a restriction on the category of head daughter. This is different from Ginzburg & Sag, who limit the head daughter's category to nominal ones (i.e. nouns or prepositions).



- In Ginzburg & Sag, CTXT is assumed to have two additional attributes, MAX-QUD and SAL(IENT)-UTT(ERANCE). The MAX-QUD is of type *question* and represents ‘the question currently under discussion’. On the other hand, the SAL-UTT, whose value is sets of type *local*, represents ‘the (sub)utterance that receives widest scope within MAX-QUD’, which is normally a *wh*-phrase.
- The treatment of short answers is incorporated to my analysis of SPCs as in (27):



- Since the SAL-UTT value contains the local value of the initial *wh*-phrase in (27), the category identity between the pivot and the initial *wh*-phrase can be accounted for.

4.3 On the interrogative analysis of SPC *wh*-clauses

- To account for the limited occurrence of interrogative *wh*-clauses in SPCs, we assume that
 - i) nouns, determiners, and adverbs have an additional head feature INT, whose value of *wh*-

interrogative words (e.g., *who*, *what*, *which*, *where*, and *how*) is [INT +], and
 ii) a new type of clause *p(seudo)c(left)-cl(ause)* is introduced as a subtype of *wh-int-cl*.³

(28) *wh*-words in interrogatives:
 $\lceil_{\text{HEAD}} \lceil_{\text{INT} +} \rceil$

(29) *p(seudo)c(left)-cl(ause)* (a subtype of *wh-int-cl*):
 $\lceil_{\text{HEAD}} \lceil_{\text{INT} \square} \rceil \rightarrow \lceil_{\text{HEAD}} \lceil_{\text{INT} \square} \rceil, \mathbf{H}$

- No pied-piping effects:

1. Since INT is a head feature, in an ordinary phrase, it is not inherited from specifier or complement daughter. Consequently, the bracketed phrases in (30) is [INT-], thus not permitted as a precopular clause by (18).

(30) a. *[[Which student] the teacher visited] was Jane.
 b. *[[About what] the student asked] was about music.

2. In a *pc-cl*, the INT value is inherited from the filler daughter by (29), which involves non-default inheritance of HEAD information. Accordingly, the bracketed *wh*-clause in (32) is [INT +].

(31) Generalized Head Feature Principle
hd-ph:
 $\lceil_{\text{SYNSEM} / \square} \rceil \rightarrow \dots \mathbf{H} \lceil_{\text{SYNSEM} / \square} \rceil \dots$

(32) [[What] Jane found] was a pebble.

Cf. Such non-default inheritance of certain HEAD information may occur in free relative constructions as well.

(33) [*NP* [*NP* Whomever]_{acc} he likes]_{nom} makes a big trouble. (Lee 2002:35)

5 On connectivity/anti-connectivity effects

5.1 Anti-connectivity and comparison with a deletion-based QDT approach

- *Anti-connectivity effects*: the connectivity observed in SPCs does not always coincide with that of question-answer pairs (Sharvit 1999, Cecchetto 2001).

(34) a. What John thinks that Mary likes is himself.
 b. *John thinks that Mary likes himself.
 c. What does John think that Mary likes? Himself. (Schlenker 2003:203)

(35) a. What some student admires is every teacher. (* $\forall\exists$)
 b. What some student admires is some student admires every teacher.
 c. What does some student admire? Every teacher. (* $\forall\exists$) (Cecchetto 2001:98-99)

³For the speakers who do not accept (part of) the examples in (10), we may posit a head feature PC instead of INT, and lexically mark as [PC +] the *wh*-words allowed in pseudocleft constructions. In this case, the INT feature in (29) should be accordingly replaced by the PC feature.

- The anti-connectivity effect in (34) cannot be explained in the deletion-based approach, because the pivot in (34a) will correspond to the ungrammatical sentence in (34b).⁴
- Moreover, the deletion-based QDT approach cannot explain the absence of the $\forall\exists$ reading in (35a), because, at SS and LF, (35a) will be of the form (35b), in which the pivot part should allow the $\forall\exists$ reading just as in the simple sentence *Some student admires every teacher*. (Cf. Cecchetto 2001)
- By contrast, in our analysis, (34-35) does not cause any problem, since the pivots in (34a) and (35a) are directly related to the short answers in (34c) and (35c) respectively.
- The unavailability of wide scope reading of the pivot quantifier phrase is accounted for in our analysis, because the constraints on *decl-frag-cl* in (26) requires that the quantifier associated with the short answer NP be retrieved at the clause. (This is due to the non-identical STORE values of the clause and its head.)

5.2 Some remarks on connectivity effects

- Although our analysis is free from the problems with the previous QDT approach, it might be viewed as losing the advantage of the deletion-based QDT approach—a simple syntactic account of connectivity effects.
- However, as Heycock & Kroch (1999) point out, accounts for connectedness effects in pseudoclefts must be extendable to other cases that arise in discourse. This is because the connectivity effects in (2) are also exhibited between sentences, as (36) illustrates, and cannot be simply reduced to syntactic conditions employing c-command relations.

(36) What did she_i claim? Only that Mary_{*i} will be late.

- Therefore, what seems to be more desirable is a semantic account that takes into account discourse representations of question-answer pairs, coreference phenomena, etc.
- Bound variable connectivity in (2a) can be readily handled via the description of functional uses of *wh*-phrase and the analysis of short answers. (Cf. Ginzburg & Sag 2000:310)
- For other cases like binding theory connectivity in (2c,d), we do not have a concrete rule that characterizes the binding patterns. However, however the rule is stated, we believe that it should be one that offers an account of binding connectivity in discourse (e.g., (36)) as well.

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⁴Schlenker mentions that the reason why anti-connectivity holds in (34) is because *himself* undergoes A'-movement before the deletion of the underlined constituent.

(i) himself [John thinks t_i that Mary likes t_i]

However, it is not clear at all what motivates such movement. Furthermore, the anti-connectivity in (35) cannot be explained in the same way.

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