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Pronominal v. determiner *wh*-words: evidence from the copy construction

This paper argues for a difference between pronominal *wh*-words (*what*) and *wh*-determiners (the *what* in *what books*) using evidence from *wh*-copy constructions. The former introduces a free variable while the latter is quantificational. This analysis is supported by parallel work on Germanic pronouns (Wiltschko 1998) and allows for a unified treatment of wh-phrases in questions and in free relatives.

In some dialects of German, the copy construction (1a) is in free variation with standard *wh*-extraction (1b).

1.   a. Wen glaubt   John <u>wen</u>   Mary getroffen hat?
      b. Wen glaubt   John <u>dass</u>   Mary getroffen hat?
         who believes J.   (who/that) M.   met   has   *Who does John believe Mary has met?*

This construction is distinctly different from wh-expletive constructions, in which the highest *wh*-phrase is always *was*, analyzed as indirect dependency by Dayal (1994) and (2000). Extraction constructions with an embedded clause have a complementizer in the intermediate CP; copy constructions have a copy of the wh-phrase, in lieu of a complementizer, in the intermediate CP. Both ask the same question, but the copy construction is subject to at least one additional restriction: *which+NP* phrases cannot be copied (2).

2.   a.   Welche Bücher glaubst du dass   sie gerne liest?
      b. *Welche Bücher glaubst du   welche Bücher   sie gerne liest?
           which   book   believe you (that/which book) she gladly reads?
           Which book do you believe she gladly reads?

Current theories of the copy construction are empirically inadequate. Proposals that characterize the intermediate copy as a wh-agreeing complementizer (Thornton & Crain 1994) cannot account for the coexistence of the wh-phrase and the complementizer in dialects that do not generally respect the Doubly-Filled Comp Filter (3), among other things (Fanselow & Mahajan 2000).

3.   Wer glaubst du, <u>wer dass</u> du bist?
         who think   you who that you are?   *Who do you think who that you are?*

Those that suggest that the copy construction differs interpretationally from extraction (Felser 2003 proposes that the intermediate copy needs to be interpreted occasionally) make erroneous predictions for tests of quantifier scope (consistent v. inconsistent readings, wh-quantifier scope interaction, *how many* reconstruction).

Additionally, the difference cannot be reduced to one of D-linking; holding a specific context fixed does not improve the acceptability of *which+NP* copying, which is presumed to have a specific reading when D-linked (Pesetsky 1987):

4.   Susie has only three dollars.
         a. Wieviel meint sie wieviel das kostet?
         b. *Wieviel Geld meint sie wieviel Geld das kostet?
             (how.much/how.much money) thinks she (how.much/*how.much money) that costs
             How much/how much money does she think that costs?

Finally, those that characterize the intermediate copy as a semantically vacuous trace of movement (Nunes 1999 argues that intermediate copies are adjoined and cliticized to Cº) need to explain the *which+NP* restriction by appealing to the notion of morphological heaviness. This incorrectly bars the copying of prepositional wh-phrases, which are acceptable (5).

5.   Mit wem glaubst du mit wem Hans spricht?
         with whom believe you with whom H.   talks   *With whom do you believe Hans is talking?*

This paper brings to the fore a parallel between the copy construction in interrogatives and a similar construction in free relatives (FRs): wh-phrases in FRs can also be copied (6), but *which+NP* phrases are bad here too.

6.   Ich traf wen John meint wen Adam liebt.
   I   met who J.   thinks who A.   loves   *I met who John thinks Adam loves.*

As wh-phrases in FRs vary with respect to whether or not they quantify, it makes sense to think that they are not inherently quantificational (Jacobsen 1995, Caponigro 2004). I extend this suggestion by proposing that (one type of – see below) wh-phrases in questions are not inherently quantificational (following Hamblin 1973, Groenendjik & Stokhof 1984). The argument is as follows.

Pronominal wh-phrases (wh-words occurring without an NP) are not inherently quantificational. They introduce a free variable, bound at the end of the derivation by existential closure (Heim 1982) or possibly underneath the VP (Diesing 1992). They may additionally introduce some sort of predication, so the semantic value of *who* is $\lambda P[\text{animate}'(x) \& P(x)]$. Since a given token of a wh-pronominal is not quantificational, its iteration in the copy construction is unproblematic for the derivation. Each copy introduces a free variable, these variables are

coreferent due to trace-induced lambda abstraction, and each variable is bound only once by existential closure. (7) below shows the semantic derivation for the copy construction in (1). This derivation differs from an extraction counterpart only in that the copy construction has an additional animacy restriction in the scope of the matrix verb. I argue that this is inconsequential and that the two constructions therefore have the same meaning. This part of the analysis accounts for the grammaticality of morphologically complex PPs in (5): these wh-phrases are not quantificational, so their low interpretation does not pose a problem.

  While wh-pronouns are not quantificational, wh-determiners (wh-words in D^0 that take NP complements – see Wiltschko 1998 for a parallel distinction between relative pronouns and determiners in German) *are* quantificational. Thus, the semantic value of *what* in *what book* is $\lambda P[\exists x[\text{inanimate}'(x) \& P(x)]]$. The *which+NP* restriction falls out of this distinction; copy constructions of interrogatives with wh-determiners are ungrammatical because their derivations have the trace variable being quantificationally bound in two locations (thus, *x* in the embedded CP need not be coreferent with *x* in the matrix CP). (8) below shows the semantic derivation for the wh-determiner copy construction in (2). Essentially, then, the analysis is this: copy constructions with wh-pronominals are grammatical because the variable they introduce is only bound once (via existential closure); copy constructions with wh-determiners are ungrammatical because the variable they introduce is bound twice.

7. $\lambda p \exists x.\text{ani}(x) \& p=\text{believes}(j, \text{ani}(x) \& \text{met}(m,x))$
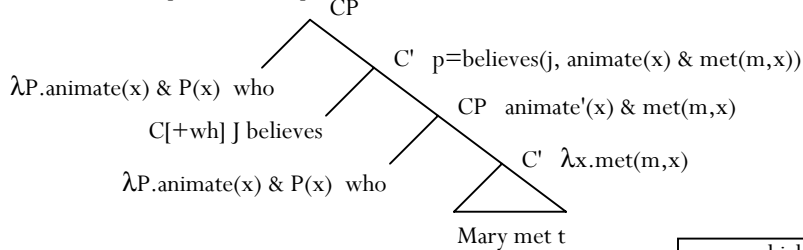
8. $*\lambda p \exists x.\text{student}(x) \& p=\text{believes}(j, \exists x.\text{student}(x) \& \text{met}(m,x))$
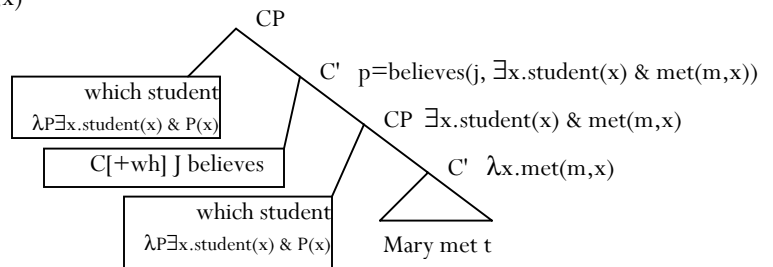
  This paper goes on to explore consequences and predictions of the theory within the copy construction (its restriction on negation, the ambiguity of *how many*, the semantics of prepositional phrases) and more generally (its contribution to the D-linking literature, its compatibility with copy theories of movement).

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