

Approximative *of zo* as a diagnostic tool

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1. Syntactic diagnostics

An important tool in syntactic research is the use of syntax diagnostics. The syntactician tries to discover the nature of some syntactic construction or phenomenon by means of syntactic diagnosis, i.e. the identification of certain syntactic properties (often by means of syntactic tests). In the course of time, syntactic theory has brought us a variety of diagnostics. A well-known case, already familiar from structuralist grammar, is constituency diagnostics, i.e. the identification of the grouping behavior of words and phrases by means of constituency tests. Another well-known instance are the *wh*-diagnostics discussed in Chomsky's (1977) *On Wh-movement*. In this paper, Chomsky shows how the application of *wh*-movement in some syntactic construction can be identified on the basis of the following diagnostic properties: (a) presence of a gap; (b) sensitivity to the Complex NP constraint; (c) sensitivity to the *wh*-island constraint; (d) apparent violation of the Subjacency condition in bridge verb contexts. For an infinitival question like *I wonder who to invite*, the identification of *wh*-movement is quite straightforward given the overt presence of a *wh*-word in the left periphery of the infinitival clause. The identification of *wh*-movement in constructions lacking an overt *wh*-phrase is arguably more exciting, since there is no direct (i.e. overt) sign available for the presence of a displaced *wh*-phrase. Take, for example, a comparative construction like (1a). Even though there is no overt *wh*-expression present in the comparative clause, the *wh*-diagnostics lead us to an analysis of this construction in terms of *wh*-movement: i.e. a *wh*-phrase is moved to COMP (i.e. Spec,CP in present-day terms). Consider for this the following examples, where *t* indicates the original extraction site:

- (1) John met more linguists ...
 - a. ... [than you met *t*/*them].
 - b. *... than I believed [_{NP} the claim [_{CP} that Sue had met *t*]].
 - c. *... than I wondered [_{CP} when Sue had met *t*].
 - d. ... [than we thought [you said [Bill believed [Sue met *t*]]]].

Since *On Wh-movement*, the diagnostic method has been recognized as an important tool in syntactic research. An early study employing this method was Van Riemsdijk's (1978a) *On the diagnosis of Wh movement*.

This squib is another illustration of the diagnostic method. My starting point is the approximative *of zo* 'or so' expression in Dutch. It will be argued that this expression can be used to identify predicates of the categorial type XP. Knowing this, I will show how approximative *of zo* can be used as a diagnostic tool for identifying the presence of phrasal predicates in certain types of syntactic constructions.

2. The syntax of the approximative *of zo* expression

A quite common expression in Dutch -- especially spoken Dutch -- is the sequence *of zo* (or so). An example is given in (2):

- (2) Was Jan boos of zo?
 was Jan angry or so
 'Was John angry or so?'

The expression *of zo* in this example has an approximative meaning: *boos of zo* can be paraphrased as: 'angry or a property/quality close to angry'. In other words, there is a certain semantic 'nearness' of the meaning of *boos* and the meaning of the pro-form *zo*.

As shown by the preposing test (3a) and the substitution test (3b), it is clear that the sequence *boos of zo* forms a syntactic unit:

- (3) a. [Echt boos of zo]_i is hij nooit t_i geweest. (Topicalization)
 really angry or so has he never been
 b. [Echt boos of zo]_i dat_i zal hij nooit worden.
 (Left dislocation)
 really angry or so that will he never become

Within the constituent (*echt*) *boos of zo*, we identify the disjunctive coordinator *of*. It expresses an alternative contrastive relationship: What is expressed in one conjunct is considered as an alternative to what is expressed in the other conjoined member. By using *zo*, the alternative is expressed in a vague way. It is also important to note that the disjunctive coordinator *of*, which can have both an exclusive (4) and a non-exclusive (5) meaning, only has a non-exclusive meaning in the approximative *of zo*-expression; i.e. there is no explicit exclusion of one of the 'candidates':

- (4) A: Ik heb mijn moeder over de prijs verteld.
I have my mother about the prize told
B: Heb je haar geschreven of gemaïld?
have you her written or mailed
- (5) A: Jan heeft een prijs gewonnen.
Jan has a prize won
B: Heeft hij dat al geschreven of gemaïld aan Marie?
has he that already written or mailed to Mary

Some further examples showing that approximative *of zo* is associated with a non-exclusive meaning are given in (6)-(7). The examples (based on Haeseryn et al 1997) all have a non-exclusive meaning.

- (6) Mensen die [[lid] of [donateur/zo]] zijn krijgen reductie.
people who member or donor/so are get reduction
- (7) Heb je al [[koffie] of [thee/zo]] gekregen?
have you already coffee or tea/so got

As shown by the examples (6)-(7), the approximative *of zo* expression does not only occur in combination with adjectives (cf. (2)) but also with nouns. As a matter of fact, approximative *of zo* is a cross-categorial phenomenon in the sense that the left conjunct can be of any lexical type, i.e. adjectival (8), nominal (9), prepositional (10) and verbal (11):

- (8) A: Wat was Jan toendertijd?
what was Jan at-the-time
B: Verslaafd of zo (was Jan).
addicted or so was Jan
- (9) A: Wat word jij later?
what become you later
B: Filosoof of zo (word ik later).
philosopher or so (become I later)
- (10) A: Waar liggen de sleutels?
where lie the keys
B: Boven of zo (liggen de sleutels).
above (= upstairs) or so (lie the keys)

- (11) A: Wat hebben ze gedaan?
 what have they done
 B: Geschaatst of zo (hebben ze).
 skated or so (have they)

The fact that the sequence *XP of zo* can occur as an independent phrase (cf. the B-examples) is an additional argument for its constituent status. The B-examples also show that in the context of a full sentence, the sequence *XP of zo* can precede the finite verb of the main clause. Under the assumption that the finite verb has moved to C (i.e. the verb second effect), *XP of zo* arguably occupies Spec,CP. The fact that it can be preposed to this syntactic position again illustrates its constituency.

Thus far we have seen that approximative *zo* is a member of a coordinate structure, more specifically it constitutes the right conjunct. Another question that should be raised concerns the categorial status of the pro-form *zo*: Is it a head (X) or is it a phrase (XP)? There are empirical reasons for taking the position that it is a constituent of the categorial type XP. Before showing this, let me point out that the disjunctive coordinator *of* can conjoin two heads. Consider, for example, the patterns in (12):

- (12) a. Je [belt of mail] haar vanavond.
 you call or mail her tonight
 b. Waarom [belt of mail] hij zijn vriendin niet?
 why calls or mails he his girlfriend not
 ‘Why doesn’t he call or mail his girlfriend?’

In these examples, verb second (i.e. head movement of the finite verb to C) has taken place. Given the fact that this operation only applies to heads, we must conclude that the coordinate structure *belt of mail* (and obviously also its coordinated members) in (12) is a head-like constituent as well.

When we compare the examples in (12) with the approximative counterparts in (13), we observe a sharp contrast in grammaticality.

- (13) a. *Je [belt of zo] haar vanavond.
 You call or so her tonight
 b. *Waarom [belt of zo] hij zijn vriendin niet?
 why calls or so he his girlfriend not

The ill-formedness of these examples may be taken to indicate that *zo* is not a head-like category. If it were, there does not seem to be any reason why it

could not undergo verb second together with the finite verb. If *zo* is phrasal (i.e. XP), the ill-formedness of (13) is due to (a) the coordination of two unlike constituents (i.e. V and XP) and (b) the impossibility of placing a phrasal element (i.e. the right conjunct) in a head position.

A second reason for taking *zo* to be a maximal phrase (i.e. XP) rather than a head (i.e. X) comes from the phenomenon of incorporation, which may be analyzed as another instance of head movement. As has been pointed out by Van Riemsdijk (1978b), it is possible in Dutch to incorporate a noun (e.g. *piano*) into the verb, yielding the complex verb [_V N + V]. The incorporated element must be a head; this under the assumption that heads can only be adjoined to heads. That the complex verb, containing the incorporated element, constitutes a head is shown by the fact that it can undergo (rightward) verb raising into a higher verb. Consider now the examples in (14):

- (14) a. Ik geloof dat hij toen nog [piano (of zo)] gespeeld heeft.
 I believe that he then still piano (or so) played has
- b. Ik geloof dat hij toen nog [piano (of zo)] heeft gespeeld.
 (Verb raising)
- c. Ik geloof dat hij toen nog heeft [[piano (*of zo)] gespeeld].
 (Incorporation + VR)
- d. [Piano (of zo)] geloof ik dat hij toen nog gespeeld heeft
 (Topicalization)

(14a) shows that *of zo* can form a unit with a non-incorporated noun. In (14b), only the verb *gespeeld* has undergone verb raising. (14c) exemplifies the pattern in which the noun has incorporated into the verb *gespeeld* and this complex verb has undergone verb raising. The ill-formedness of *piano (*of zo) gespeeld* may be interpreted as evidence for the non-head status of *zo*. (14d) shows that the sequence *piano of zo* can be topicalized.

In short, from the fact that *zo* cannot be part of a disjunctive coordinate structure that undergoes a head-movement like operation, I draw the conclusion that the pro-form *zo* is not a head-like constituent but a phrasal one (i.e. XP). This means that we end up with the following format for the approximative *of zo* construction: [_{ConjP} XP [_{Conj'} of [_{AdvP} zo]]].

The configuration represents that the two conjuncts are of the same hierarchical level, which is also required by the requirement that the coordinated constituents of a coordinate structure be of the same syntactic type. The 'sameness' of the two coordinated elements also extends to the semantics: i.e. arguments can be coordinated with arguments, and

predicates with predicates. The next question then is what kind of semantic element *zo* is. It goes without saying that *zo* is a predicate rather than an argument. As shown in (15), it typically occurs in predicative contexts, e.g. as predicate nominal in copular constructions:

- (15) a. Jij zult later ook zo worden.
 you will later also so become
 ‘You will also become like that.’
 b. Hij is nu eenmaal zo.
 he is now once so
 ‘That’s the way he is.’

3. Approximative *of zo* as a diagnostic tool

Thus far, we have seen that approximative *of zo* cannot combine with head-like constituents. Furthermore, *zo* typically is a pro-form that ‘replaces’ a predicate. In what follows, I will show how the approximative *of zo* expression can be used as a diagnostic tool for getting a better understanding of the nature of certain syntactic constructions.

The first type of construction to which I will apply the *of zo*-test is given in (16):

- (16) [Gebeld] heeft hij zijn tante nog nooit.
 called has he his aunt still never

In these examples, a participle verb (*gebeld*) has been fronted to the left periphery of the clause. The question arises what the categorial status of the fronted verbal constituent is.

In the literature, two analyses have been proposed. According to one analysis, called the ‘remnant movement analysis’ (see Thiersch 1985, Den Besten and Webelhuth 1987), the fronted verbal constituent is a maximal projection VP including a trace of a scrambled direct object. The derivation involves two instances of movement: First, the direct object scrambles out of the DO-position and moves (possibly string-vacuously) to a position adjoined to VP (or the Spec of some functional projection). The remnant VP is subsequently topicalized. In (17a), the remnant movement analysis is schematically represented for (16). The alternative analysis can be characterized as: ‘Fronting of a small verbal category’ (cf. Fanselow 1983, Van Riemsdijk 1989). According to this analysis, scrambling is a matter of free base generation; i.e. AdvP-DP-V and DP-AdvP-V are both possible

base-generated word orders. The verbal category that is fronted in (16) is not an incomplete verbal category (i.e. a VP containing a trace of the scrambled constituent) but rather a complete verbal category. Importantly, the verbal category does not have to be maximal (i.e. VP); the constituents V and V' can also undergo fronting. The V-fronting analysis is represented in (17b).

- (17) a. $[_{CP} [_{VP} t_k gebeld]_j [_{C'} heeft_i [_{TP} hij zijn tante_k nog nooit t_j t_i]]]$
 b. $[_{CP} [_{V} gebeld]_j [_{C'} heeft_i [_{TP} hij zijn tante nog nooit t_j t_i]]]$

Thus, a major question of debate is whether the fronted verbal constituent must be maximal (VP) or not. The *of zo*-test may help us here in the identification of the hierarchical status of the fronted verbal constituent. Remember that the left conjunct of the approximative *of zo* construction must be a maximal phrase (XP). That is, the configuration $[X^0 \text{ of } [_{AdvP} zo]]$ is not permitted. Strong evidence for this was the impossibility of the sequence *V of zo* in head movement (e.g. verb second) contexts (cf. (13)). Consider now example (18a), which shows that the fronted verb can be combined with approximative *of zo*. This suggests that the fronted verbal constituent is a VP, as proposed by the remnant movement analysis (see (18b)). Notice that the V-fronting analysis faces the problem why *of zo* would be blocked in verb second contexts but not in V fronting contexts; in both constructions, *of zo* would combine with a verbal head (V). In short, the *of zo*-test seems to favor the remnant movement analysis.

- (18) a. $[Gebeld \text{ of } zo] \text{ heeft hij zijn tante nog nooit.}$
 b. $[_{CP} [[[_{VP} t_k gebeld] \text{ of } [_{XP} zo]]]_j [_{C'} heeft_i [_{TP} hij [zijn tante]_k nog nooit t_j t_i]]]$.

A second illustration of syntax diagnostics by means of the *of zo*-test comes from the syntax of proper names. As has been argued in Longobardi (1994), proper names such as *Henk* and *Bush* are DPs consisting of a predicative part (i.e. N(P)) and a locus of referentiality (i.e. D(P)). The presence of a predicative part in a referential noun phrase like *Bush* is also suggested by the existence of constructions like (19):

- (19) a. Wie zou dit probleem kunnen oplossen? Henk of zo?
 who would this problem be-able to-solve? Henk or so?
 b. [Bush of zo] zou zoiets kunnen zeggen.
 Bush or so would something-like-that be-able to-say
 ‘Bush or so (i.e. Bush or someone like Bush) could say something like that.’

If *zo* can only be coordinated with a predicative XP, we must draw the conclusion from the facts in (19) that there is a predicative part within the proper noun phrase. This predicative part is arguably NP. The expression *Henk of zo* may then be assigned the representation in (20):

- (20) [DP [D *e*] [ConjP [NP Henk] [Conj' of [AdvP zo]]]]

That approximative *of zo* can be combined with a subpart (i.e. the lexical part NP) of the noun phrase is also shown by the examples in (21).

- (21) a. [Boeken of zo]_i heeft hij [geen t_i].
 books or so has he no(ne)
 b. [Welk [gedicht of zo]] wil je horen op je begrafenis?
 which poem or so want you to-hear at your funeral

(21a) is a split topicalization construction (cf. Van Riemsdijk 1989); the NP *boeken* is the left conjunct of the approximative construction. In (21b), *zo* must be interpreted as being coordinated with the lexical part NP, and not with the higher phrasal level DP, since *of zo* cannot be coordinated with interrogative phrases. This is clear from the ill-formedness of an example like (22):

- (22) *[Wat of zo] wil je horen op je begrafenis?
 what or so want you to-hear at your funeral

Let me close of this squib with the examples in (23) and (24):

- (23) a. [Een originele analyse of zo van dit probleem]
 an original analysis or so of this problem
 heb ik nooit gezien.
 have I never seen
- b. [Een moderne bewerking of zo van dit toneelstuk]
 a modern version or so of this play
 heb ik nog nooit gezien.
 have I still never seen
- (24) a. [Echt trots of zo op zijn dochter] zal Jan nooit worden.
 really proud or so of his daughter will Jan never become
- b. [Erg trouw of zo aan zijn bondgenoten] is hij nooit geweest.
 very faithful or so to his allies has he never been

What is interesting about these examples is that approximative *of zo* intervenes between what looks like a lexical head (i.e. the nouns *analyse* and *bewerking* and the adjectives *trots* and *trouw*) and a PP-complement of the head. Thus, at first sight, *of zo* appears to combine with the lexical head to its left. According to my analysis of *of zo*, however, the left member cannot be a head but must be a phrase XP. One way to approach this is schematically given in (25a,b), where — in the spirit of Kayne (1994) and Hoekstra (1999) — leftward phrasal movement applies within the extended nominal and adjectival projection. In (25a), leftward DP-internal movement takes place to the specifier position of the CP that is selected by D. In (25b), a phrasal constituent is moved to Spec, DegP after the PP-complement of *trots* has been scrambled leftward to some ‘middle field position’ within the adjective phrase.

- (25) a. [_{DP} een [_{CP} [_{ConjP} originele analyse of zo]_i [_{C'} [_C van] [_{AgrP} [dit probleem] Agr t_i]]]]
- b. [_{DegP} [_{ConjP} echt trots t_j of zo]_i [_{Deg'} Deg [_{FP} [_{PP} op zijn dochter]_j t_i]]]

Obviously, a more detailed analysis of these facts is needed. One thing is clear, though: The diagnostic method also gives us new thoughts on constructions we thought we understood.

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