

***Wh*-movement and *wh* in situ: Theory, typology, and diachrony**

Robert Truswell (University of Edinburgh)

This talk concerns correlations between word order in *wh*-clauses and denotation of *wh*-words. Many *wh*-words (that is, words canonically used in forming content questions) have other functions in other clause types. Some can be interpreted as indefinites (following Haspelmath 1997, often dependent indefinites, which must appear in the scope of a relevant operator, as in (1)).

1) gif hwa hit bletsap ... ‘If who [= anyone] blesses it, ...’ (Old English)

A crosslinguistically much rarer, but still well-attested pattern is that a *wh*-word also appears in relative clauses of various types, perhaps the rarest being restrictive headed relatives, as in (2).

2) a person [who blesses it] (Present-Day English)

An initial connection with the topic of word order is that *wh*-relatives are always fronted (Downing 1978) – time permitting, I will discuss the one putative counterexample in this talk, namely Tsez (Demirok 2017). In contrast, *wh*-indefinites are typically in situ (we will state this more precisely below). More strikingly, languages with *wh*-indefinites tend to have in situ *wh*-phrases in interrogatives, as well as when the *wh*-phrase is interpreted as an indefinite (this claim can be verified by crossreferencing languages included in the surveys of Gärtner 2009 and Dryer 2013).

This implies that *wh*-words which make good indefinites make poor relatives, and *vice versa*. This prediction seems to be empirically correct (see also Luján 2009), although *wh*-relatives are typologically too rare for us to be really confident.

We can find a ready-made explanation for this correlation between position and function, by synthesizing two kinds of approach which are common in the theoretical literature. First, the “dependent” analysis (Kratzer & Shimoyama 2002, and many others) treats a *wh*-phrase as denoting a set of alternatives, which must be interpreted in the scope of a suitable focus-sensitive operator. Because the *wh*-phrase must be interpreted at LF in the scope of an operator, it is natural (though not essential) for it to be in situ at LF, and also pronounced in situ.

Second, the “abstractor” analysis (e.g. Caponigro 2003) treats a *wh*-phrase as an operator, taking scope over a clause and abstracting over a variable typically corresponding to a copy of the *wh*-phrase. Because this analysis has the operator taking scope over a whole clause, it is natural (though not essential) for it to be pronounced in a position c-commanding the whole clause, such as Spec,CP – with movement being the standard device for relating the phrase’s base position to Spec,CP.

So there are two equally good ways to make a *wh*-question compositionally. Now, consider dependent *wh*-indefinites. These are well served by the dependent analysis (indeed, that was Kratzer & Shimoyama’s point): on the dependent analysis, the principal difference between a *wh*-interrogative and a *wh*-indefinite is simply the operator that binds the *wh*-phrase. They are not well served by the operator analysis, because indefinites aren’t operators.

As for *wh*-relatives, there is significant variation in their semantics (Belyaev & Haug 2020, Truswell & Gisborne 2020), but in the core case of restrictive relatives like (2), the *wh*-phrase appears to abstract over a variable corresponding to a copy of movement. This means that the abstractor analysis extends naturally to cover restrictive relatives, but the dependent analysis does not: *wh*-phrases in restrictive relatives are not indefinites.

There are further, more subtle predictions that follow from this line of analysis. For instance, in the dependent analysis, the *wh*-phrase does not move, overtly or covertly, so we have no reason to expect island effects. However, we do expect the kinds of intervention effects described by Beck (1996, 2006). The converse is true of the abstractor analysis: no reason to expect Beck-intervention effects, but we should see the full range of island effects associated with *wh*-movement.

From a diachronic perspective, several Indo-European languages (including at least many Romance and Germanic languages) have lost *wh*-indefinites and gained *wh*-relatives over the course of the written record. This suggests that a reanalysis from *wh*-dependent to *wh*-operator is possible. (I have no examples of the opposite – of reanalysis from operator to dependent – but data is too sparse to

be confident that this is a real gap. If it is a real gap, there would be a natural interpretation in the terms of the analysis sketched below.)

This is surprising, because dependent *wh*-phrases are typically in situ, and *wh*-operators are typically in Spec,CP. The word orders associated with the two analyses are very different, so how is reanalysis even possible? There appears to be no latent structural ambiguity of the sort required for reanalysis.

The answer must be that sometimes dependent *wh*-phrases front, not because they are *wh*-phrases, but for some other reason. An enlightening case study from this perspective is Hittite (Garrett 1994, Huggard 2015). Hittite *wh*-phrases have a range of uses, including as specific and nonspecific indefinites, and in definite and generalizing correlatives. Huggard argues that each use is associated with a distinct position, and so a distinct word order, roughly as in (3).

3) [_{CP} generalizing *wh*-correl. X definite *wh*-correl. ... specific *wh*-indef. [_{VP} nonspecific *wh*-indef. ...]]

An analysis in our terms could be that different null operators can attach in different positions in the clause, and the *wh*-phrase moves to the position associated with the operator which will bind it. Whatever, it seems inescapable that Hittite has dependent *wh*-phrases, which are often ex situ (so look somewhat like *wh*-abstractors).

Now, consider Old English (for the avoidance of doubt, OE is not directly descended from Hittite!). Old English has *wh*-fronting in questions (4a), but it also has *wh*-indefinites (4b), and although it has some limited use of *wh*-phrases in relatives (4c), this is almost entirely confined to left-adjoined correlative-like structures with generalizing interpretations – I show that this is a limited class of relatives in which the *wh*-phrase can be analysed as an indefinite.

4a) Hwæt gehyre ic be ðe? ‘what hear I by thee’ = ‘what do I hear from you?’

4b) wyrce hwa þæt ðæt he wyrce ‘work who that that he work’ = ‘if anyone does what he does’

4c) he ... sprecð swa hwæt swa he gehyrð ‘he speaks so what so he hears’ = ‘he says whatever he hears’

There is some evidence that OE *wh*-questions, despite the *wh*-phrase moving, still show Beck-intervention effects. For instance, OE does not allow *wh*-movement to cross negation. That suggests that OE *wh*-movement is Hittite-esque in that the *wh*-phrase moves to the specifier of an operator, but the *wh*-phrase reconstructs to be interpreted in situ, in the scope of that operator.

Slowly, over Late Middle and Early Modern English, *wh*-movement loses Beck-intervention effects (5a), *wh*-indefinites have disappeared, and *wh*-relatives have generalized to constructions like (5b), which could not helpfully be analysed as indefinite. So the sporadically fronted OE dependent *wh*-words have been reanalysed as necessarily fronted *wh*-operators.

5a) What care has not nature also taken to multiply plants, by multiplying their seeds!

5b) þan is ido [vor wan ich com], ich fare azen ‘when is done for what I came, I travel away’ = ‘when what I came for is done, I leave’

This illustrates a recurring pattern with word order and operator-variable constructions. Operator-variable constructions are necessarily bipartite, but one of the two parts is often inaudible (a trace, or a null operator). There are many different ways in which a single constituent could be pressed into service to represent both parts of the semantic relationship, and word order is a key cue, but a somewhat noisy one. The diachronic typology of *wh*-constructions is partly a reflection of that noise.

References

Beck (1996). PhD, Tübingen. **Beck (2006)**. *NaLS*. **Belyaev & Haug (2020)**. *Lg*. **Caponigro (2003)**. PhD, UCLA. **Demirok (2017)**. *NELS*. **Downing (1978)**. In Greenberg (ed.), *Universals of Human Language 4*. **Dryer (2013)**. Order of relative clause and noun. *WALS*. **Garrett (1994)**. *Die Sprache*. **Gärtner (2009)**. *Linguistic Typology*. **Haspelmath (1997)**. *Indefinite Pronouns*, OUP. **Huggard (2015)**. PhD, UCLA. **Luján (2009)**. In *Proceedings of ICHL 18*. **Kratzer & Shimoyama (2002)**. In *Proceedings of 3rd Tokyo Conference on Psycholinguistics*. **Truswell & Gisborne (2020)**. *CJL*.