## Reconsidering the relative cycle: Reanalysis and language contact in Middle English relative clauses

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Cyclic changes are well-attested across languages, the best-known example probably being the Jespersen-cycle of negative elements, illustrated in (1) for English (Wallage 2013):

(1)  $ne \rightarrow ne... not \rightarrow not$ 

The original configuration involved only a single negation element, *ne*; this was reinforced in Middle English by an additional *not*; finally, *not* took over, leading again to a single negation element in clausal negation. In this process, the middle stage, which involves the doubling of two negative elements, is crucial (Wallage 2013; see e.g. Schwenter 2006, Hansen 2009 and Hansen & Visconti 2009 for Romance). Under this view, reinforcement involves the introduction of a novel marker alongside the original one, which undergoes gradual phonological weakening as well as feature loss (from semantic features to interpretable formal features to uninterpretable formal features, cf. Zeijlstra 2014).

A similar cyclic change, termed the relative cycle, was proposed by van Gelderen (2004, 2009) for (headed) relative clauses in English, shown in (2) below:

(2) that  $\rightarrow$  wh + that  $\rightarrow$  wh

According to this, as *that* was reanalysed from a relative pronoun at the end of the Old English period, the specifier position became phonologically empty, allowing the introduction of *wh*-based relative operators in [Spec,CP] in Middle English, first in addition to an overt *that* and later on their own as well. Under this view, the doubling stage, illustrated in (3), was a substantial middle step, comparable to the one in the negative cycle.

- (3) a. the est Orisonte, **which þat** is cleped communly the assendent 'the East horizon, which is commonly known as the ascendent' (Chaucer *Treatise on the Astrolabe*, folio 10)
  - b. Criseyde **which that** certeynly // Receyueth wrong 'Cressida, who has certainly received a wrong' (Chaucer *Troilus and Criseyde*, Campsall ms, 2.240)

Initially, which was available both for personal, (3b), and non-personal, (3a), referents: the clearcut distinction between who(m) and which was completed only in Early Modern English (Johansson 2012). The existence of patterns like (3) in Middle English but not much beyond (van Gelderen 2013, Bacskai-Atkari 2022) seems to support this scenario. However, there are two major empirical problems with this kind of analysis.

The first problem is obvious: unlike in the negative cycle in (1), in which *not* ultimately replaced *ne*, there is no such replacement in English relative clauses, as both *that*-relatives and *wh*-relatives are attested in later periods as well, as shown in (4) for Present-Day English:

- (4) a. This is the book **that** I have written.
  - b. This is the book **which** I have written.

I argue that this difference from the negative cycle lies in there being different factors underlying (1) and (2): specifically, the introduction of the new *wh*-based operators was not a case of reinforcement but rather fostered by (i) language contact with French/Latin (van Gelderen 2004, Gisborne & Truswell 2017) and (ii) analogy with (embedded) interrogatives (Bacskai-Atkari 2022). Crucially, the *wh*-based relative pronouns retain their pronominal (operator) status, undergoing movement from the TP to [Spec,CP]. and thus do not occupy the same position as the complementiser *that*, which is base-generated in C. This syntactic difference leads to variation rather than a classical cyclic scenario along the lines of (1).

The second problem becomes obvious when consulting empirical evidence from corpora. The existing literature on the relative cycle and doubling patterns mostly cites examples from

Chaucer: however, a closer look at a representative sample of Chaucer's *The Canterbury Tales* this confirms that while doubling was a substantial pattern (over 6%) in this text, it was less frequent than *wh*-relatives (almost 16%) and especially *that*-relatives (almost 78%). The data thus seem to speak against the central role of doubling as an intermediate stage: the appearance of these doubling patterns coincides with the appearance of simple *wh*-relatives. In other Middle English texts, such as the Wycliffe Bible, the doubling stage seems to be absent altogether.

Based on the corpus results, I argue that doubling is rather a by-product of the independent availability of the two major patterns and as such not expected to be a massive pattern of its own. Further, the distribution of the individual strategies shows differences according to the function of the gap already in this early stage, leading to a clear subject/non-subject asymmetry.

Specifically, the distribution of the three strategies in the *The Canterbury Tales* shows significant (P<0.5) differences between subject and (direct) object gaps (P=0.0003) and between objects and obliques (P<0.00001). The latter difference is motivated by independent syntactic factors (the general lack of preposition stranding, see Bergh & Seppänen 2000) and is not attested in later corpus data (cf. Johansson 2012, Bacskai-Atkari 2023). By contrast, the subject/object asymmetries are related to the different strategies becoming associated with different functions: *that*-relatives dominate in subject relatives, while *wh*-relatives are dominant in non-subject relatives, where there started to appear and spread from (Romaine 1982, Gisborne & Truswell 2017). The doubling strategy patterns with *that*-relatives. As relative pronouns lexicalise the gap, they may ease processing in the more marked functions (cf. the Filler-Gap-Complexity Hypothesis of Hawkins 1999).

In sum, the results from the corpus study suggest that the doubling pattern as a middle stage in the relative cycle is an illusion. Rather than a gradual replacement process involving the phonological and semantic reduction of the original relative marker, the changes in Middle English relative clauses can be described as the emergence of a system in which the distribution of the individual markers is primarily related to a subject/non-subject difference.

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