Evidence for Relativization by Deletion in Chaucerian Middle English

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It might seem implausible that any one language should require two relativization rules, but in this paper I shall present internal evidence that two rules of relativization are needed in the grammar of Chaucerian Middle English. One of these rules moves the NP to be relativized to a position adjacent to the head of the relative clause, and the other deletes the NP to be relativized in its original (underlying) position.

The data for this paper have the following sources: all examples listed in the Tatlock and Kennedy Concordance to the Works of Chaucer[2] under that, who, whom, which, whose and what were examined, and the texts of "Troilus and Criseyde" and "A Treatise on the Astrolabe" were checked. No counterexamples were found to the generalization on which the argument I shall give depends.

In A History of English Syntax Traugott discusses relative clauses in Old and Middle English. She does not state any of the rules involved in Middle English relative clause formation, nor does she say whether she considers all relatives to be formed by a movement rule, or some to be formed by movement, and some by deletion. For Old English however, she treats all restrictive relatives as the result of a movement rule, and since she mentions no changes in this respect from Old to Middle English, it seems safe to assume that Middle English relativization would be treated in the same way as Old English relativization, that is as a movement process. A movement analysis of Middle English relatives has also been suggested by Keyser in "A Partial History of the Relative Clause in English."

Berman in "The Relative Clause Construction in Old and Middle English", proposed that in both Old and Middle English two rules of relativization were operative, one a rule of relativization by fronting and the other a rule of relativization by deletion, but offered no crucial evidence for choosing this grammar over one in which only relativization by movement is possible.

Although both types of analysis are consistent with most of the facts, crucial evidence does exist. An analysis which allows only relativization by movement cannot account for pied-piping in Middle English, while a system like Berman's, with two rules of relativization gives a simple and insightful explanation for the data.

A. A "MOVEMENT IN ALL CASES" ANALYSIS OF MIDDLE ENGLISH RELATIVE CLAUSES

Middle English relative clauses may be introduced by a relative pronoun:[3]

1. That is my nece, and called is Criseyde,
   Which some men wolden don oppressioun,
                              (Troilus and Criseyde. 2. 1417.)

or by a that:

2. Ther was a duc that highte Theseus;
                              (The Knight's Tale. 860.)

or by a relative pronoun followed by that:

3. What wol my deere herte seyn to me,
   Which that I drede nevere mo to see?
                              (Troilus and Criseyde. 4. 858.)

or by no overt marker:

    4. In which she hadde a cok, hight Chauntecleer.
                        (The Nun's Priest's Tale. 2849.)

Pied-piping is never possible in a relative clause introduced only by that.

    A standard movement analysis of relative clauses in Middle English would contain the following:[4]
A complementizer that which introduces relatives and other finite clauses.[5] A rule which pronominalizes the NP to be relativized under identity with the head of the clause.[6] A rule of wh-fronting which moves the wh-pronoun to the front of its clause, to a position under the Comp node, preceding the complementizer that. Pied-piping is optional, moving a preposition along with the fronted NP if the NP is dominated by a PP node in underlying structure. There is an optional rule of 'that-deletion' and an optional rule which deletes a relative pronoun if it is in clause initial position once it has been fronted by the wh-fronting rule.

    Since both the that-deletion and relative pronoun deletion rule are optional, either, neither, or both may apply, deriving all the possibilities shown in 1–4. Moreover, since the wh-pronoun deletion rule applies only to wh-pronouns in clause initial position, if a preposition has been pied-piped the structural description of the rule will not be met, and the ungrammatical sequence prep that will never be generated. While such an analysis is compatible with most of the facts of Middle English relativization, it is totally incompatible with the facts described in the next section concerning pied-piping, which thus provide evidence that a "movement in all cases" analysis is crucially inadequate for Chaucerian Middle English.

B. PIED-PIPING IN MIDDLE ENGLISH.

    I mentioned above that pied-piping never occurs in that-relatives. (A that-relative is defined as one in which no wh-relative pronoun occurs.) However, this is not the only restriction on pied-piping in Middle English. In wh-relatives (a wh-relative is defined as any relative clause in which a wh-pronoun appears) pied-piping is obligatory. Example sentences:

(a) – stranded prepositions in that-relatives.

    5. Whan I was come ayeyn into the place
        That I of spak, that was so sote and grene,
                    (The Parliament of Fowls. 295.)

    6. This rather man that I spak of thoughte he wolde assaie wher he, thilke, were a philosophre or no;
                    (Boece. Bk.2. Prosa 7. 146.)

    7. Than tok I alle the signes, degrees, and minutes, that I fond direct under the same planete that I wroghte for.
                (A Treatise on the Astrolabe. Part 2. 45. 19.)

    8. First wite thou certeinly, how that haven stondeth, that thou list to werke for;
   (A Treatise on the Astrolabe. Part 2. 46. 1.)

(b) – wh-relatives containing pied-piped prepositions:

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9. Thow were ay wont ech lovere reprehende
    Of thing <u>fro which</u> thou kanst the nat defende.
                            (Troilus and Criseyde. Bk. 1.510.)

10. This bok <u>of which</u> I make mencioun
    Entitled was al thus as I shal telle:
                            (The Parliament of Fowls. 29.)

11. For if a preest be foul, <u>on whom</u> we truste,
    No wonder is a lewed man to ruste;
                            (Canterbury Tales. Prologue. 501.)

12. But yet ne folweth it nat therof that every persone <u>to whom</u>
    men doon vileynye take of it vengeance;
                            (The Tale of Melibee. 1467.)

13. To knowe........ the partie of the orisonte <u>in which that</u>
    the sonne ariseth.
                            (A Treatise on the Astrolabe. 31.)

From this data and from the fact that no cases have been found of non
pied-piped prepositions in <u>wh</u>-relatives one may hypothesize that the
sentences corresponding to 9 through 13 with the preposition stranded
would be ungrammatical for Chaucer. 14, for example, would not occur,
though 15 would:

14. *This bok <u>which</u> I make mencioun <u>of</u>.....

15. This bok <u>that</u> I make mencioun <u>of</u>.....

Consider the apparatus necessary to allow 10 and 15 to be generated
but prevent 14, i.e. to generate <u>that</u>-relatives with stranded preposi-
tions and <u>wh</u>-relatives with pied-piped prepositions and not <u>wh</u>-relatives
with stranded prepositions.

16.
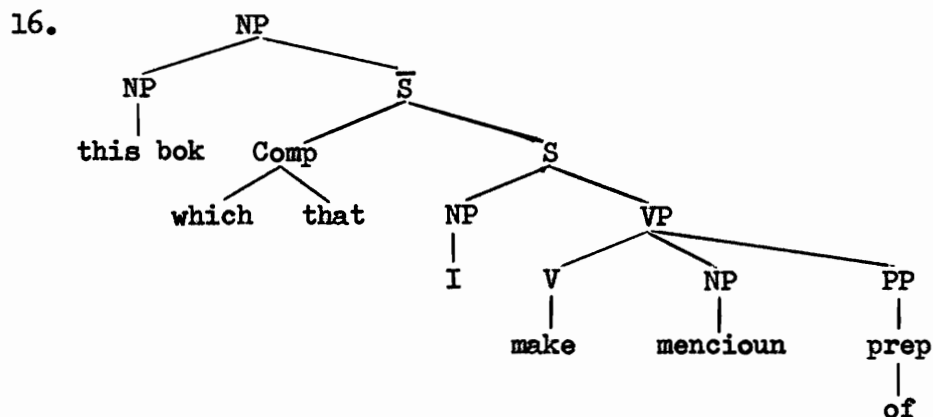
16 shows the structure of these sentences after <u>wh</u>-fronting has applied.
If the <u>of</u> had been pied-piped into a position under the Comp node before
<u>which</u> then there would be no problem. The rule which deletes <u>wh</u>-relative
pronouns would not apply since the <u>wh</u>-word would not be in clause initial
position, and the <u>that</u> could optionally delete, giving sentence 10 and
a variant of it with the complementizer still present.

If however, pied-piping does not apply, since both wh-pronoun dele-
tion and that-deletion may apply, or either one may apply, there is no
way to prevent that-deletion alone applying to give 14 which is ungram-
matical. The only way to ensure that wh-pronoun deletion applies here
is to put an ad hoc condition on it roughly as follows: If the wh-word
is not preceded by a preposition after relativization has applied, but
was in the configuration

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        PP
       /  \
      P    NP
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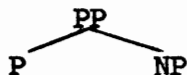
in underlying structure (i.e. if relativization has stranded a preposition),
then the wh-word deletes obligatorily.

This will ensure that no stranded prepositions are found in wh-rel-
atives. But notice that it not only complicates the wh-deletion rule
considerably, it gives it global power by permitting it to scan two
stages of the derivation at the same time. The rule must check that
the relative pronoun is in clause initial position after relativization
and it must check the underlying structure before relativization in or-
der to pick out the relativized items that have been shifted out of
a prepositional phrase.

In the next section I will show that a "movement or deletion" an-
alysis needs no ad hoc global conditions to explain these facts.

C. THE "MOVEMENT OR DELETION" HYPOTHESIS.

This hypothesis involves the following assumptions:
That is a complementizer. (c.f. fn. 5.) Movement has occurred only if
a relative pronoun appears in surface structure. (i.e. only in wh-rela-
tives). In all other cases (i.e. those relatives introduced by that or
with no overt marker) the NP in the relative clause has been deleted
"in situ" under identity to the head by a rule which deletes across a
variable. Once a relative pronoun has been fronted it is never possi-
ble to delete it. There is an optional rule of that-deletion.

RELATIVE CLAUSE MOVEMENT.

NP	that	X	NP	Y
			+wh	
1	2	3	4	5
1	4+2	3	∅	5	⟹ OPT

(The necessity for the variable X in this rule is shown by example 3.)

RELATIVE CLAUSE DELETION.

NP	that	X	NP	Y
			+wh	
1	2	3	4	5
1	2	3	∅	5	⟹ OBLIG

(The necessity for the variable X in this rule is shown by example 8.)

By this analysis 10 (the wh-relative) is derived by movement as in
the "movement in all cases" analysis, but 15 (the that-relative) is de-
rived by the deletion rule. The solution to the pied-piping problem is

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now clear -- pied-piping is obligatory in Middle English. Since pied-piping is a convention applicable to movement rules only, this hypothesis correctly predicts that prepositions can be stranded in that-relatives where no movement has occurred. If pied-piping is obligatory then it follows that in wh-relatives prepositions may never be stranded since such relatives are derived by a movement rule which is subject to the pied-piping convention. Thus the facts quoted from Chaucer follow exactly the pattern predicted by this analysis.

17.
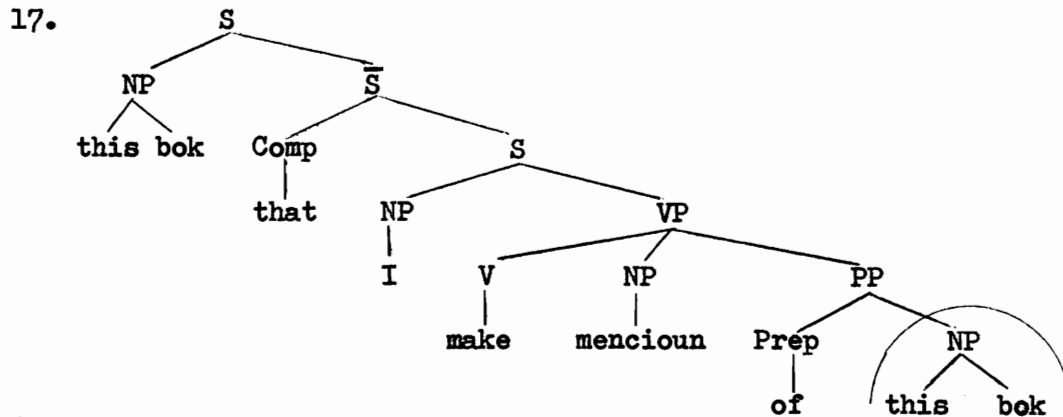
In 17 one may optionally front the circled NP. If this alternative is chosen then since pied-piping is obligatory the preposition must accompany the NP and 10 will be derived. If the movement alternative is not taken, then the deletion rule must be applied. It will delete the circled NP leaving the preposition in place, to derive 15. Thus 14 will never be derived. In this way the "movement or deletion" hypothesis predicts and explains the distribution of prepositions without adding any additional apparatus to the grammar, and without resorting to the global condition which the "movement in all cases" hypothesis requires. Further evidence that the "movement or deletion" hypothesis is capturing a genuine generalization about Chaucerian Middle English which the alternative fails entirely to capture can be found in wh-questions.

D. WH-QUESTIONS AND PIED-PIPING IN MIDDLE ENGLISH.

In the corpus I have examined there are no cases of stranded prepositions in wh-questions. A selection of examples follows:

18. For yif thow remembre of what cuntre thow art born, it nys nat governed by emperoures,
(Boece. Bk. 1. Prosa 5. 18.)

19. To knowe with which degre of the zodiak eny sterre fix in thin Astrolabie arisith upon the est orisonte.
(A Treatise on the Astrolabe. Pt. 2. Sect. 19.)

20. To knowe in which partie of the firmament is the conjunccyoun.
(A Treatise on the Astrolabe. Pt. 2. Sect. 32.)

21. Syth she is ded, to whom shul we compleyne?
(Complaint unto Pity. 28.)

22. To whom shal she compleyne, or make mone?
(Legend of Good Women. 1799.)

Clearly there is no way to relate this fact to the facts of relative clauses under the "movement in all cases" hypothesis, since there the explanation" lies in a rule which deletes wh-words and no such rule is operative in forming wh-questions. Thus the "movement in all cases" analysis will have to be supplemented by a condition stating that pied-piping is obligatory for questions, although as we have seen pied-piping must be optional for relative clauses in this analysis.

The "movement or deletion" hypothesis on the other hand does offer a unified explanation of the two phenomena, in terms of the same process: pied-piping is obligatory.

It is now apparent that assuming that movement occurs in all relative clauses forces us to posit a highly complex analysis which claims that the relative clause facts and the wh-question facts are entirely unrelated and is clearly incapable of accounting for the distribution of prepositions in Middle English in any principled way. A grammar which contains Relative Clause Movement and Relative Clause Deletion is able to capture the obviously correct generalization: pied-piping was obligatory in Middle English.

E.

There is an interesting class of exceptions to the generalization about pied-piping discussed above. These concern the preposition in which may be stranded in wh-relatives and wh-questions at this stage of the language:[7]

23. .... for nadde they but a sheete,
     Which that they myghte wrappe hem inne a-nyght,
                         (The Canon's Yeoman's Tale. 879.)

24. Of that word took hede Troilus,
     And thoughte anon what folie he was inne,
                         (Troilus and Criseyde. Bk. 1. 819.)

One might hypothesize that the stage of English discussed here is intermediate between a stage at which pied-piping was obligatory for all prepositions and the Modern English situation where pied-piping is optional in most cases. Note that the fact that pied-piping is optional for in in Middle English does not in any way invalidate the argument for relativization by deletion given above. The "movement in all cases" hypothesis requires yet another complication to the condition on relative pronoun deletion roughly as follows:
"If the wh-word is not preceded by a preposition after relativization has applied, but was in the configuration

$$\begin{array}{cc} & PP \\ \diagup & \diagdown \\ P & NP \end{array}$$
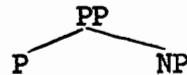
in underlying

structure (i.e. if relativization has stranded a preposition) then the wh-word deletes obligatorily unless the preposition concerned is in.
It seems that any remaining plausibility the "movement in all cases" analysis may have had must now be destroyed. The "movement or deletion" analysis treats in as a simple exception to obligatory pied-piping.

There is also a small class of examples like:

25. Til that knyght of which I speke of thus
                         (Franklin's Tale 807.)

These sentences contain two occurrences of the preposition, one of which has been pied-piped to the front of the clause, and the other of which

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has been stranded in the relative clause. Like the <u>in</u> facts discussed above, these cases provide no counter-evidence to the "movement or deletion" hypothesis. If the pied-piping convention is restated so that when a preposition is pied-piped a copy is optionally left behind in the relative clause, these facts can be accounted for with no difficulty.

F. CONCLUSIONS.

The argument presented above, if correct, has a number of consequences. First, it entails the existence of unbounded deletion rules, thus providing some support for Bresnan's claim in "Comparative Deletion and Constraints on Transformations" that the rule which forms comparatives in English is an unbounded deletion rule.

Second, it demonstrates that one language may have both relativization by deletion and relativization by movement.

Third, since there are no cases in the corpus of relative clauses formed by deletion or movement violating the Island Constraints or the Cross-Over Constraint, the evidence presented here provides indirect support for the "movement or deletion" analysis of Modern English relatives proposed, for example, by Emonds and Morgan. Like comparative deletion, (c.f. Bresnan op.cit.), relative clause deletion in Middle English apparently obeys these constraints even though it is a deletion rule and not a movement rule. Clearly then it is not possible to argue against relativization by deletion in Modern English on the grounds that all relatives obey the Island Constraints and the Cross-Over Constraint and must therefore be formed by a movement rule, or on the grounds that it is implausible for one language to have two rules of relativization.

FOOTNOTES

1. The research for this paper was supported by grant NSF GS 35283, Professor Samuel Jay Keyser, Principal Investigator. My thanks are due to all who participated in the project, especially Professor Jay Keyser, and above all to Professor Joan Bresnan who made many helpful comments and criticisms at every stage in the production of this paper.

2. This concordance is incomplete in so far as not all occurrences of the most common words are listed. However, the authors do present a representative sample of the data. They say, "It has been the intention to represent adequately all meanings and uses of a word, especially unusual and archaic uses..."

3. All the examples in this paper are cited as they appear in <u>Chaucer</u>, F.N. Robinson, ed., The Riverside Press. (1933) Other texts do not vary in any respects crucial to the argument presented here.

4. The exact details of such an analysis are not of importance here; it is clear that any "movement in all cases" analysis of Middle English relatives must contain the optional <u>wh</u>-pronoun deletion rule on which this argument is based. The general form of the analysis is that of S.J. Keyser (1972).

5. The fact (mentioned above) that pied-piping is impossible in relative clauses introduced by <u>that</u> provides one piece of evidence that it is a complementizer - if it were a relative pronoun one would expect pied-piping to occur with it just like any other relative pronoun. The possibility

of that cooccurring with a wh-relative pronoun as in 3 provides further such evidence. Two relative pronouns cannot occur in the same relative clause in Middle English. Thus there are no examples like 3':

3'. Which which I drede nevere mo to see?

If that is a complementizer which is optionally deleted in wh-relatives as suggested in this paper then clearly one would expect that to cooccur with relative pronouns but would not expect combinations of relative pronouns to be possible.

6. The question of the precise nature in underlying structure of the item to be relativized in no way affects the issues discussed here. For the sake of argument I shall assume throughout that underlyingly there is a fully specified NP.

7. It is interesting that the preposition in almost always has the form inne when it is stranded. Inne also occurs frequently in intransitive constructions such as:

" .... For out of doute,
This Diomede is inne, and thou art oute."
(Troilus and Criseyde. 5. 1518)

These facts might provide confirmation for Emonds' analysis in "Indirect Object Movement as a Structure Preserving Rule" (Foundations of Language) of verb particles as intransitive prepositions. However, manuscripts appear to vary considerably in respect to the in/inne alternation, and the exact nature of the generalization is unclear to me at present.

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