This paper aims to account for the syntactic transition of doubly-filled Comp in the history of English in terms of locality of language change. On the assumption that the loss of verb movement in main clauses was a downward shift of the [+F] feature, it will be argued that doubly-filled Comp was permissible from the 14th century to the mid-15th century when [+F] occupied the lower head of the split-CP structure in embedded clauses. This analysis provides substantial support for the idea that the simultaneous demise of V2 and doubly-filled Comp was not a mere coincidence but induced by the same factor.*

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Keywords: complementizer, V-movement, diachronic change, locality

1. Introduction

It is a well-known fact that a wh-phrase cannot cooccur with the complementizer that in present-day English, as in (1):

(1) a. *I didn't know what that the students wanted to do.
    b. *I have a friend whom that my brother respects.

To explain this fact, Chomsky and Lasnik (1977) propose the doubly-filled Comp filter:

(2) The Doubly-Filled Comp Filter
    *[comp wh-phrase complementizer], where neither of the two is null. (cf. Chomsky and Lasnik (1977))
The validity of this filter, however, is questionable on both conceptual and empirical grounds. Conceptually, (2) is a mere stipulation as it stands and it would be preferable if it could be derived from some other independent principle; furthermore, this filter fails to capture the empirical fact that there in fact exist a number of languages including Middle English (ME) that allow doubly-filled Comp.

This article is intended to be an investigation of doubly-filled Comp in the history of English. Specifically, it will be argued that the transitional nature of doubly-filled Comp in ME can be naturally accounted for if we suppose that a diachronic process of feature shift demonstrates the general tendency of locality. This implies that the familiar property of sentence derivation is also observed in diachronic changes.

In what follows, after a brief discussion of a few major issues in section 2, section 3 will develop a theoretical framework and will make clear the environment in which doubly-filled Comp is properly licensed. Then sections 4 and 5 will be devoted to an analysis of doubly-filled Comp in ME and Old English (OE).

2. Issues

Contrary to the prediction of Chomsky and Lasnik’s doubly-filled Comp filter, sequences of a wh-phrase and an overt complementizer can be found in many languages. Some examples are given in (3):

(3) a. West Flemish
    Kweten nie wat dan d’joengers geeten een.
    I know not what that the children eaten have
    ‘I don’t know what the children have eaten.’
    (Haegeman (1992: 57))

b. Bavarian German
    I woaß ned wann daß da Xaver kummt.
    I know not when that the Xaver comes
    ‘I don’t know when Xaver will come.’
    (Bayer (1984: 212))

One possible approach to this cross-linguistic variation that immediately comes to mind is to consider the filter in (2) as a parameter on the functional category C. Under this view, the values of this parameter will determine whether or not the head and the specifier of a CP can be both phonetically realized.

However, a brief examination into doubly-filled Comp in the history
of English reveals that such an approach is not promising. Allen (1977) notes that wh-phrases in indirect questions and relative clauses first began to cooccur with that at the end of the 13th century and at the beginning of the 14th century, respectively:

\begin{enumerate}
\item a. \ldots dat he ire telle scholde gwy dat he so mourning
goed
\end{enumerate}
\begin{flushleft}
\textit{‘... that he should tell her why he went so in mourning’}
\end{flushleft}
\begin{flushright}
\textit{(c1290 South English Legendary 24.45, Allen (1977: 255))}
\end{flushright}
\begin{enumerate}
\item b. \ldots a yong man wiche dat wowen hir began
\end{enumerate}
\begin{flushleft}
\textit{a young man who began to woo her}
\end{flushleft}
\begin{flushright}
\textit{(c1330 Arthour and Merlin A.770, ibid.: 256)}
\end{flushright}

The number of examples of doubly-filled Comp steadily increased during the 14th century, but they were already rare at the end of the 15th century. If the filter in (2) contains a sort of parameter, it will be the case that its value once changed at the end of the 13th century to allow doubly-filled Comp, and again at the end of the 15th century to prohibit it. Though this possibility cannot be theoretically excluded, such an anomalous change of values is not exhibited by any other parameters responsible for the historical development of English (e.g. the head-complement parameter), so that a more straightforward account of this phenomenon would be preferable. In the next section, I will refine the structure of CP and show that apparent instances of doubly-filled Comp are not in fact cases where an overt wh-phrase occupies the

\footnote{In OE relative clauses, the combination of a demonstrative pronoun \textit{se} and an indeclinable particle \textit{pe} appeared as a complex relative pronoun, which shares a strong resemblance to the cooccurrence of wh-phrases and \textit{that} in ME. However, Allen argues against the general view that the \textit{se pe} relative was the direct ancestor of the \textit{wh-that} relative on the basis of the fact that the \textit{se pe} relative declined at the end of the 12th century, about a century earlier than the first instance of the \textit{wh-that} relative. We will defer the discussion of the \textit{se pe} relative in OE until section 5.}

\footnote{This is based on the observation made by Allen (1977). Mustanoja (1960) also notes that the combination \textit{which that} became rare by the end of the 15th century. An anonymous EL reviewer, however, points out that there are a certain number of doubly-filled Comp examples in the Paston Letters in the latter half of the 15th century. For the treatment of such remaining examples, see note 13.
3. Theoretical Backgrounds

3.1. A Split-CP Hypothesis

Throughout the subsequent discussion, I will assume that complementizers universally have the structure in (5):

![Diagram](image)

Chomsky (1995) and other current Minimalist studies adopt the split-VP hypothesis, in which a verb phrase is decomposed into two distinct projections: unergative vP and unaccusative VP. Extending this analysis to complementizers, we get the structure in (5). In the remainder of this paper, the upper projection will be referred to as cP and the lower projection as CP, whereas Comp will be used as a cover term for these two projections.

Under the split-CP hypothesis proposed here, c specifies a clause type which is either [-wh] or [+wh], while C functions as a subordinator. Complex complementizers like (6) can be seen as a direct reflection of the structure in (5):

(6) West Flemish

Kweten nie of da Valère dienen boek a gelezen eet.

I know not if that Valère that book already read has

'I don’t know if Valère has already read that book.'

(Haegeman (1992: 50))

The sequence of of and da is most naturally analyzed as realizing each distinct head of the split-CP structure.

Unlike West Flemish, complementizers in present-day English are phonetically spelled out when C amalgamates with c. The possible combinations are illustrated as follows:

(7) [-wh] c+C (subordinator): that
    [+wh] c+C (subordinator): whether

The complex category made up of c and C can be formed in either of the following ways: if c has some strong feature which attracts an X^0 element, C raises to c in overt syntax and manifests itself as a com-
plementizer together with $c$; or, the two heads enter the Morphological Structure (MS) after Spell-Out on their way to PF and undergo a morphological Merger operation in the sense of Halle and Marantz (1993) under structural adjacency. We will assume that the output of the Merger occurs in the position of $c$. In V2 languages, where V obligatorily raises to Comp in main clauses, the same strong feature that attracts V induces overt formation of complementizers in embedded clauses before Spell-Out. On the other hand, in non-V2 languages including present-day English which lack such a strong feature, the complex is not formed until MS.

Compared to CP recursion analyses advocated in Rizzi and Roberts (1989), Authier (1992) and Watanabe (1993), among others, the present version has the following two characteristics. First, although Rizzi and Roberts and others restrict CP recursion to specific contexts such as embedded Topicalization, I assume that the structure in (5) is universal. Secondly, (5) is a lexical decomposition of a complementizer in which the upper $cP$ and the lower CP each has its own syntactic and semantic function, whereby we can easily reject the possibility of Comps unlimitedly piled up.

Although the structure in (5) is universal, it is worth stressing here that the lower CP is absent in certain contexts. One of such cases is main clauses. Since C is a subordinator, it is irrelevant in main clauses and thus only $cP$ appears:

(8) $[cP \ c \ [IP \ John \ left]]$.

Chomsky (1995: 292) observes that main clauses include a Comp node above IP which determines clause types. Our split-CP hypothesis can give a straightforward answer to the question why this Comp node is not phonetically realized. This is because $c$ does not amalgamate with C in (8), so that the complex necessary for the realization of that cannot be formed.

That-deletion also results from the absence of CP:

(9) I know $[cP \ [IP \ John \ left]]$.

Again, only $cP$ appears in the phrase structure and that is not realized.3

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3 Nakajima (1996) also utilizes a split-CP structure to explain the distribution of complementizers. In his analysis, that occupies the upper head of split-CPs and its null counterpart appears when only the lower head projects, contrary to our analysis.
In this case, cP is interpreted as a subordinate clause without CP, since the subcategorization property of the matrix verb that permits a cP complement fulfills the same function as inserting the subordinate marker. This means that when there is an independent means to give an interpretation of a subordinate clause, it is not necessary to introduce C.

One advantage of this analysis is that the general restriction of *that*-deletion to complement positions immediately follows from the split-CP structure:

(10)  
   a. *(That) the teacher was lying was hardly obvious.  
   b. *(That) the teacher was lying, Ben already knew.  
   c. It surprises me *(that) you have heard about Roger.  

(Stowell (1981: 396-397))

When *that* appears inside a subject position, a topicalized position, and an extraposed position, it cannot be deleted. In contrast to (9), where cP occurs as a complement, cP in (10) cannot be interpreted as a subordinate clause through the subcategorization frame of the matrix predicate. In this case, a complete cP-CP structure is obligatory and therefore *that* is always realized.4 Thus, our split-CP hypothesis achieves the same effect as Stowell’s (1981) analysis based on the Empty Category Principle (ECP).

Moreover, the split-CP hypothesis can explain a wider range of empirical phenomena than the ECP analysis. Consider (11):

(11)  
   a. I believe [IP [* (that) the end is nigh] to be obvious].  
   b. I consider [IP [* (that) he is an idiot] to be obvious].  

(Doherty (1997: 211))

Doherty (1997) states that these sentences are marginally acceptable if *that* is present, whereas deleting *that* renders them totally unacceptable. In Chomsky’s Barriers framework, the specifier of a selected argument, which corresponds to the node dominating *that the end is nigh* in (11a), is not a barrier. Then, the analysis based on the ECP predicts that the

---

4 Behind this explanation lie the assumptions that subcategorization, a property of a head to specify certain features on its complement, is an LF condition licensed in a way analogous to feature-checking (cf. Svenonius (1994)) and that there are no reconstruction effects of Topicalization; otherwise, the topicalized clause in (10b) would be licensed at the base position without C, owing to the subcategorization property of the matrix verb. See Nakajima (1996) for related discussion.
complementizer of sentential subjects of ECM infinitives is optional because the matrix verb governs this position, which is not the case, however. On the other hand, our split-CP hypothesis can correctly exclude the possibility of that-deletion. In (11), the matrix verbs are subcategorized as taking the whole IP, not the subjects of the infinitives, which means in our terms that C must be present in the subject clauses to guarantee that they are properly interpreted as subordinate clauses. Once the cP-CP structure is formed, the complementizer that is automatically realized. That-less clauses occurring as subjects of infinitives lack the subordinator, so that they cannot receive interpretations at LF and thus are excluded as deviant.

Even if a that-clause occurs in a subcategorized position, however, the complementizer cannot be deleted when Topicalization takes place within embedded clauses, as in (12):

\begin{enumerate}
\item a. I hope *(that) this book, you will really appreciate.
\item b. She said *(that) horror films, she doesn’t like.
\end{enumerate}

These might appear to be counterexamples to our proposal that a subcategorized complementizer can be deleted, but if we take into account the property of embedded Topicalization, it turns out that (12) constitutes evidence for our hypothesis. In the split-CP structure, there are two Spec positions which are available as landing sites for A-bar movement. Following ideas of Authier (1992), Culicover (1991), Müller and Sternefeld (1993), Watanabe (1993) among others, let us suppose here that while [Spec, cP] is reserved for wh-phrases that enter into a checking relation with the [+wh] feature in c, [Spec, CP] serves as the landing site for non-logical operators including topics and focus elements:5

\begin{enumerate}
\item a. [Spec, cP]: Wh-movement
\item b. [Spec, CP]: Topicalization and other non-logical operators
\end{enumerate}

Then in the examples in (12), CP is obligatorily present in addition to cP to provide the target of topic movement, resulting in overt realiza-

---

5 Culicover (1991) assumes that only focus Topicalization is substitution to [Spec, PolP] which corresponds to our [Spec, CP], whereas topic Topicalization is adjunction to a maximal projection which is either CP, PolP, or IP.
tion of the complementizer that.\(^6\)

Given the discussion of that-deletion in (9) through (12), it can be concluded that we have obtained independent evidence for the split-CP structure in (5).

3.2. The Structure of Doubly-Filled Comp

Let us here turn to the structure that licenses doubly-filled Comp. In Icelandic and Yiddish, V2 word order can freely occur in embedded clauses as well as in main clauses:

\[(14)\]

a. **Icelandic**  
\[Jón efast um að á morgun fari María snemma\]  
John doubts on that tomorrow will Mary get up  
early  
‘John doubts whether Mary will get up early tomorrow.’

b. **Yiddish**  
\[Jonas bedoyert az dos bukh hob ikh geleyent.\]  
John regrets that this book have I read  
‘John regrets that I have read this book.’  

(Vikner (1995: 72))

Bhatt and Yoon (1991) explain this phenomenon by means of a split-CP structure similar to (5). Adapting their notation to the one employed here, we can schematically represent the relevant structure as follows:

\[(15)\]

\[V_{\text{matrix}} [cP \text{ Complementizer} [CP \text{ Topic} V_{\text{finite}} [IP \text{ Subject ...}]]]\]  
(languages that allow general embedded V2)

\(^6\) The same analysis applies to the impossibility of that-deletion in factive complements, as in (i):

\[(i)\]

\[I \text{ regret *that I did not take your advice.}\]

Watanabe (1993), modifying the analysis of Melvold (1991), argues that factive complements contain a non-logical factive operator in Spec of the lower CP and proposes the following structure (the notation is ours):

\[(ii)\]

\[\ldots \text{ regret } [cP c [CP Op C [IP ...]]]\]

The presence of the operator is justified by the fact that adjunct extraction out of factive complements is blocked, as in *why does John regret that Bill issued the order in which why is interpreted as modifying the embedded clause. If his analysis is on the right track, then CP is obligatory for the same reason as in embedded Topicalization, and thus that is phonetically spelled out.
The point of their analysis is that the possibility of general embedded V2 is attributed to the property of complementizers; that is, they argue that Icelandic and Yiddish have complementizers which exclusively realize the upper head c, so that a finite verb in an embedded clause can freely move to C to derive the V2 word order.\(^7\)

Then, the question at issue is what happens if a language has a complementizer that exclusively realizes the lower subordinator C. My claim is that it is precisely in this case that doubly-filled Comp is licensed as a legitimate configuration. (16a) is the structure of English where doubly-filled Comp is not permissible, whereas (16b) is the structure of languages that allow doubly-filled Comp:

\[(16)\]

a. \[V_{\text{matrix}} [cP Wh \text{that}(-wh) [cP tC [IP ...]]]\]
   
   (languages that do not allow doubly-filled Comp)

b. \[V_{\text{matrix}} [cP Wh c(+wh) [CP Complementizer [IP ...]]]\]
   
   (languages that allow doubly-filled Comp)

The doubly-filled Comp filter might be reduced to Rizzi’s (1991) wh-criterion:

\[(17)\] The Wh-Criterion

A. A wh-operator must be in a Spec-head configuration with X\(^0\)(+wh).

B. An X\(^0\)(+wh) must be in a Spec-head configuration with a wh-operator. (cf. Rizzi (1991))

In (16a), C amalgamates with c specified as [−wh] and the complex is spelled out as that. This leads to a violation of the condition A of the wh-criterion. In (16b), on the other hand, the complementizer only realizes the lower C and the wh-operator is in a Spec-head relation with the null head specified as [+wh]; hence, the wh-criterion is properly

\[^7\] If complementizers in Icelandic and Yiddish realize only c, then it is predicted that they can appear in main clauses which lack C. This prediction is borne out:

(i) a. **Icelandic**

   \[Að María skuli elskja Jón\]
   
   That Mary shall love John
   
   ‘May Mary love John!’

   (Thráinsson (1986: 188))

   b. **Yiddish**

   \[Tsi hot er geleient dos bux?\]
   
   Whether has he read the book?
   
   ‘Has he read the book?’

   (Den Besten and Moed-van Walraven (1986: 114))
satisfied within cP.

There is convincing empirical evidence to support the structures in (16a, b). In English, when Topicalization occurs in embedded clauses, topic elements always appear to the right of the complementizer:

(18) a. John said that *this book, Mary really wanted to read.*
    b. *John said this book, that Mary really wanted to read.*

By contrast, in Bavarian German, which allows doubly-filled Comp, a constituent can move to the left of the complementizer when it receives a focus interpretation:

(19) **Bavarian German**

\[
Da \text{ Xaver dass an Mantl kaffd hod hod neamt glaubt.}
\]

the Xaver that a coat bought has has nobody believed

‘Nobody believed that XAVER bought a coat.’

(Bayer (1984: 213))

Provided that topic and focus elements move to the specifier of the lower subordinator C, we can reasonably conclude from the linear order correlation between topic/focus elements and complementizers that English that occupies c, while in Bavarian German the complementizer dass stays at C. This is consistent with (16).8

To summarize, the possibility of doubly-filled Comp can be reduced to the property of complementizers and the generalization in (20) is obtained:

(20) If a language L allows doubly-filled Comp, L has a complementizer that exclusively realizes the subordinator C.

4. An Explanation for the Historical Change

Having established the theoretical background against which an analysis is carried out, we are now in a position to seek an explanation for the historical change. As mentioned above, *wh*-phrases and that

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8 As mentioned above, the complex category in English spelled out as that is formed through a process of morphological Merger at MS. The grammaticality of the example in (18a) indicates that topics in [Spec, CP] do not block the Merger of c and C. Bobaljik (1995) maintains that adverbs are irrelevant to the adjacency requirement on morphological Merger. Slightly extending this hypothesis, I tentatively assume here that non-argument positions in general do not constitute a factor in the computation of adjacency.
began to cooccur at the end of the 13th century or at the beginning of the 14th century, but doubly-filled Comp became rare already at the end of the 15th century. Here, it is especially important to point out that the transition of doubly-filled Comp was accompanied by another syntactic change as well. Kemenade (1987) reports that V2 word order in main clauses disappeared at the end of the 15th century, which is the same period in which doubly-filled Comp also declined. The chronological transitions of V2 and doubly-filled Comp can be represented as in (21):

\[(21)\]

\[
\begin{array}{cccccccc}
1000 & 1100 & 1200 & 1300 & 1400 & 1500 & 1600 \\
\hline \\
\hline \\
\hline \\
\end{array}
\]

a. V2 in main clauses
b. Doubly-Filled Comp

Kemenade simply stipulates that the doubly-filled Comp filter was introduced into the grammar of English at the end of the 15th century and gives no further explanation to the interaction between these two changes. In what follows, a more principled account of the phenomena will be presented on the assumption that a process of language change has a locality property. Yet before we proceed to the main task, let us briefly review the history of verb movement.

4.1. Locality of Feature Shift

As is well-known, in OE and early ME, main clauses exhibited V2 word order. Here I adopt the analysis of Kemenade (1987) and assume that in V2 clauses finite verbs moved to Comp. In embedded clauses, the presence of complementizers blocked V2 except for cases where certain bridge verbs appeared in the matrix. Among examples from OE and early ME are the following:

\[(22)\]  

OE

a. On pam timan aras Pelagies gedwyld geond on the time arose Pelagian heresy over world  
‘At that time, the Pelagian heresy arose over the world.’ (\textit{The Parker Chronicle, an. 381})

b. Palladius ... wæs onsended ... þæt he hiera geleafan Palladius ... was sent on that he their belief trymede.  
establish (sub.sg.)
‘Palladius ... was sent ... so that he might establish their belief.’

(ibid, an. 430)

(23) Early ME

a. Danne cleped he his pineres, and hat hem me then speaks to he his tormentors and gets them me nemen ... call (inf.)

‘Then he speaks to his tormentors and gets them to call me ...’

(Vices and Virtues 17/26, MED)

b. Hi wenep þat þu segge þoþ.

he thinks that you (sg.) say (sub.sg.) truth

‘He thinks that you say the truth.’

(The Owl and the Nightingale 844, ibid.)

The Comp node is occupied by the finite verbs in the (a) examples and by the complementizers in the (b) examples, respectively. Then it can be said that Comp had to be occupied by a certain lexical element, as is the case with other V2 languages.

To capture this fact in terms of the Checking Theory, one of the central components of the Minimalist Program, let us assume that (24) holds of V2 languages:

(24) In V2 languages including OE and early ME, c has a [+F] feature, which attracts an element with a [+finite] feature.

A [+finite] feature is contained in finite verbs and the complementizers of finite clauses. In main clauses, the [+F] feature is checked off by overt verb movement, whereas in embedded clauses it is checked off by complementizer-insertion.

9 More precisely, OE was not a strict V2 language like modern German and Dutch and exhibited non-V2 word order in main clauses and that-deletion in embedded clauses. This is most plausibly due to the fact that OE was already under a gradual process of language change and thus it does not affect the main points of the discussion in the text.

10 In indirect questions with wh-phrases, insertion of hweper (whether) or if into c is barred because their semantic content corresponding to yes-or-no questions causes an interpretive mismatch with a wh-phrase in [Spec, cP]. Let us tentatively assume that in indirect questions the [+F] feature is checked off by null wh-complementizer. Or, given the fact that wh-phrases were primarily used within finite clauses and there were no examples of wh+to infinitives as complement clauses in OE (Visser (1963-1973: 976)), another possibility is that wh-phrases have [+finite] features and check off the [+F] feature in c. We leave the choice of these options open here.
Up to late ME, V2 gradually declined and the word order of the modern-French type appeared, as in (25):

(25) *Late ME*
And the erthe and the lond *chaungeth often* his colour.
and the earth and the land changes often its color

(*Mandeville's Travels* ix.100, *OED*)

In this example, the finite verb precedes the VP adverb *often*, showing that Infl had some strong feature that attracts finite verbs. Suppose that the relevant feature was [+F] as in OE. It corresponds to the strong V feature in the sense of Chomsky (1995).

Later in early Modern English, verbs came to occupy the same position as in present-day English:

(26) *Early ModE*
Worldly chaunces ... in adversitye *often chaunge* from evell to good ...  
(*Chronicle of Henry VII* 8, ibid.)

In (26), the finite verb follows the VP adverb. Under the split-VP hypothesis, this word order suggests that [+F] occupied v and verbs raised no farther than that position.

In summary, the history of verb movement can be schematically represented as in (27):

(27) **Feature Shift in Main Clauses**

<p>| | | | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>[cP c [IP Infl [vP v [VP V]]]]</td>
<td>[cP c [IP Infl [vP v [VP V]]]]</td>
<td>[cP c [IP Infl [vP v [VP V]]]]</td>
<td></td>
</tr>
<tr>
<td>a. OE~</td>
<td>[+F]</td>
<td>[+F]</td>
<td>[+F]</td>
<td></td>
</tr>
<tr>
<td>b. mid 15c~</td>
<td>[IP v [VP V]]</td>
<td>[IP v [VP V]]</td>
<td>[IP v [VP V]]</td>
<td></td>
</tr>
<tr>
<td>c. EModE~</td>
<td>[+F]</td>
<td>[+F]</td>
<td>[+F]</td>
<td></td>
</tr>
</tbody>
</table>

As mentioned in section 3.1, C is absent in main clauses. We can see from (27) that the loss of verb movement can be regarded as a downward shift of the [+F] feature from the topmost c to v. In the latter half of the 15th century [+F] shifted from c to Infl, which caused the demise of V2. In early Modern English, it shifted from Infl to v and V-to-I movement disappeared. This indicates that a process of feature shift has a kind of locality flavor.

Then, we can draw the following generalization:

(28) **Locality of Diachronic Feature Shift**

In a process of language change, a feature F on X° can shift to Y° only if there is no Z° intervening between X° and Y°. Note that in (27) [+F] shifts among functional heads. This is consist-
ent with the functional parametrization hypothesis proposed by Fukui (1995), which essentially says that language variations are restricted to the domain of functional categories in the lexicon. If this is the case, (28) would be more narrowly defined in such a way that $X^0$, $Y^0$, and $Z^0$ must be $[+\text{functional}]$.

Let us return to the asymmetry between main clauses and subordinate clauses. By contrast to main clauses where only $c$ appears that specifies clause types, subordinate clauses include $C$ in addition to $c$. In light of the locality property in (28), the process of feature shift in subordinate clauses is expected to look like (29):

(29) **Feature Shift in Subordinate Clauses**

a. OE $\sim$ $[cP \ c \ [cP \ C \ [IP \ \text{Infl} \ [vP \ \nu \ [vP \ \nu \ [vP \ \nu \ [VP \ V]]]]]]$ $[+F]$

b. 14c $\sim$ $[cP \ c \ [cP \ C \ [IP \ \text{Infl} \ [vP \ \nu \ [vP \ \nu \ [vP \ \nu \ [VP \ V]]]]]]$ $[+F]$

c. mid 15c $\sim$ $[cP \ c \ [cP \ C \ [IP \ \text{Infl} \ [vP \ \nu \ [vP \ \nu \ [vP \ \nu \ [VP \ V]]]]]]$ $[+F]$

d. EModE $\sim$ $[cP \ c \ [cP \ C \ [IP \ \text{Infl} \ [vP \ \nu \ [vP \ \nu \ [vP \ \nu \ [VP \ V]]]]]]$ $[+F]$

As before, the shift of the $[+F]$ feature locally proceeds. The point is that there is an intermediate stage, (29b), where $[+F]$ occupies $C$. The shift of this feature from $c$ to $C$ made possible doubly-filled Comp in the 14th century and thereby brought about the transitional situation as illustrated in (21). Suppose here that by the stage (29b), *that* had acquired the ability to realize only $C$ and check off the $[+F]$ feature. Empirical evidence for this assumption will be offered in the next section. If this was really the case, then the structure of doubly-filled Comp from the 14th century up to the mid-15th century will be delineated as follows:

(30) 14c $\sim$ mid 15c: $[cP \ \text{Wh} \ c(+\text{wh}) \ [cP \ \text{that} \ [IP \ \ldots]]]$

This is exactly the structure mentioned in (16b), where the $wh$-criterion is satisfied within $cP$ and thus doubly-filled Comp is properly licensed. It follows that doubly-filled Comp became legitimate in this period. Afterwards in the latter half of the 15th century, the $[+F]$ feature shifted from $C$ to Infl as in (29b, c), so that it became no longer necessary to insert *that* in order to check off this feature, resulting in the demise of doubly-filled Comp. It is also noteworthy that in main clauses the shift of $[+F]$ to Infl caused the loss of the V2 word order, as we have seen in (27b). Thus, we can give a reasonable explanation for
the simultaneous demise of V2 and doubly-filled Comp by recourse to
the split-CP hypothesis and the locality property of diachronic feature
shift.

As an alternative to the insertion of that, a finite verb could raise to
C to check off [+F] in the absence of the subordinator:

(31) ȝif he ascexe þee what is þat God, sey þou þat it is God
      if he ask you what is that God say you that it is God
      þat maad þee ...
      that made you (a1425 The Cloud of Unknowing 26)

It is clear from the context following the indirect question that what is
pat God is an inverted wh-complement clause. Embedded V2 word
order like this offers substantial support for the assumption in (24) that
finite verbs and that share the [+finite] feature which is attracted by the
strong [+F].11

It might be noted, in passing, that during the 14th century examples
such as (32), where the wh-phrases do not occur with that and the finite
verbs stay in situ, coexisted with doubly-filled Comp:

(32)  a. Is he a clerk or noon? telle what he is.
      is he a clergy or not tell what he is
      (c1386 Chaucer Canon Yeoman 63, OED)

     b. It is the cuppe whom he serueth, ...
     it is the cup which he serves

The same alternation is observed in contemporary Belfast English as well:

(i)  a. I wonder which dish that they picked.
     b. They wondered what had John done.
     c. *I wondered which dish that did they pick. (Henry (1995: 106–108))

Doubly-filled Comp and V2 word order is permissible within wh-complement
clauses, but they cannot appear simultaneously. This indicates that the grammar of
Belfast English is very similar to that of ME, where [+F] is located in C. If [+F] is
checked off by the insertion of that as in (ia), the auxiliary cannot raise to C be-
cause this position is already filled with the complementizer; for the same reason,
auxiliary raising in (ib) blocks the insertion of that.

11
ordinate interpretation. Relative clauses like (32b), on the other hand, do not occur in subcategorized positions, but the coreference between a relative pronoun and its antecedent makes it possible to interpret them as dependent on higher clauses. Then, C is optional in these examples and thus the insertion of the complementizer *that* is not required. The relevant structure can be illustrated as follows:

\[(33) \ [cP Wh c(+wh) [IP ...]]\]

Since the [+F] feature is absent together with C in this structure, there is no need to insert *that* to check off this feature.

4.2. *That* as a Pure Subordinator

Now that the transitional nature of doubly-filled Comp has been accounted for with the presupposition that the complementizer *that* in ME could behave as a pure subordinator, the next question that must be examined is whether it really had the ability to realize only C. This section presents three types of constructions that are compatible with this assumption. The first to observe is the italicized linear order of the topic elements and *pat* (=*that*) in (34):\(^{12}\)

\[(34) \ a. \ I \ sal \ yu \ lere \ þe \ dute \ of \ god, \ his \ wille \ pat \ þe \ may \ do.\]

\[(a1425 \ Rule \ of \ St. \ Benet \ 2.5, \ Kroch \ and \ Taylor \ (1997: \ 315))\]

\[b. \ Lauerd, \ we \ prai \ þe \ for \ þi \ misericorde \ þat \ we \ mai \ sua \ yeme \ þis \ reul \ o \ mekenes, \ In \ þe \ felazscap \ of \ thine \ angels \ that \ we \ may \ be.\]

\[(Rule \ of \ St. \ Benet \ 11.25, \ ibid.)\]

In these examples, the topic elements appear to the left of the complementizer, which patterns with the Bavarian German example in (19). Keeping to the assumption that topic elements move to [Spec,
CP], we are led to conclude from the linear order above that the complementizer occupies the head C.

Secondly, cooccurrence of the complementizers if and that was permissible in ME, as illustrated in (35):

(35) Sche fondeth ... If that sche mihte hirself conforme
she inquires if that she might herself accommodate
To do the plesance of a wif.
to do the service of a wife

(Confessio Amantis 4.3110, MED)

Complex complementizers like this pose a serious problem for analyses based on the traditional single CP structure in the face of the general prohibition against multiple X₀ elements occupying the same head. Our split-CP hypothesis, on the other hand, provides an appropriate configuration for the cooccurrence of complementizers, with if and that occupying each of the splitting heads. If this analysis is correct, it can be said that the complementizer that in (35) exclusively realizes the lower C and serves as a pure subordinator.  

The third argument for the status of that as a subordinator concerns temporal prepositions with clausal complements. Before we move on to the situation in ME, let us first focus on present-day English. As is widely known, prepositions such as before, after, and since cannot cooccur with that when they take clausal complements:

(36) a. *John arrived before that I had expected.
b. *I will go out after that I have finished my task.
c. *We have known each other since that I came to Japan.

These examples at first glance seem to suggest that temporal prepositions select IP as their complements.

13 As an anonymous EL reviewer points out, the combination of if that survived to early Modern English. This suggests that the shift of [+F] to Infl in the mid-15th century did not lead to the total demise of that as a subordinator. Even if C does not have any strong features which require obligatory insertion of a subordinator, it is still possible for that to be optionally inserted into C for some semantic reason, perhaps to ascertain that the clause is dependent on the matrix. Residual doubly-filled Comp examples mentioned in note 2 can also be accounted for in this way. Even in present-day English, conjunctions followed by that are observed in expressions like now that, so that, but that, given that, among others. See Beal (1988) and Rissanen (1997) for a detailed discussion of the historical transition of optional that with other subordinate conjunctions.
What has to be noticed, however, is that there is in fact compelling evidence that Comp is included in the clausal complements of these prepositions. Geis (1970) observes that when a temporal preposition is followed by a complex sentence, it yields interpretive ambiguity with respect to temporal relations. Consider (37):

(37) a. I saw Mary in New York \[PP \text{before} \[S_1 \text{she claimed} \[S_2 \text{that she would arrive}\]]\].
    b. I can't leave \[PP \text{until} \[S_1 \text{John said} \[S_2 \text{I could leave}\]]\].
    c. I haven't been there \[PP \text{since} \[S_1 \text{I told you} \[S_2 \text{I was there}\]]\].

In these examples, the prepositions connect a time t1 in the main clauses with a time t2 in the embedded clauses, and the time t2 can refer either to S1 or to S2. For example, there are two readings available for (37a): it can be interpreted either as 'I saw Mary in New York before she made a certain claim' or as 'I saw Mary in New York before she would arrive.'

To account for this ambiguity, Larson (1987) proposes that a null operator moves within the domain of embedded clauses. The relevant structures are represented as in (38):

(38) I saw Mary in New York
    a. \[PP \text{before} \[S' Opi \[S \text{she claimed} \[S' \text{she would arrive} ti\]]\]
    b. \[PP \text{before} \[S' Opi \[S \text{she claimed} \[S' \text{she would arrive} ti\]]\]

(38a) corresponds to the reading 'I saw Mary in New York before she made a certain claim,' and (38b) to the reading 'I saw Mary in New York before she would arrive.' If this analysis is on the right track, it follows that there is a Comp node in the embedded clause which serves as the landing site for the null operator.

Then, we encounter a contradictory situation. The obligatory absence of that in (36) shows that the embedded clause of temporal prepositions does not include Comp, whereas it is argued in (37) and (38) that it indeed includes Comp. The split-CP structure, however, enables us to resolve this paradox. Suppose here that when a temporal preposition takes a clausal complement, it selects CP without cP:

(39) after: \(P, [___ DP, CP \text{(without cP)}]\)

[Spec, CP] provides a position to which the null operator moves, and due to the lack of cP in this Comp node, the complementizer that cannot be phonetically spelled out because that in present-day English is a complex category consisting of c and C.

With this selectional property in mind, let us return to the history of
English. From around the 13th century, *that* began to serve as a conjunction that introduced clausal complements of prepositions. Some examples are given below:

(40) a. He shewide thingis to comen & hid er *pat* þei he foresaw things to come hid before that they fallen.
fall (sub.) (a1382 Wyclif Ecclus. 48.28, MED)
b. *Aftir that* he waischide the feet of hem, he took his after that he washed the feet of them he took his clothis.
clothes (c1384 Wyclif John 13.12, ibid.)

Given that temporal prepositions in ME had the same selectional property as in present-day English, these examples clearly indicate that the complementizers realize only C.14,15

5. Doubly-Filled Comp in OE

Finally, this section conducts a brief survey of the doubly-filled Comp in OE. The basic facts are as follows: in relative clauses, the demonstrative pronoun *se* or the particle *þe* was employed as relative pronouns, or both of them often cooccurred as shown in (41a). On the

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14 One might wonder if the nature of temporal prepositions in ME was really the same as in present-day English, as pointed out in Dubinsky and Williams (1995). They argue that elements such as *before* and *after* were pure prepositions in ME, while they also act as complementizers in present-day English. They presuppose a non-splitting single CP structure, so that when *after* is a complementizer and takes a clausal complement, it cannot cooccur with *that* simply because multiple heads are generally prohibited.

However, their analysis faces at least two difficulties. First, it must call for rather complicated and ad hoc stipulations to explain the null operator movement in (38). Secondly, it is not clear how the cooccurrence of *if* and *that* in (35) is handled under this analysis. It is unlikely that a typical complementizer *if*, as opposed to temporal prepositions, underwent a process of reanalysis and changed its category through the history of English.

15 A remaining problem is how *that* acquired this property in ME. We suggest that the use of *that* as a pure subordinator can be traced back to the particle *þe* in OE. This particle became out of use around 1200. Then, as argued by Mitchell (1985: §§2425-2430), it seems quite plausible to suppose that *þe* was replaced by *that* on the analogy of its phonetically contracted form and *that* took over the former function of the particle *þe*. See also (42) in the next section.
other hand, in indirect questions such as (41b), a *wh*-phrase never cooccurred with the particle *pe*:

(41) a. Seo ilce burg, *seo* δe mæst wæs, *seo* is nu læst.
the same town which greatest was it is now smallest
‘The same town, which was very large, is now very small.’
*(Orosius 2.4, An Anglo-Saxon Dictionary)*

b. Be δæs folces heringe ic nat hwæt (*pe*) we
about the people’s praising I not-know why we
δæs fægniaþ.
this rejoice
‘As regards popular applause, I do not know why we re-
joice at it.’ *(De Consolatione Philosophiae 30.1, ibid.)*

The phenomenon in (41a) is strongly reminiscent of the doubly-filled Comp in ME. It must be made clear why this construction was prevalent in OE and why it was allowed only in relative clauses.

The key to this question is the preposition+*pe* constructions in OE, such as *er δæm δe* and *mid δy δe* in (42):

(42) a. *Ær* δæm δe Romeburh getimbred
before Dem. (m.sg.dat.) Rome built
waere, ...
be (sub.sg.)
‘before Rome was built, …’
*(Orosius 1.3, An Anglo-Saxon Dictionary)*

b. *Mid* δy δe he δis gebed gecweden
with Dem. (m.sg.instr.) he this prayer said
hæfde, …
‘When he had said this prayer, …’
*(The Blickling Homilies 229. 27, ibid.)*

This construction is the predecessor of the preposition+*that* construction in ME. Note that the clause types in (42) are specified by the prepositions, so that the particle *pe* serves as a pure subordinator which realizes only C.16 Given this fact, it can be said, as pointed out by

16 The structure of the complex conjunctions looks like (i):

(i) [PP ær [CP þæm pe ...]]
This is a sort of doubly-filled Comp structure with the demonstrative pronoun occupying the Spec of the projection headed by the particle *pe*. The dative Case of the demonstrative pronoun *þæm* can be assigned (or checked) by the preposition ær
Mitchell (1985), that *pe* was essentially a subordinating particle and its usage as a relative pronoun was derived from this basic property. In order to capture this insight, I adopt the idea of Rizzi (1990) and posit the distinctive feature [+predicative] on the subordinator C:

(43) [+predicative] C: relative clauses

[−predicative] C: other clauses including indirect questions

[+Predicative] C is the marked value which introduces relative clauses interpreted as predicating of the antecedents, while [−predicative] C is the unmarked value which introduces other subordinate clauses including indirect questions. On the basis of this idea, I propose the condition in (44):

(44) *pe* is assigned a [+predicative] feature when it is embedded under c.

The relevant structures of (41) can be illustrated as follows:

(45) a. \[c_P ~ se ~ \text{pe}_i \] [+pred] + c [+wh] \[c_P t_i [\text{IP} \ldots] \]

[+pred] [+F] [+wh] (relative clauses)

b. *\[c_P ~ \text{wh} ~ \text{pe}_i \] [+pred] + c [+wh] \[c_P t_i [\text{IP} \ldots] \]

[−pred] [+F] [+wh] (indirect questions)

In OE, the [+F] feature occupied c (see (29a)). Then, the particle *pe* generated in C must raise to c to check off this feature. In (45a), the [+predicative] feature of the particle and the [+wh] feature of c match with those of the pronoun *se*, so that this structure is properly licensed. In (45b), by contrast, there is a feature mismatch between the [−predicative] feature of the *wh*-phrase and the [+predicative] feature of *pe*, and thus this structure is ruled out as deviant. In short, although OE had the structure shown in (16a) where the complementizer is located in c, doubly-filled Comp was nevertheless allowed in relative clauses owing to the [+predicative] property of the subordinating particle *pe*.

in much the same way as believe-type ECM verbs check the objective Case of the subject of infinitives occupying [Spec, IP].
6. Concluding Remarks

In this paper, I have attempted to offer an explanation for the questions why doubly-filled Comp was observed only in a limited period of time in the history of English and why its change was linked with V2 word order in main clauses. The main point was that the shift of the [+F] feature from c to C made possible doubly-filled Comp in embedded clauses and its shift to Infl caused the demise of V2 and doubly-filled Comp at the same time. This analysis has brought about two theoretical implications as its consequences. One is that the split-CP structure is universal and the possibility of doubly-filled Comp is reduced to the property of complementizers. The other is that a process of language change displays a tendency of locality. This means that the familiar property found in synchronic phenomena plays a crucial role in diachronic changes as well.

REFERENCES


Culicover, Peter (1991) "Topicalization, Inversion, and Complementizers in English," ms., The Ohio State University.


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