

T-to-C Movement and the “Degrammaticalization” of Infinitival *To**

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1. Introduction

Hopper and Traugott (2003) maintain that diachronic grammatical changes known as grammaticalization follow a unidirectional path that is represented by the “cline of grammaticalization” in (1).¹

(1) content item > grammatical word > clitic > inflectional affix

(Hopper and Traugott (2003:7))

According to this, a content item changes into a grammatical word, then into a clitic, and finally into an inflectional affix, but not vice versa. There has been a lengthy debate in the literature as to whether there are any degrammaticalization phenomena that run counter to this cline.²

The English infinitive marker *to* constitutes an apparent counterexample to the unidirectionality hypothesis in that it had a clitic-like property of being strictly adjacent to infinitive verbs in Old English (OE) but subsequently came to behave as a grammatical word; thus, the change in the status of *to* is a possible candidate for degrammaticalization in the history of English. The following questions are related to this phenomenon:

- (2) a. Why did the adjacency between *to* and infinitive verbs disappear?
b. Does the relevant change count as a case of “degrammaticalization”?

Throughout this paper, we maintain the position that “(de)grammaticalization” is a name given to a phenomenon that is not a theory by itself, and therefore, it requires explanation by independent mechanisms; hence the first question, i.e. (2a). We will

analyze the change in terms of T-to-C movement. More specifically, it will be argued that the adjacency between *to* and infinitive verbs in OE was achieved through the head movement of infinitive verbs to *to* located in C; later, however, due to the decline of the infinitival inflectional suffix *-en*, the same operation came to yield a different output, leading to the loss of the adjacency effect. With regard to the question in (2b), we will derive the conclusion that infinitival *to* has invariably been an independent grammatical word through OE to Present-day English (PE), and therefore, the change in question cannot be regarded as a case of backward development on the unidirectionality cline.

This paper is organized as follows. Section 2 reviews the basic facts and points out some issues. Section 3 introduces T-to-C movement and draws a generalization about the realization of external arguments. Based on these theoretical backgrounds, section 4 establishes the structure of OE *to*-infinitives and then explains the adjacency effect in OE and the subsequent “degrammaticalization” phenomenon. Section 5 offers some additional evidence for the independence of *to* in OE. Finally, section 6 presents the concluding remarks.

2. The “Degrammaticalization” of Infinitival *To*

A striking characteristic of the infinitive marker *to* in OE and early Middle English (ME) is that it must be strictly adjacent to the head of VP. Thus, particles like *ut* in (3), which may be placed immediately before verbs in finite clauses, must appear to the left of *to* in infinitival clauses:

- (3) þæt him wære alyfed ut to farenne
that him was allowed out to go
‘that he was allowed to leave’ (GD 2 (H) 25.155.26/Los (2005:210))

This suggests that *to* and the following verb *farenne* together form a kind of complex

verb. Such strict adjacency, however, is not required in *to*-infinitives from late ME onward. Thus, split infinitives as in (4) below are frequently observed:

(4) Y say to ȝou, to nat swere on al manere

I say to you to not swear on all manner (Wyclif *Matthew* 5.34/ibid.154)

In this example, the negative particle *nat* intervenes between *to* and the infinitive verb *swere*, showing that they are separable, unlike OE *to*-infinitives. Thus, it seems as if infinitival *to* has changed its status from a clitic to an independent grammatical word, which would constitute a counterexample to the cline of grammaticalization in (1). Los (2005:225–229) argues that *to* is lexically adjoined to V in OE as a clitic while it occupies T in ME, and that this is indeed a rare case of degrammaticalization.

The situation complicates further when we take into account the etymology of infinitival *to*. It is standardly assumed that it developed from a preposition (Callaway (1913), Jespersen (1909–49), and Mustanoja (1960), among others). Crucially, ordinary prepositions do not need to be adjacent to the head of its complement even in OE, as in (5) below:

(5) he tihte þæt folc to þæs hælendes slege

he urged the people to the Savior's murder

'he urged the people to murder the Savior'

(ÆCHom I, 20 292.5/Los (2005:162))

Here, the strict adjacency between the preposition *to* and the head noun *slege* is blocked by *þæs hælendes*, the object of the head noun. Thus, the overall picture of the history of *to* would be summarized as follows:

(6) preposition (free form) > clitic (bound form) > lexical tense marker (free form)

It could thus be argued that the change in the status of *to* is not merely

degrammaticalization, but a process of re-lexicalization of a clitic that had once undergone grammaticalization. The question that arises here is: why does infinitival *to* exhibit such a seemingly weird process of change?³

3. Theoretical Backgrounds

This section provides theoretical backgrounds against which the following analysis will be carried out. These include the mechanism of T-to-C movement developed by Pesetsky and Torrego (henceforth P&T) (2001, 2004) and the generalization about the realization of external arguments.

3.1. T-to-C Movement in Infinitives

The theory of T-to-C movement proposed by P&T (2001, 2004) is intended to apply to both matrix and embedded clauses and offers a comprehensive explanation for a wide range of phenomena including the subject/non-subject asymmetry of auxiliary inversion in matrix questions, the *that*-trace effect, and the deletion of the complementizer *that* in embedded clauses. A complete review and assessment of their theory falls outside the scope of this paper, and we will only sketch out how T-to-C movement works in infinitival clauses. The relevant assumptions are summarized in (7).

(7) *T-to-C Movement in Infinitives* (P&T (2001, 2004))

- a. Case is an uninterpretable T-feature (uT) on D.⁴
- b. C bears uT with the EPP property.
- c. uT on C is satisfied either by T-to-C movement or DP movement to [Spec, C].
- d. *For* is a particular realization of T moved to C.
- e. An uninterpretable feature, once marked for deletion, remains accessible

to further computation until the relevant phase has been fully built.

Let us consider the alternation of irrealis infinitives in the following example and see how the abovementioned assumptions collaborate to derive the optionality of the complementizer *for*:

- (8) a. I would prefer [for Sue to buy the book].
 b. I would prefer [Sue to buy the book].

In both these infinitives, the subject *Sue* is thrown into the syntactic computation with interpretable ϕ -features and uT , and it is merged to [Spec, v] (see (7a)). When T is introduced into the structure, its uninterpretable ϕ -features ($u\phi$) that act as a probe delete uT on *Sue*, and remerge *Sue* to [Spec, T] via their EPP property. This derives the common intermediate structure in (9):

- (9) [TP [DP Sue, ~~\bar{T}~~ , ϕ]_i [T, ~~$u\phi$~~] [_{VP} t_i buy the book]]

The next step is the merger of C that bears uT with the EPP property (see (7b)). Importantly, two operations are available to delete uT on C (see (7c)). One option is T-to-C movement, whereby the head and tail of the chain formed are phonologically realized as *for* and *to*, respectively (see (7d)). The resulting structure is (10a), which corresponds to the infinitival complement with *for* in (8a). The other option is the DP movement of the subject *Sue* to [Spec, C]. This is possible because uT on *Sue*, which is marked for deletion in (9), remains accessible to further computation until the CP phase has been fully built (see (7e)), as a result of which it is still visible to uT on C. The resulting structure is (10b), which corresponds to the infinitival complement without *for* in (8b):

- (10) a. [CP [T *for*]_i+ [C, ~~\bar{T}~~] [TP Sue t_i buy the book]]
 b. [CP [Sue, ~~\bar{T}~~ , ϕ]_i [C, ~~\bar{T}~~] [TP t_i to buy the book]]

Thus, the optionality of the complementizer *for* in irrealis infinitives in PE can be

accounted for in terms of the availability of both T-to-C movement and DP movement for the deletion of *uT* on C.⁵

3.2. The Syntax of External Argument Realization

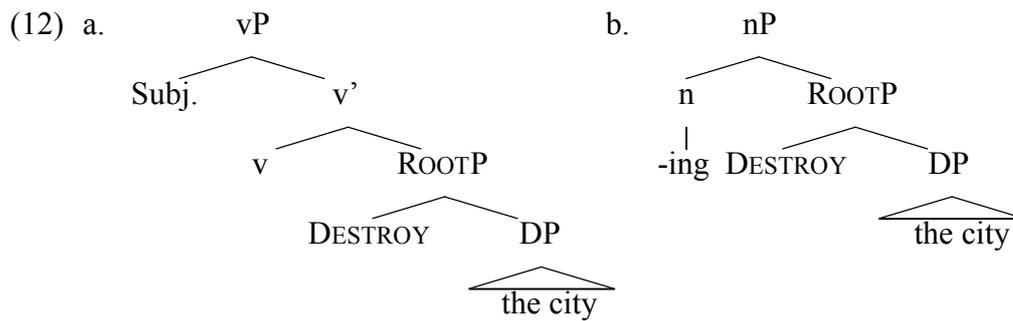
It is well known that some deverbal nominals inherit the argument structures of the verbs from which they are derived. In particular, complex event nominals (CENs) in the sense of Grimshaw (1990) must realize the internal arguments of the corresponding verbs, as illustrated below:

- (11) a. They destroyed *(the city).
b. the destroying *(of the city)
c. We constantly assign *(unsolvable problems).
d. the constant assignment of *(unsolvable problems)

(Grimshaw (1990:50))

At the same time, it is also clear from these examples that the realization of external arguments is not obligatory in CENs, which is not expected if they inherit the entire argument structures of the original verbs. Then, why the absence of external arguments?

The split phrase structure á la Distributed Morphology (Halle and Marantz (1993), among others) offers a straightforward solution to this problem. Under this framework, the categorial status of lexical items is not specified in the lexicon, but it is derivationally determined in the syntax by merging “small categories” such as the verbalizer *v* or the nominalizer *n* to a root, which is underspecified for its category. The structures of the verb *destroy* and the corresponding noun *destroying* are delineated as follows:



These structures tell us that first and foremost, the term “deverbal noun” is misleading because there is no derivational relation between *destroy* and *destroying*: they are simply two distinct words based on a common root. Thus, the root DESTROY is realized as the verb *destroy* and as the noun *destroying* when it is merged with *v* and *n*, respectively. Both the noun and the verb obligatorily take an internal argument because the common root DESTROY has the selectional property of taking a Theme argument. (In the case of *destroying*, the *of*-insertion rule is applied at the phonological component, perhaps for Case reasons.) On the other hand, the selection for external arguments depends on small categories. The assumption that only *v*, but not *n*, has an argument-taking property would explain the asymmetry between verbs and CENs with respect to the presence or absence of external arguments.

A closer examination, however, reveals that an Agent argument is implicitly present in CENs as well, even though its realization is not obligatory. This is evident from the following facts that the implicit Agent can appear as a *by*-phrase, as in (13a); this Agent may control PRO in infinitival clauses, as in (13b); and agent-oriented adjuncts such as *deliberate* can occur within CENs, as in (13c):

- (13) a. the translation of the book by a famous Japanese novelist
 b. the opening of the door [in order PRO to let air in]
 c. the deliberate mass killing of unarmed civilians

Here, it is important to note that the same properties are observed in passives as well:

- (14) a. Hortense was pushed by Elmer.
 b. This bureaucrat was bribed [PRO to avoid the draft].
 c. This bureaucrat was bribed deliberately. (Baker et al. (1989:221–222))

In order to explain the data in passives, Baker et al. (1989) propose that the passive morphology *-en* serves as an external argument. Let us now apply this hypothesis to CENs as well, and assume that the interpretation of the implicit Agent in CENs in (11) and (13) is carried by the suffixes *-ing*, *-ment*, and *-ion*. This assumption, coupled with the split phrase structures in (12), enables us to derive the following generalization about the realization of external arguments:

(15) *External Argument Generalization (EAG)*

External arguments are realized within the projection of a small category by one of the following items:

- (i) DP in Spec position
 (ii) the head of the small category

Each small category is specified as to which option is available; for example, the verbalizer *v* in (12a) is specified for (i) and the nominalizer *n* in (12b) for (ii). With regard to the passive morphology *-en*, Baker et al. assume that it is generated under Infl. For them, this is desirable because external θ -roles would then be uniformly assigned outside VP under the *LBG–Barriers* framework wherein subjects are base-generated under [Spec, I]. This conceptual advantage, however, disappears under the internal subject hypothesis (ISH) after 1990s, wherein ordinary DP subjects receive their θ -roles inside VP. For us, passive *-en* would be generated under *v* in line with the EAG. Thus, the EAG can be regarded as an extended and complete version of the ISH, where all external arguments, both DPs and heads, are uniformly realized within small categories.⁶

‘David, who was wont to have the spirit of prophecy in him’

(GD 4.40.26, H/ibid.)

This strongly suggests that *to*-infinitives are a non-finite alternative to subjunctive *that*-clauses in OE and can thus be seen as having clausal properties.

With regard to the position of infinitival *to*, we assume that it occupies C, following Kayne’s (1981) analysis of the French infinitive marker *de* and its Italian counterpart *di*.

- (17) a. Jean croit [_{CP} de [_{TP} PRO être intelligent]]. (French)
Jean believes to be intelligent
- b. Gianni crede [_{CP} di [_{TP} PRO essere intelligente]]. (Italian)
Gianni believes to be intelligent

The assumption that *de* and *di* reside in C forces infinitival clauses introduced by these elements to project to CPs, and correctly predicts that they cannot appear as raising infinitives in French and Italian.

- (18) a. *Jean_i semble [_{CP} de [_{TP} *t*_i être parti]]. (French)
Jean seems to be left
- b. *Gianni_i sembra [_{CP} di [_{TP} *t*_i essere partito]]. (Italian)
Gianni seems to be left

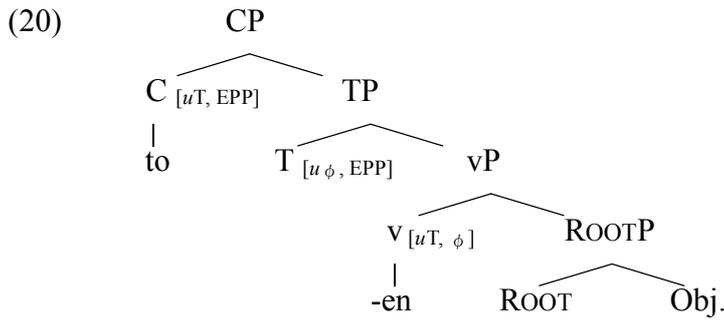
The ungrammaticality of these examples is readily accounted for in terms of the ban on A-movement across CP boundaries. What about OE *to*-infinitives? Amano (2001) examines the data in Jespersen (1909–49), Visser (1963–73), Denison (1993), and Los (2000), among others, and argues that OE does not allow the extraction of subjects from within *to*-infinitives (as in French and Italian), and therefore, *to*-infinitival complements in OE should be analyzed exclusively as control infinitives. Since control infinitives are generally assumed to be CPs, Amano’s argument is compatible with our claim that infinitival *to* in OE occupies the head of CP.

Finally, concerning the syntactic status of the suffix *-en*, I contend that it possesses the dual property of being an external argument of infinitive verbs and the non-finite tense of the infinitival clause. The hypothesis that infinitival *-en* is an external argument was first proposed by Tanaka (1994) on the basis of the fact that the subjects of *to*-infinitives are never lexically realized in OE. Paraphrasing his insight in the present framework, we may state that the verbalizer *v* that appears in OE *to*-infinitives is specified for the option of realizing its external argument as a head element with respect to the EAG. Let us further assume that the suffix *-en*, like ordinary DP arguments, bears ϕ -features and uT .⁷ At the same time, it also seems natural to suppose that *-en* expresses the non-finite tense of the infinitival clause. In order to capture this duality, I would propose that *-en* is a phonological realization of the complex head consisting of *v* and *T* that is derivationally formed in the syntax. Under Distributed Morphology, this relation is expressed through the means of the following correspondence rule that is applied post-syntactically:

$$(19) \text{ /-en/} \longleftrightarrow T+v \text{ } [uT]$$

The suffix *-en* is supplied to the complex at the phonological component after uT on *v* is deleted by *T*. In the following diagrams, *-en* is placed under *v* for convenience sake, but this notation implies the correspondence rule in (19).

Based on all these assumptions and the feature specifications on each functional head that induce T-to-C movement, the “base” structure of OE *to*-infinitives is represented as follows:



This structure is essentially the same as that of PE *to*-infinitives, the only difference being with regard to the phonological realizations of C, T, and v (Nawata (2004)).

Next, let us illustrate the derivation of OE *to*-infinitives to see how the adjacency effect between *to* and infinitive verbs follows. After ROOTP is completed, it is merged with the verbalizer v and the head ROOT is raised and adjoined to v. Subsequently, when T is introduced into the structure, $u\phi$ on T that acts as a probe marks uT on v for deletion and raises it to T via its EPP property.⁸ This derives the intermediate structure below:

$$(21) \left[{}_{\text{TP}} \left[{}_{\text{v}} \text{ROOT-en}, \#T, \phi \right]_i + \left[\text{T}, \# \phi \right] \left[{}_{\text{vP}} t_i \text{ Obj.} \right] \right]$$

Following this, C with uT is merged with this structure. Importantly, unlike PE in which there are two options to delete uT on C, i.e. T-to-C movement and DP movement to [Spec, C], only the former is available in OE; this is because the suffix *-en* serves as the external argument and hence no subject DP is present in the relevant structure. Moreover, an object DP, if any, is not an appropriate candidate for DP movement by virtue of minimality: being situated below *ROOT-en*, it is not visible from the probe on C. Thus, *ROOT-en* necessarily moves to C.

$$(22) \left[{}_{\text{CP}} \left[\text{C } to, \#T \right] + \left[{}_{\text{v+T}} \text{ROOT-en}, \#T, \phi \right] \left[{}_{\text{TP}} t_{\text{v+T}} \left[{}_{\text{vP}} t_{\text{v}} \text{ Obj.} \right] \right] \right]$$

As is evident from this structure, *to* and *ROOT-en* form a complex head on C; thus, the adjacency effect follows.⁹ Since this is a genuine syntactic effect, *to* cannot be considered as a phonologically deficient clitic (see note 1).

A comment is in order with respect to clause-internal word order variation. OE *to*-infinitives allow both VO and OV orders; however, in the latter case, objects must precede *to* and cannot intervene between *to* and infinitive verbs. In the recent literature, it is often proposed that the OV order in finite clauses is derived through the leftward movement of objects (Roberts (1997), among others). In the framework of Chomsky (2000, 2001, 2004), the relevant position to which objects move is [Spec, v], i.e. the edge of a strong phase vP, where objects receive interpretation as topics. We suppose, then, that weak phases including passive vP and nP deriving CENs, which do not realize external arguments by DPs in its Spec position, lack the EPP property that requires some Spec element and thus do not trigger object shift, either. It follows that vP in OE *to*-infinitives also counts as a weak phase whose Spec position is not available for shifted objects. Thus, objects must move to [Spec, C], the edge of the nearest strong phase, to be interpreted as topics. This yields (23):

$$(23) [_{CP} \text{ Obj. } [_{C} \text{ to, } \#T] + [_{v+T} \text{ ROOT-en, } \#T, \phi] [_{TP} t_{v+T} [_{vP} t_v t_{Obj.}]]]$$

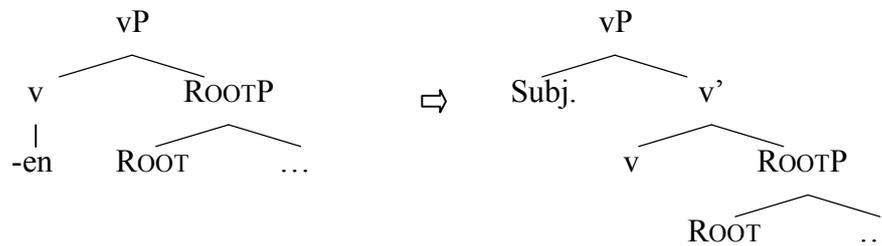
Word orders in which other vP-internal elements such as PPs and adverbs appear to the left of *to* can also be analyzed in the same manner.

4.2. The Change in ME

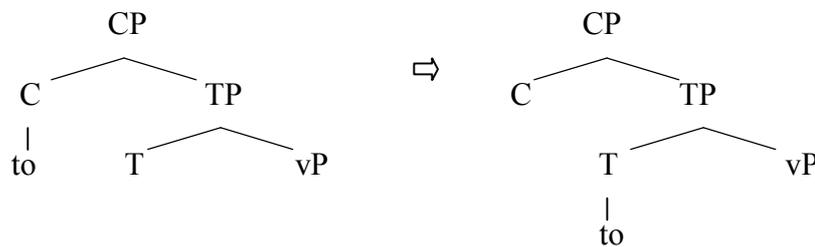
Next, we will turn our attention to the loss of the adjacency effect in late ME. My claim here is that this loss is ultimately attributed to the morphophonological change of the infinitival suffix *-en*. As is well known, the suffix *-en* slowly declined through ME and came to be spelled as *-e* or *-ϕ* in late ME (Nakao (1972)). In light of this fact, it seems rather reasonable to suppose that the attrition of *-en* was compensated through the following two effects.

$$(24) \textit{The Compensation Effects of the Loss of the Infinitival Suffix in ME}$$

- a. the change in the mode of realizing external arguments



- b. the shift of *to* from C to T



First, since *v* was no longer able to carry external arguments, the mode of the EAG changed from the option in which external arguments are realized as the head of *vP* to the one in which they are expressed by Spec elements, as in (24a). Second, since *-en* had corresponded to *T* as well (see (19)), its loss triggered the shift of *to* from *C* to *T*, as illustrated in (24b).

Due to the emergence of subject DPs and the shift of *to*, the phonological realization of the infinitival clause became almost identical to that in PE. This in turn implies that the output of feature-deletion in the derivation of infinitives also came to exhibit the PE pattern. The relevant processes and the resulting structures reviewed in section 3.1 are repeated below:

- (25) a. Step 1: Deletion of $u\phi$ on *T* by subject DP
 [TP [DP Subj., $\#F$, ϕ] [T, $\# \phi$] [_{VP} *t*_{Subj.} V Obj.]]
- b. Step 2: Deletion of uT on *C* either by T-to-*C* movement or DP movement to [Spec, *C*]
 (i) [CP [T for]_i+[C, $\#F$] [TP Subj. *to*_i V Obj.]]

(ii) [CP [Subj., $\#F$, ϕ] [C, $\#F$] [TP $t_{\text{Subj.}}$ to V Obj.]]

The step that is crucial for our concern is (25a), in which $u\phi$ on T is deleted by subject DP. The important point to note is that the head of vP does not carry ϕ -features and uT by virtue of no longer being an argument, and thus it is not visible from $u\phi$ on T. The infinitive verb remains in situ, separated from T where *to* is realized. This completes our explanation of the loss of the adjacency effect in late ME.

As the consequences of morphological shifts in (24), several constructions appeared in late ME that had formerly been disallowed; some of these are given below:

(26) a. *Split Infinitive*

to temple make he sal be best

to temple make he shall be best

(14c *Cursor Mundi* 12965, Cotton ms/Mustanoja (1960:516))

b. *Lexical Subject with the Complementizer For*

She was a prymerole, ... For any lord to leggen in his bedde.

she was a primrose for any lord to lay down in his bed

(c1386 Chaucer C.T. A 3268/Visser (1963–73:sec.937))

c. *Raising Infinitive*

And in my barm ther lith to wepe | Thi child and myn

and in my bosom there lies weeping thy child and mine

(1390 Gower *Confessio Amantis* III 302/Los (2005:98))

Split infinitives such as the one in (26a) clearly indicate that infinitive verbs ceased to raise to T in late ME. This particular example also demonstrates that [Spec, v] became available as a landing site of object shift. This is expected if we assume, as above, that object shift is driven by the EPP property of v that requires some Spec element; along with the emergence of subject DPs, the infinitival vP is naturally supposed to have

acquired the status of a strong phase with the EPP property. The other new constructions are also suggestive of the change in late ME. The complementizer *for* in (26b) is the phonological reflex of T that has undergone T-to-C movement, and the infinitive marker *to* in (26c) must reside in a position lower than C, most presumably in T, in order to enable the subject to move to the matrix clause (see the discussion in the previous section). All these clustering changes are due to the morphological shifts in (24).¹⁰

To recapitulate the discussion so far, the adjacency effect between *to* and infinitive verbs in OE is a genuine syntactic effect, and its loss in late ME is an epiphenomenon that was caused by the emergence of subject DPs and the shift of *to*, both of which are ultimately attributed to the decline of the infinitival suffix *-en*. Thus, infinitival *to* is invariably an independent grammatical word: a complementizer in OE and a lexical tense marker in late ME onward. Therefore, it is not the case that the change in the status of *to* follows a direction opposite to that of the unidirectionality cline stated at the outset.

5. More on the Independence of *To* in OE

Finally, this section considers some additional clitic-like behaviors of infinitival *to* in OE and demonstrates that our analysis can cover them as well.

A first case concerns coordinate structures. When two infinitives with the suffix *-en* are coordinated in OE, *to* must appear in both conjuncts:

(27) Me is geseald anweald to ofsleanne and to edcucigenne.

me is given power to slay and to revive

‘Power is given me to slay and make alive again.’

(Ælf. L.S. XXXIV 321–322/Kageyama (1992:96))

No instances are observed of the form *to V-en and V-en*, where *to* is omitted in the second conjunct (Kageyama (1992), Los (2005)). In (27), *to* and *V-en* together behave as a word, providing an apparent evidence for the clitic status of *to*. Notice, however, that merely stating that *to* is a clitic does not suffice to explain the data as the requirement on the part of *to* to attach to a host should be satisfied at the first conjunct in *to V-en and V-en*; thus, some additional stipulation would be necessary to rule out this form.

Kagayama (1992) explains the obligatoriness of *to* in both conjuncts in terms of the Coordinate Structure Constraint (CSC). Although he identifies OE infinitival *to* as the head of AgrP, the essence of his analysis can be easily incorporated into the present framework. The structures of *to V-en and to V-en* and *to V-en and V-en* are represented in (28a, b), respectively:

- (28) a. [CP *to* ofsleanne_i [TP *t_i*]] and [CP *to* edcucigenne_j [TP *t_j*]]
 b. * [CP *to* ofsleanne_i [TP *t_i*] and [TP edcucigenne]]

In the illegitimate structure in (28b), T-to-C movement occurs only in the first conjunct while *V-en* stays on T in the second conjunct. This is a clear violation of the CSC. Thus, the fact about the coordination of *to*-infinitives favors our analysis rather than the clitic analysis of *to*.

A second constriction is that of pro-infinitives, such as the one in (29) that are allowed in PE but are not observed in OE.

- (29) You should go even though you don't like to [*e*]. (OK in PE/* in OE)

Given that OE infinitival *to* occupies C, illegitimate pro-infinitives in OE will be analyzed as Sluicing, i.e. TP-deletion. What is crucial here is the fact that CPs left by Sluicing must contain a *wh*-element of some sort. The complement of CPs with lexical complementizers such as *that* and *for* cannot undergo deletion.

- (30) a. Even though Mary's not sure [_{CP} who [*e*]], she knows someone is speaking tonight.
- b. * Even though Mary hopes [_{CP} that [*e*]], she wonders if anyone interesting is speaking tonight.
- c. * Sue asked Bill to leave, but [_{CP} for [*e*]] would be unexpected.

(Lobeck (1995:45–46))

Pro-infinitives in OE are thus ruled out by the same reason that excludes (30b, c), whatever it may be. Furthermore, when TP-deletion is applied without T-to-C movement in OE *to*-infinitives, *uT* on C remains undeleted, which causes the derivation to crash. Thus, the absence of pro-infinitives in OE also fits well into our approach. On the other hand, the pro-infinitives in late ME onward, where *to* has shifted to T, are analyzed as VP-deletion, and hence, the restriction on Sluicing is irrelevant. VP-deletion that leaves *to* behind is licensed under certain structural conditions (Martin (2001)). As expected, the first instance of pro-infinitives in Visser (1963–73) dates from 1303.

- (31) But wylle 3e alle foure do A þyng þat y prey 3ow to.
 but will you all four do a thing that I pray you to

(1303 Brunne *Handlyng Synne* 8021/Visser (1963–73:sec.1000))

This coincides with the emergence of the other constructions in late ME given in (26), which is naturally accounted for under the present analysis.

6. Concluding Remarks

To sum up, we have claimed that the infinitive marker *to* in OE is not a clitic but a complementizer, and that the historical change of *to* is not an instance of backward development of the unidirectionality cline. The relevant change from the pre-OE period

to PE can be more correctly summarized as follows (cf. (6) in section 2):

(32) preposition (free form) > complementizer (free form) > lexical tense marker
(free form)

We explained the latter part of this change using the syntactic devices of T-to-C movement and the EAG. More specifically, we argued that apparent clitic-like behaviors of OE infinitival *to* are side effects of T-to-C movement and that the loss of the adjacency between *to* and infinitive verbs in late ME is a result of the morphological shift of *to* from C to T together with the emergence of subjects in infinitives, which themselves are compensation effects of the loss of the infinitival suffix *-en*. Notice again that our explanation of the chain of change is primarily morphosyntactic. Therefore, if grammaticalization is to be understood as phonological and/or semantic bleaching (see note 1), the shift of *to* cannot count as degrammaticalization; this is because the complementizer *to* and the tense marker *to*, both independent functional heads, have much the same amount of phonological and semantic contents, and are thus not objects of comparison in this respect.

Notes

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1. We will not offer a precise definition of grammaticalization in this paper and will instead follow the general idea that the unidirectionality cline in (1) is induced by the phonological and/or semantic bleaching of lexical items. For further discussion on the treatment of grammaticalization within syntactic theories, see Akimoto et al. (2005). Incidentally, the term “clitic” will be used below to refer to only “phonological” clitics that need to adjoin to a host due to their phonological deficiency, either at PF or in the

lexicon.

2. For example, Newmeyer (1998:263–275) argues that the developments of genitive *'s*, *there* as a noun and *man* as a noun are instances of degrammaticalization in English.

3. Note that this question is orthogonal to that of whether infinitival *to* in OE is still a preposition or has already changed into some functional head. Among the previous studies, Tanaka (1997) claims that OE infinitival *to* is a preposition equipped with a strong V-feature, which, he assumes, attracts the head of VP; Nawata (2004), on the other hand, stipulates that it is a phonological clitic located in C. Either analysis seems somewhat ad hoc, and hence a more principled account is required.

4. P&T (2001) assume that uT on D is realized as Nominative and that the lexical subjects of infinitives have Nominative Case. P&T (2004) generalize this idea to include Accusative as well and argue that all structural Cases are uT . In what follows, we will leave open the particular value assigned to the subjects of infinitives and refer to it simply as “Case.”

5. As is well known, the complementizer *for* cannot appear when the infinitival subject is PRO:

- (i) a. Sue would like [PRO to buy the book].
- b. * Sue would like [for PRO to buy the book].

P&T (2001:395) stipulate that when the subject is PRO, uT on C does not have the EPP property and thus T-to-C movement does not occur either. On the other hand, P&T (2004:501) observe that T moved to C is spelled out as a null morpheme when T agrees with PRO, and otherwise as *for*. Due to space constraints, we will refrain from further exploration of this issue in this study.

6. CENs and passives exhibit the following differences: (i) while CENs optionally allow an Agent argument to appear as (possessive) DP, this is not the case with

passives; (ii) there are CENs corresponding to unaccusative verbs, but passives cannot be formed from unaccusatives. With regard to (i), let us tentatively assume that the possessive Agent is an adjunct just like *by*-phrases. The contrast in (ii) seems to suggest that while the passive morphology *-en* obligatorily realizes an external argument and thus does not tolerate vacuous passivization from unaccusative verbs, nominal affixes only optionally express external arguments. OE *to*-infinitives discussed below follow the pattern of CENs in this respect.

7. This amounts to saying that the infinitival suffix *-en*, which was originally a dative ending, has Case in OE. Though it is highly possible, given that OE *to*-infinitives are CPs, that OE *-en* is not a proper dative morphology (Los (2005:164)), it is nevertheless not unreasonable to suppose that it still retains *uT* as a reflex of its etymological property. Also see note 3.

8. Another possibility would be that *v* pied-pipes the entire *vP* and moves to [Spec, T]. This option, however, is ruled out by P&T's (2001) Head Movement Generalization:

- (i) Suppose a head *H* attracts a feature of *XP* as part of a movement operation.
 - a. If *XP* is the complement of *H*, copy the head of *XP* into the local domain of *H*.
 - b. Otherwise, copy *XP* into the local domain of *H*. (P&T (2001:363))

Since *vP* is the complement of *T*, only its head *v* is copied and adjoined to *T*.

9. If a moved head always adjoins to the left of its host, *ROOT-en* is expected to precede *to*, which is contrary to the fact. Two possible explanations would be: (i) *ROOT-en* indeed left-adjoins to infinitival *to* in the syntax, and subsequently, the surface word order is derived through a readjustment rule at the phonological component; (ii) the CP domain is decomposed into several independent categories and *to* is located in a head higher than the target *to* which *ROOT-en* moves. We will leave this question open

here.

10. Other infinitival constructions that developed in late ME include the ECM construction and *for to* infinitives without lexical subjects. ECM infinitives are generally assumed to be TPs, and therefore, their development is accounted for in the same manner as that of raising infinitives. With regard to the development and demise of *for to* infinitives, see Nawata (2004).

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