The Syntactic Structures of Infinitives

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Yu, Chongtaek. 2005. The Syntactic Structures of Infinitives. *The Linguistic Association of Korea Journal, 13*(3), 163-183. Both old English (OE) and middle English (ME) had two types of infinitives—simple (accusative) infinitive and inflected (dative) infinitive preceded by *(for)~tō/te/to*. The infinitival *for* has always been a prepositional link (PL) since ME, but the infinitival *to* is a PL or a preposition (P) still now. Thus an InfP is assumed to be base-generated between a TP and a CP. The underlying structures of InfPs can be divided into two: a double-Spec InfP and a single-Spec InfP. In an infinitival clause (Inf-C) containing a double-Spec InfP, a lexical/nonlexical infinitival subject moves to the Spec-Inf for covert Agree (CA)/overt Agree (OA), whereas in an Inf-C containing a single-Spec InfP, a lexical infinitival subject moves to the Spec-Inf/T for CA/OA.

Key Words: simple infinitive, inflected infinitive, PL, Inf-C, InfP, CA, OA

1. Introduction

The syntactic structures of infinitives have long been a controversial issue among syntactic grammarians. Thus what I want to pursue in this paper is to suggest suitable syntactic structures on the basis of the diachronic and synchronic study of infinitives.

In the second section, I will investigate two types of OE and ME infinitives—simple infinitive and inflected infinitive preceeded by *tō*.[1)]

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1) Beside the simple infinitive, or verbal substantive in *-an* (ME *-en*, *-e*), OE, like other West German languages, had a *dative* form of the same or a closely-relative substantive, which in OE, ends in *-anne*, *-enne*, in ME, reduced successively to *-ene*, *-en*, *-e*, and was thus at length levelled with the simple infinitive, and with it reduced to the uninflected verb-stem. This dative form

Above all, I will pay special attention to explaining the grammatical function of infinitival *tō*. It's because I think that the infinitival *tō* is a crucial key to the representation of the ModE infinitival structures. I will also study some different types of the infinitival structures which have been suggested by transformational grammarians.

In the third section, I will establish a base-generated InfP in infinitival constructions, considering how uninterpretable features are checked and valued by Agree in the InfPs. That is, I will consider where phrases including uninterpretable features move in the infinitival constructions, following the Phase Impenetrability Condition (PIC).

Finally, this paper will come to a conclusion that there is a base-generated InfP in an Inf-C, and that the InfP allows an infinitival subject to move to the Spec-Inf.

2. The diachronic study of infinitives

The verbal endings in OE inflected regularly or irregularly in accordance with number, person, mood, and tense. And they also inflected in accordance with infinitive and participle.[2)]

OE had two types of infinitives—simple infinitive and inflective infinitive. The former took an inflectional ending quite different from the one that the latter did, as shown in the following table 1:

Table 1. The inflectional endings of OE infinitives

OE verb	simple infinitive	inflected infinitive	verb class
bēon, wessan (be)	beēon, wessan	tō bēonne	anomalous
dōn (do)	dōn	tō dōnne	anomalous
gān (go)	gān	tō gānne	anomalous
fremman (perform)	fremman	tō fremmanne	weak
writan (write)	writan	tō writanne	weak

was always preceded or governed by the preposition *tō* (=to). See *to* in the *Oxford English Dictionary* (OED).

2) See Cassidy and Ringler (1971: 26-29, 60-63)

The simple infinitive without *tō* in the above table, which became the bare infinitive in ModE, added an inflectional ending *-an* to its stem. The ending was used for morphologically representing the accusative (acc.) or nominative (nom.) case.[3] On the contrary, the inflected infinitive, which was often called the gerund in OE, added an inflectional ending *-anne* or *-enne* to its verbal stem. The infinitive was always preceded by *tō*, and it represented the dative case like object of preposition.[4]

In the first place, let us examine the simple infinitives without *tō* from the OE literary works:

(1) a. Hē sæde Þæt hē æt sumum cirre wolde *fandian* hū longe Þæt land norÞryhte læge,···

The Voyages of Ohthere and Wulfstan, 6-7.

(He said that he once (lit. at a certain time) wanted to find out how far the land might extend due north···)

b. Þā het se cyning *faran* mid nigumum tō Þara niewena scipa,···

The Wars of King Alfred against the Vikings, 100-101.

(then the king ordered (a detachment) to proceed there with nine of the new ships,···)

c. *Gesēon* is geliefan.

On the analogy of an infinitival sentence in the *OED*.[5]

(To see is to believe.)

In (1a), the OE simple infinitive *fandian* (=find out, search out, attempt,

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3) According to the *OED*, the OE infinitive had (in the nom.-acc. case) the suffix *-an*. The OE nom.-acc. was the source of the (now less frequent) simple infinitive, as in *We saw him come*, *They need not come*, and *He likes to see it*.

4) The gerund was originally the dative of the infinitive, Germanic *-anjai*, which became OE *-enne*. The ending *-anne* had *-a-* by analogy with the infinitive *-an-*. The object of preposition was usually in the dative case, so the inflected infinitive was regularly preceded by *tō*, forming with it a phrase often best translated into ModE by the infinitive. See Moore, Knott, and Hulbert (1955: 182), Diamond (1970: 19), and Cassidy and Ringler (1871: 29).

5) *To* is now prefixed also to the nom.-acc. infinitive, in which OE had the simple infinitive form in *-an*, as in *To see* is to believe, and *He likes to see i t*.' Confer Diamond (1970: 17).

etc.) represented the acc. immediately after the anomalous verb *willan* (=want, wish, be willing to, etc.). Likewise, in (1b), the simple infinitive *faran* (=proceed, go, travel, march, etc.) represented the acc. after the causative verb *hātan* (=order, command, bid, etc.), and immediately after the acc. object *cyning* (=king). On the contrary, in (1c), the OE simple infinitive *gesēon* (=see, observe, etc.) represented the nom.

Let us in turn examine the inflected infinitives with *tō* from the OE literary works:

(2) a. Monige cwōmon *tō bicgenne* Þa ðing.

Bæda's History, 96.

(Many people came to buy the things.)

b. Ond ðȳ ilcan gēare hīe sealdon ānnum unwīsum cyninges Þegne Miercna rīce *tō haldanne,*···

The Reigns of Æðelred Ælfred, 66-67.

(And in the same year they gave a foolish king's thane Merican kingdom to hold,···)

c. Hē ondrēd Þyder *tō faranne.*

Gosp. Matt., ii, 22.

(He feared to go there.)

In (2a), the preposition *tō* immediately before the dative *bicgenne* had the same meanings as before ordinary substantives, representing the adverbial relationship with the dative. This *tō* was used as a preposition which meant 'for the purpose of.'[6] In (2b), the preposition *tō* represented the adjectival relationship with the dative *haldanne*. This *tō* had the meaning of duty, obligation, or necessity.[7] On the contrary, in (2c), the preposition *tō* immediately before the dative *faranne* was ultimately a mere 'sign

6) Originally, *tō* (=to) expressed motion, direction, inclination, purpose, etc. toward the act or condition expressed by the infinitives, as in *He came to help (i.e. to the help of) his friends, He went to stay there, He prepared to depart (i.e. for departure), It tends to melt*, and *He proceeded to speak*. See *to* in the *OED*.

7) See *to* in the *OED*.

without any meaning of its own, representing the substantial relationship with the dative. Thus many of the verbs which, in OE, took the simple infinitives could also take dative infinitives with *tō*.[8]

While the OE infinitive was going through the ME period (1100-1500), its case form, that is, inflectional endings were almost levelled and simplified.[9] Normally, an ME infinitive played the role of an adjunct to a verb, a substantive, an adjective, or an adverb. As for an infinitive that was an adjunct to a verb, it had two forms which stemmed from OE: One was the simple (=plain) infinitive which had the acc. case after temporal auxiliaries (*shall*, *will*) or modal auxiliaries (*may*, *can*, *dar*, *mot*, *lete*, etc.), and, just as in OE, after a certain number of verbs such as *go*, *hear*, *think*, etc. The other was the infected infinitive used with *to* or with *for to* (in Northern English and Scots, *for till*), which was the dative. Besides, an infinitive as an adjunct to an adjective or adverb was also proceeded by *to*.

First, let us examine the ME simple infinitives drawn from the ME literary works:

(3) a. Þei wolde *go sle* such a lord or such a man that···
The Travels of Sir John Mandeville, 54.
(they wanted to go and kill such a lord or such a man that···)
b. I Þenke *telle(n)* a partie.
John Gower, 3596.
(I think to tell a party.)
c. sch gaf him *drink* a drauhte,···
John Gower, 4167.
(she gave him a draft to drink,···)

In (3a), the simple infinitive *go* (OE *gān* or *gangan*) and *sle* (OE *slēan*) resulted from the levelling or dropping of an acc. inflectional ending *-an* after the temporal auxiliary verb *wolde*. Likewise, in (3b), the simple infinitive *telle(n)* (OE *tellan*) was levelled and dropped after *Þenke*, the

8) See *to* in the *OED*.
9) See Mossé (1975: 99-100).

ending *-an* changing into *-en* or *-e*. In (3c) where the so-called acc.-with-infinitive construction is contained, the simple acc. infinitive *drink* also lost its OE inflectional ending *-an* before (after in ModE) the acc. *drauhte*, and then it became the simple infinitive with the null-suffix.[10] In brief, ME simple infinitive had three types of inflectional endings *-en*, *-e*, or null-suffix after auxiliaries and a certain number of verbs, and before the acc. substantives in the acc.-with-infinitive constructions.

Secondly, let us examine the ME inflected infinitives drawn from the ME literary works:

(4) a. Þanne wolde he maken hen *to drynken*···
The Travels of Sir John Mandeville, 44.
(then he wanted to make them drink···)

b. Þus wenten many dyverse lusty bacheleres *for to sle* grete lordes···
The Travels of Sir John Mandeville, 60-61.
(thus many diverse vigorous bachelors went to kill great lords···)

c. Þo Þe 〈h〉 er doð eni god *for habben* Godes are···
The Poema Morale, 53.
(when you do any good here to have God's mercy···)

d. Hyt ys no nede eke *for to axe*···
The Book of the Duchess: The Dream, 416.
(There is no need, also, to ask···)

e. Hit bycomeÞ for Clerkus Crist *for to severn*, and knaves uncrouned *to cart* and *to wodche*···
The Author and His life, 61-62.
(It is fitting for clerks to serve Christ, and for untonsured laymen to cart and work···)

In (4a), the inflected infinitive *drynken* had the reduced inflectional ending *-en* corresponding to OE *-anne* or *-enne*. Contrary to (3c), this

10) In case the acc. was the infinitival subject, as in *Sche bad alle oÞre go.* (She bade all the others go.),' it always precedes the simple infinitive. See Mossé (1975: 100).

acc.-with-infinitive took not the simple infinitive but the inflected one. I conjecture that the matrix verb *maken* (ModE *make*) made it have the infinitival dative form. However, it is certain that the meaning of *to* before the inflected infinitive was weakened to be almost meaningless.[11] In (4b), *for to* immediately before the inflected infinitive *sle* in the adverbial relation was used with an idea of purpose in the sense of 'in order to,' the infinitival ending also reducing to *-e*. Besides, there was no longer any difference of meaning between *to* and *for to* from the end of the 13th century, and by way of reciprocity, just as *to* was also used for purpose, *for to* was used where no purpose was involved. In (4c), *for* without *to*, which was often found in the 13th century, was exceptionally used before the inflected infinitive *habben*. In (4d), *for to* was used immediately before the inflected infinitive *axe* in adjectival relation.[12] In (4e), *to* and *for to* were alternately used without any distinct meaning. We also find that the *'It ~for NP to V'* construction had already been used in ME.[13] As shown in (4), the ME dative infinitive had three types of inflectional endings such as *-en* in *serven*, *-e* in *worche*, and the null suffix in *cart*.

In short, the OE simple infinitive was used as the acc. after modals or a certain number of verbs, and in the acc.-with-infinitive construction, and rarely as the nom. In the course of ME, its inflectional ending was levelled and dropped to become *en*, *-e*, or the same null-suffix as the ModE infinitival ending. On the contrary, the OE and ME inflected infinitives were used only as the dative, always preceded and governed by the preposition *tō/te/to*. Originally, the preposition *tō* before the dative infinitive had the same meaning and use as before the ordinary

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11) The infinitive used with *to* corresponds exactly to the use of the gerundive or inflected infinitive in OE. And in the 12th century, this inflected form had not entirely disappeared. Mossē (1975: 100).

12) A possible origin of the use of *for+to* may lie in the construction *for+object+to+infinitive* (called the acc.-with-infinitive). See Mossē (1975: 101).

13) Lightfoot (1981: 110-111) says that the earliest infinitival form varied between *to V* and *for to V*. The *(for) to V* construction in a subject complement occurred first in 1205, last in 1590, while the *for N' to V* construction in a subject complement occurred first in 1567. Confer Yim (1984: 292-294).

substantives. It expressed motion, direction, inclination, purpose, etc. in adverbial relation toward the act or condition expressed by the infinitive. It also expressed obligation, possibility, duty, etc. in adjectival relation toward the act or condition expressed by the infinitive. In ME, *to* and *for to,* which both expressed purpose before the end of 13th century, were used without any different meaning between them. But, in process of time, the obvious sense of prepositions were weakened and generalized, so that they became ordinary links expressing any prepositional relation in which an infinitive stands to a preceding verb, adjective, or substantive. When the infinitive was the subject or direct object, *to* lost all its meaning, and became a mere sign or prefix of the infinitive.[14] Nevertheless, after an intransitive verb or passive voice, the infinitival *to* has been a preposition from OE to ModE:[15]

(5) An infinitival preposition(s) *(for)~tō/te/to* in OE/ME came to be (a) PL(s) without any meaning, or the *to* is still a P with some subtle meaning in ModE. The infinitival *(for)-to* have or has borne no relation to tense from OE to ModE.

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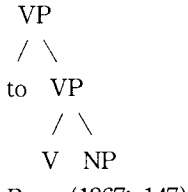
14) There was also a special idiomatic use of the infinitive with *tō* as an indirect nom., where logically the simple infinitive might be expected. From these beginnings, the use of the infinitive with *tō* in place of the simple infinitive, helped by the phonetic decay and loss of the inflection and the need of some mark to distinguish the infinitive from other parts of the verb and from the cognate substantive, increased rapidly during the late OE, and early ME period, with the result that in ModE, the infinitive with *to* is the ordinary form, the simple infinitive surviving only in particular connections, where it is very intimately connected with the preceding verbs. See *to* in the *OED.*

15) In ModE, an infinitival preposition *to* is still used for purpose, as in *I got up early (in order/so as) to get the first train.* Likewise, it must be added to a bare infinitive in a passive construction containing a causative /perception verb and represents some subtle meaning, as in *They saw him drive away→He was seen to drive away*, and *They made them accept our terms→They were made to accept our terms.* See *to* in the *OED.*

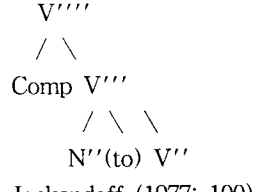
3. The synchronic study of infinitives

As mentioned in the previous section, every ModE infinitive has such an inflectional ending as a null suffix no matter whether it was a simple or inflected inflective in OE and ME. And a preposition *to* immediately preceding the infinitive has almost lost its semantic contents as a PL, but it is a P still now in particular infinitival constructions. However, the syntactic structures in which the ModE infinitival *to* could be located have long been a controversial issue among transformational grammarians.

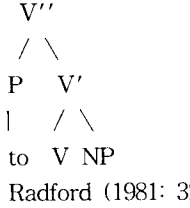
Some grammarians have the infinitival *to* dominated by a VP:

(6) a.


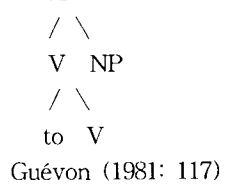
Ross (1967: 147)

b.


Jackendoff (1977: 100)

c.


Radford (1981: 328)

d.


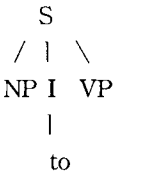
Guévon (1981: 117)

In (6a), the infinitival *to* is immediately dominated by the VP, but it doesn't have any phase marker. In (6b), the infinitival *to*. which is one of three branching nodes, is also dominated V'''. Its hierarchical structure is contrary to the binary branching principle proposed by Chomsky (1989).[16]

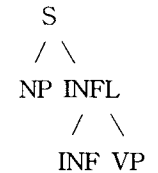
16) Chomsky (1989: 44) assumes a two-level X-bar theory of conventional sort, perhaps restricted to binary branching.

In (6c), fortunately, the infinitival *to* is dominated by the unique phrase marker P, the meaning and use of which seems to be identical with those of the OE and ME infinitival *tō*. In (6d), the infinitival *to* adjoins to the verb under the phrase marker V as if it were a prefix of V. As shown in (6), all the positions of the infinitival *to* seem to be wrongly established under a VP, for, according to (5), it can be a constituent dominated not by a VP but rather by a prepositional-link phrase (PLP) or PP.

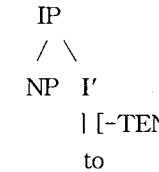
Likewise, others have infinitival *to* dominated by an INFL phrase:

(7) a.


Emonds (1991: 257)
Borsley (1991: 136)

b.


Petzesky (1991: 290)

c.


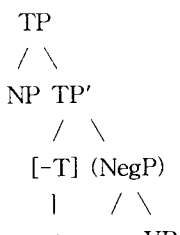
Haegeman (1991: 242)

In (7a), the infinitival *to* is immediately dominated by I, but it is also contrary to the Chomsky's (1981) binary branching principle. In (7b), the infinitival *to* is immediately dominated by INF, which is the head of the INFL phrase. In (7c), the infinitival *to* is the head of the IP, which consists of [-TENSE] and [-AGR] feature. Nevertheless, the infinitival *to* in (7) seems to be wrongly dominated by I/INF/I', considering (5) which

states that the infinitival *(for)-to* bear(s) no relation to tense.

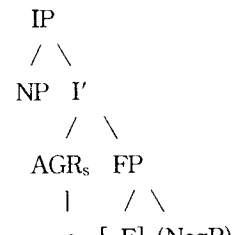
Many recent papers have extended x'-schema to the projection of functional heads and developed the more articulated and abstract conception of sentence structure. Let us consider the different types of infinitival structures:

(8) a.



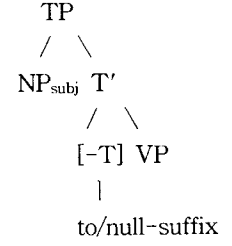
Pollock (1989: 397)

b.



Chomsky (1989: 58)

c.



Johnson (1989: 29)

In (8a), an infinite clause is in complementary distribution with a finite one, so that the infinitival *to* is base-generated under the feature [-T].[17]

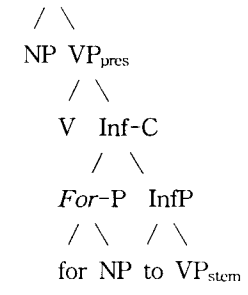
17) Pollock (1989: 375) argues that *to* is base-generated in [-finite] INFL, and that it can (but need not, because it is not a bound morpheme) be moved by Affix Movement (Chomsky's (1981) "rule R"), and this rule adjoins it to VP at S-structure.

In (8b), the infinitival *to* is base-generated under [-F] which corresponds to [-T]. In (8c), the head of the TP [-T] is the position for the infinitival marker *to* or the null-suffix to occupy. Of course, the infinitival *to* in (8) seems to be wrongly dominated by [-T]/[-F], for I assume in (5) that the infinitival *(for)-to* bear(s) no relation to tense.

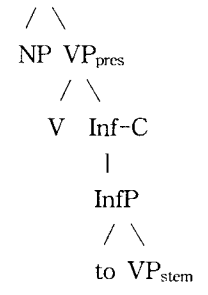
Finally, let us examine the infinitival structures suggested by Baker (1989:). They are so interesting and persuasive that I cannot help showing them separately:

(9) a. Fred intends [for Sam to review that book].
b. Fred intends [to review that book].

(10) a.



b.



As stated in Baker (1989: 76-78), (10a) is the basic tree diagram that corresponds to the infinitival clause (Inf-C) in (9a), whereas (10b) is the basic one that corresponds to the Inf-C in (9b).[18] Here the S_{pres} would be the present-tense sentence. In (10a), the Inf-C consists of the *for*-phrase (*For*-P) and the infinitival phrase (InfP).[19] The infinitival *for+NP+to* structure is independently represented from the bare-stem verb phrase (VP_{stem}). In (10b), the *For*-P only is excluded from (10a). However, the

18) Kayne (1991: 651) assumes that an Infn-P maybe contained in an infinitival construction. Nash (1994: 414) also assumes that an INFinP may be contained in an English causative construction.

19) The Inf-C consists of the word *for*, a noun phrase, and an infinitival phrase. Intuitively, we perceive the noun phase as having the same kind of relation to the infinitival verb phrase as the subject of an independent sentence has to its verb phrase. See Baker (1989: 76).

infinitival structures in (10a-b) are lacking both a CP and a TP when I should consider the infinitival structures in the light of Minimalism. I am willing to accept the Baker's (1989) idea that an Inf-C consists of a *For*-P and an InfP. That is why the infinitival *for* and *to* were originally prepositions in the inseparable relation like *for to* in (4b, e).

If so, I will now find out suitable infinitival structures for Agree between probes and goals. Let us examine the different types of Inf-Cs[20]:

(11) a. She writes letters [for him to sign].
b. I want very much [for you to love me].
(12) a. I want [you to love me].
b. I want [to go].
(13) a. He prepared [to depart].
b. He_i was made [t_i to go].
(14) a. He_i will certainly [t_i come here].
b. The rules require that the $executives_i$ [t_i be polite].
(15) a. The tale seems [to be incredible].
b. We believe [him to honest].
(16) a. I heard [him laugh alone].
b. They made [him go].

In (11a-b), each of the Inf-Cs consists of the PL-for, the lexical infinitival subject NP, the PL-to, and the infinitive which is the bare-stem verb ($verb_{stem}$). In (12a-b), each of the Inf-Cs consists of the null PL-Φ_{for}, which is nonlexically contained in numeration, the lexical infinitival subject NP or the nonlexical infinitival subject PRO,[21] the PL-to, and the $verb_{stem}$. In (13a-b), each of the Inf-Cs consists of the PRO or the lexical infinitival subject NP, the P-to, and the $verb_{stem}$. In (14a-b), each of the Inf-Cs consists of the lexical infinitival subject NP, the null PL-Φ_{to} which

20) Confer Postal (1974: 176-179).

21) In such a sentence as *[[$_{TP}$ PRO_i appearing [$_{TP}$ t_i to have been killed t_i]] is hard]*, PRO has to move categorically since it receives not only the primary θ-role Patient from the verb *killed* but also the secondary θ-role Agent from the raising construction. See Yang (1999: 115).

is nonlexically contained in numeration, and the $verb_{stem}$. In (15a-b), each of the Inf-Cs consists of the lexical infinitival subject NP, the PL-to, and the $verb_{stem}$. In (16a-b), each of the infinitival clauses consists of the lexical infinitival subject NP, the null P-Φ_{to} which is nonlexically contained in numeration, and the $verb_{stem}$.

Each underlying structure of the pairs of Inf-Cs in (11-16) can be shown, respectively, like (17a-f):

(17) a. [···[PL-for NP PL-to $verb_{stem}$···]]
b. [···[PL-Φ_{for} NP/PRO PL-to $verb_{stem}$···]]
c. [···[PL-Φ_{for} NP/PRO P-to $verb_{stem}$···]]
d. [···NP PL-Φ_{to} $verb_{stem}$···]]
e. [···[NP PL-to $verb_{stem}$···]]
f. [···[NP P-Φ_{to} $verb_{stem}$···]]

I finally assume on the basis of (17) that an InfP may be base-generated between a TP and a CP:

(18) a. The underlying structure of a double-Spec InfP is [PL-for/PL-Φ_{for} + NP/PRO + PL-to/P-to], its head Inf having complete uninterpretable Φ-features ([*u*Φ-fs]) and [+OCC]-feature.
b. The underlying structure of a single-Spec InfP is [NP + PL-to/PL-Φ_{α}/P-Φ_{to}], its head Inf having incomplete (=defective) uninterpretable Φ-feature ([*u*Φ-f]) and [+OCC]-feature.

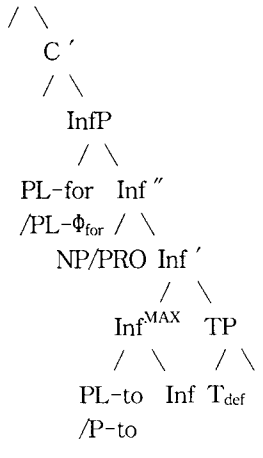
The infinitival structures (17a-c) correspond to (18a), whereas the infinitival structures (17d-f) correspond to (18b). In (18a), the PL-Φ_{for} represents the nonlexical PL-for.[22] The complete uninterpretable Φ-features (Φ-com(plete)) of Inf are assumed to agree with the Φ-features of the

22) Chomsky (1995: 228) assumes that the deletion operation (Delete α) marks some object as invisible at the interface; the material deleted, though ignored at the interface, is still accessible within C_{HL}. Thus he argues that a phonologically null complementiser Φ must be present for interpretation at the C-I interface as if it were a lexical item, but never appears overtly. Confer Ormazabal (1994: 486).

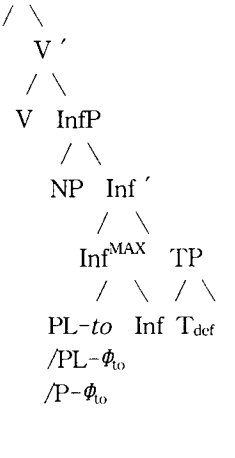
NP/PRO in narrow syntax (NS). In (18b), the PL-Φ_{to} represents the nonlexical PL-to, and the P-Φ_{to} represents the nonlexical P-to. The incomplete uninterpretable Φ-feature (Φ-incom(plete)) of Inf,[23] is also assumed not to delete the Φ-features of the NP in NS.[24] Besides, the $verb_{stem}$—the infinitive with a null suffix—undergoes a non-feature-driven head movement to T_{def} for phonetic realization in phonology. The T_{def} represents a defective Φ-feature of T.[25]

The tree diagram of the first infinitival underlying structure (18a) corresponds to (19a), whereas that of the second infinitival underlying structure (18b) corresponds to (19b):

(19) a.



b.



23) There seems to be two types of infinitival Φ-features: Φ-com and Φ-incom. I intuitively conjecture that the former has the full Φ-fs, and that the latter has only a [3rd person]-feature like T_{def}. If not, there is no way for the [[[Φ-f(s)], *u*Case] of every infinitival subject] to be checked and valued. I will leave this complex problem unsolved for the time being.

24) A reasonable assumption is that English has a marked rule of S′-deletion for complements of verbs of the *believe*-category, permitting the verb to govern the subject of the embedded complement, thus excluding PRO and permitting phonetically realized NP. Besides, predicates—*seem, likely, etc.* —delete S′ like *believe*. See Chomsky (1981: 66-68).

25) A TP with defective head T_{def} is unable to determine Case-agreement but has an EPP-feature. T_{def} has only a [person]-feature. See Chomsky (2001a: 5).

As shown in (19a-b), the lexical/nonlexical item PL-for/PL-Φ_{for} is no longer a complementiser in a CP but a PL in an InfP. That is, it is no longer an Case-assigner to an infintival subject in the [Spec-Inf] position. It seems that only Inf has the uninterpretable complete ϕ-features to agree with the [[ϕ-fs], *u*Case]] of the infinitival subject. Likewise, the lexical/nonlexical item PL-to/PL-Φ_{to}/P-Φ_{to} is no longer a head with a [-T]-feature in a TP but a PL/P in an InfP. The [PL-for/PL-Φ_{for} + NP/PRO + PL-to/PL-Φ_{to}/P] construction bears relation only to the InfP, whereas the V_{stem} bears relation to the TP. The zero-level maximal projection Inf^{MAX} consists of the PL-to/PL-Φ_{to}/P and the head Inf. It therefore seems to me that an InfP is an independent phrase from a CP and a TP.

4. Agree between features in infinitival constructions

In this section, I will take a careful look at Agree between features in infinitival constructions. Above all, let us examine the Inf-Cs which contain the first infinitival structure (19a):

(20) a. I want very much for you to love me.
b. I want you to love me.
c. I want to love you.
d.*You are wanted to love me.
e. He came to see me.

(21) a. [$_{CP}$ I want very much [$_{CP}$ [$_{InfP}$ PL-for [$_{Inf''}$ you$_i$ [$_{Inf'}$ [$_{Inf}^{MAX}$ PL-to Inf] [$_{TP}$ t'$_i$ [$_{vP}$ t$_i$ love-v me]]]]]]]
b. [$_{CP}$ I want [$_{CP}$ [$_{InfP}$ PL-Φ_{for} [$_{Inf''}$ you$_i$ [$_{Inf'}$ [$_{Inf}^{MAX}$ PL-to Inf] [$_{TP}$ t'$_i$ [$_{vP}$ t$_i$ love-v me]]]]]]]
c. [$_{CP}$ I want [$_{CP}$ [$_{InfP}$ PL-Φ_{for} [$_{Inf''}$ PRO$_i$ [$_{Inf'}$ [$_{Inf}^{MAX}$ PL-to Inf] [$_{TP}$ t'$_i$ [$_{vP}$ t$_i$ love-v me]]]]]]]
d. [$_{CP}$ He came [$_{CP}$ [$_{InfP}$ PL-Φ_{for} [$_{Inf''}$ PRO$_i$ [$_{Inf'}$ [$_{Inf}^{MAX}$ P-to Inf] [$_{TP}$ t'$_i$ [$_{vP}$ t$_i$ love-v me]]]]]]]

(21a-c) are the derivational structures of (20a-c), respectively, and (21d) is

the derivational structure of (20e). The *W(ant)*-verb in (21a-c) takes the double-Spec InfP as the complement, and the intransitive verb *came* in (21e) also takes it as a complement. As shown in (21a), the CA[26] is established between [[[*u*Φ-fs], -OCC] of *v*]P and G[[[Φ-fs], *u*Case] of me] at the *v*P-phase (=in the argument structure)[27] shortly after the H(ead)-cluster of *love*-*v* is formed, so that their uninterpretable features are deleted.[28] Then the infinitival subject *you*, which contains the G[[Φ-fs], *u*Case], is externally merged at the *v*P-phase, and it moves through the [Spec-T_{def}] to the [Spec-Inf], following the PIC.[29] Now the OA is established between [[[*u*Φ -fs], +OCC] of Inf]P and G[[[Φ-fs], *u*Case] of you] at the CP-phase. Of course, both the uninterpretable defective Φ-feature and [+OCC]-feature of the probe T_{def} can be eliminated by the Φ-com and *u*Case of *you*, while the latter cannot be eliminated by the former. The Φ-com and *u*Case of *you* is finally eliminated by the Φ-com of Inf. If the Inf does not take the [Φ-com] and [+OCC], the [[Φ-com], *u*Case of *you*]] cannot be deleted because of the T_{def} and the CP-phase. In (21b), the nonlexical item PL-Φ_{for} is selected form the Lexicon (Lex) into numeration, but the infinitival subject *you* has the same Agree relation that it does in (21a). In (21c), the nonlexical items PL-Φ_{for} and PRO are selected from the LEX into numeration, but the infinitival subject PRO moves to the Spec-Inf and finally forms the CA between [[[*u*Φ -fs], +OCC] of Inf]P and G[[[Φ-fs], *u*Case] of PRO]. Even though the PRO moves to the Spec-Inf, I will call this invisible Agree CA henceforth. In case of (20d), the infinitival subject *you* cannot move from the outer Spec-*v*

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26) Feature movement is no longer in Minimalist Program, since Attract is completely done away in Chomsky (200, 2000a, b).

27) Phases are CP and *v*P; and a subarray contains exactly one C or *v*. See Chomsky (2001a).

28) Cluster is an external or internal Merge of more phrases than one at a *v*P-phase (=In an argument structure). making their G/H-features form a set of G/H-features. See Yu (2004: 107).

29) The domain of H is not accessible to operations outside HP, but only H and its edge. Given HP=[α [H β]], β is the domain of H, and α is its edge. Accessibly of H and its edge is only up to the next strong phase, under the PIC. Elements of HP are accessible to operations within the smallest phase but not beyond. The PIC requires that A′-movement target the edge of every phase CP and *v*P. See Chomsky (2001a).

through the embedded Spec-T_{def} to the matrix Spec-T, since it violates the PIC. In case of (21d), the infinitival *to* is not a PL but a P. The infinitival subject PRO has the same Agree relation that it does in (21c) In (21a-d), all the uninterpretable features, which are checked and valued by CA/OA in the (P, G) relation, are eliminated shortly after they are transferred to Φ by Transfer at each phase.[30]

Let us in turn examine the Inf-Cs which contain the second infinitival underlying structure (19b):

(22) a. You had better not come.
b. He seems to be happy.
c. We saw her cross the road.
d. I believe him to marry her.

(23) a. [$_{CP}$ You$_i$ had better not [$_{InfP}$ t″$_i$ [$_{Inf'}$ [$_{Inf}^{MAX}$ PL-Φ_{to} Inf] [$_{TP}$ t′$_i$ [$_{vP}$ t$_i$ come-*v*]]]]]
b. [$_{CP}$ He$_i$ seems [$_{InfP}$ t″$_i$ [$_{Inf'}$ [$_{Inf}^{MAX}$ PL-to Inf] [$_{TP}$ t′$_i$ [$_{vP}$ t$_i$ be-*v* happy]]]]]
c. [$_{CP}$ We saw [$_{InfP}$ her$_i$ [$_{Inf'}$ [$_{Inf}^{MAX}$ PL-Φ_{to} Inf] [$_{TP}$ t′$_i$ [$_{vP}$ t$_i$ cross-*v* the road]]]]]
d. [$_{CP}$ I believe [$_{InfP}$ him$_i$ [$_{Inf'}$ [$_{Inf}^{MAX}$ PL-to Inf] [$_{TP}$ t′$_i$ [$_{vP}$ t$_i$ marry-*v* her]]]]]

(23a-d) are derivational structures of (22a-d), respectively. The CP is not base-generated in the Inf-Cs containing the single-Spec InfP, so that in (23a-b), the infinitival subjects *you* and *he* move to the matrix Spec-T for OA with the T, respectively, and in (23c-d), the infinitival subjects *him* and *her*—intuitively, *he* and *she* in the embedded *v*P—move to the Spec-Inf for CA with the matrix verbs *saw* and *believe,* respectively. The PL-Φ_{to} is contained in (23a, c), whereas the PL-to is contained in (23b, d).

30) Transfer applies to a narrow-syntactic derivation D_{NS}. It hands D_{NS} over to Φ and to Σ. See Chomsky (2001b: 4).

5. Conclusion

Both OE and ME had two types of infinitives—simple (acc.) infinitive and inflected (dative) infinitive preceded by *(for)~tō/te/to*, but during the ME period, their inflectional endings levelled or dropped to become *—en*, *—e*, or the same null suffix that all the ModE infinitives have. The infinitival *to* has almost lost its semantic contents, yet its partial meaning and use remains in some infinitival constructions still now. It was an ordinary link expressing any prepositional relation in which the infinitive stands to preceding verb, adjective, or substantive. The infinitival *for* is always a PL, but the infinitival *to* is a PL or P.

Apart from some different types of infinitival structures suggested by transformational grammarians, I follow the Baker's (1989) assumption that an Inf-C consists of *For*-P and InfP in its underlying structure. I therefore assume that an InfP may be base-generated between a TP and a CP.

The underlying structures of InfPs can be divided into two: the underlying structure of a double-Spec InfP is [PL-for/PL-Φ_{for} + NP/PRO + PL-to/P-to], its head Inf having complete uninterpretable ϕ-features ([*u*ϕ -fs]) and [+OCC]-feature, and the underlying structure of a single-Spec InfP is [NP + PL-to/PL-ϕ_{to}/P-ϕ_{to}], its head Inf having incomplete uninterpretable ϕ-features ([*u*ϕ-fs]) and [+OCC]-feature.

The infinitival complements of W-verbs, intransitive verbs, etc. seem to correspond to double-Spec InfPs, in which lexical/nonlexical infinitival subjects move to the Spec-Inf for CA/OA, whereas the infinitival complements of modal auxiliaries, B(elieve)-verbs, raising verbs, causative /perception verbs, etc. seem to correspond to single-Spec InfPs, in which lexical infinitival subjects move to the Spec-Inf/T for CA/OA.

References

Baker, C. L. (1989). *English Syntax*, (pp. 88-90). Cambridge, Mass.: MIT Press.

Borsley, R. D. (1991). *Syntactic Theory*. (pp. 112-113). New York: Routledge, Chapman and Hall, Inc.

Cassidy, F. G. and R. N. Ringler. (1971). *Bright's Old English Grammar and*

Reader, (pp. 26-84). New York: Holt, Rinehart and Winston, Inc.

Chomsky, N. (1981). *Lectures on Government and Binding*, (pp. 66-68). Dordrecht: Foris Publications.

Chomsky, N. (1989). Some Notes on Economy of Derivation and Representation. *MIT Working Papers in Linguistics, 10*, 43-74.

Chomsky, N. (1995). *The Minimalist Program*. (pp. 219-394). Cambridge, Mass.: MIT Press.

Chomsky, N. (2000). Minimalist Inquiries: The Framework in Martin., R., D. Michaels, and J. Uriagereka, (Eds). *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, (pp. 89-155). Cambridge, Mass.: MIT Press.

Chomsky, N. (2001a). Derivation by Phase. Kenstowicz, M. (ed.). *Ken Hale: A Life in Language*. (pp. 1-52). Cambridge, Mass.: MIT Press.

Chomsky, N. (2001b). *Beyond Explanatory Adequacy*. (pp. 1-27). Unpublished MS.

Diamond, R. E. (1970). *Old English*. (pp. 9-41). Detroit: Wayne State University Press.

Emonds, J. E. (1991). Subcategorization and Syntax Based Theta-Role Assignment. *Natural Language and Linguistic Theory, 9*, 257.

Guēvon, J. (1981). Logical Operators, Complete Constituents, and Extraction Transformation. In R. May and K. Koster (Eds.). *Levels of Syntactic Representation*. (pp. 116-117). Cinnaminson: Foris Publications.

Haegeman, (1991). *Introduction to Government and Binding Theory* (pp. 241-242). Oxford: Blackwell.

Jackendoff, K. (1977). *X-bar Syntax: A Study of Phrase Structure* (pp. 99-100). Cambridge, Mass.: MIT Press.

Kayne, R. S. (1984). Unambiguous Paths. In R. S. Kayne (Eds.). *Connectedness and Binary Branching*. (pp. 143-148). Cinnaminson: Foris Publications.

Kayne, R. S. (1991). Romance Clitics, Verb Movement, and PRO. *Linguistic Inquiry, 22* (4), 647-686.

Lightfoot, D. (1981). The History of NP Movement. In C. L. Baker and J. McCarthy (Eds.). *The Logical Problem of Language Acquisition*. (pp. 110-111). Cambridge, Mass.: MIT Press.

Moore, S., T. A. Knott, and J. R. Hulbert. (1965). *The Elements of Old English.* (pp. 168-198). Ann Arbor: The George Whar Publishing Co.

Mossē, F. (1975). *A Handbook of Middle English.* (pp. 97-109). Baltimore, Maryland: The Johns Hopkins University Press.

Nash, L. (1994). On the Categorial Specification of Causative Morphemes: Evidence from Georgian. *NELS 24,* 411-425.

Ormazabal, J. (1994). Pro, Null Case and the Interpretation of Complements. *NELS 24,* 486.

Petzesky, D. M. (1982). *Paths and Categories.* (pp. 290-291). Cambridge, Mass.: MIT Press.

Pollock, J. Y. (1989). Verb Movement, Universal Grammar, and the Structure of IP. *Linguistic Inquiry, 20,* 395-397.

Postal, P. M. (1974). *On Raising.* (pp. 176-179). Cambridge, Mass.: MIT Press.

Radford, A. (1981). *Transformational Syntax.* (pp. 327-330). Cambridge: Cambridge University Press.

Ross, J. R. (1967). *Constraints on Variables in Syntax.* (pp. 146-149). The MIT ph. d. dissertation.

Yang, D. H. (1999). Recent Developments in Minimalist Syntax. *Proceedings of Studies in Modern Grammar,* 103-123.

Yim, Y. J. (1984). *Case-Tropism: The Nature of Phrasal and Clausal Case.* (pp. 292-296). Seoul: Hanshin Publishing Co.

Yu, T. J. (2004). The Cluster Formation of Phrases. *The Linguistic Association of Korea Journal, 12* (3), 105-128.

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