

## The Rise of the *To*-Infinitive

### Handout based on

- Los, Bettelou. 2005. *The Rise of the To-Infinitive*. Oxford University Press, Oxford.
- Nawata, Hiroyuki. 2007. A new perspective on the development of the *to*-infinitive. *English Linguistics* 24: 2. 514-544. (review article)

Homophony of prepositional *to* and the infinitival marker: change from a lexical category (P) to a functional category (T).

Various historical stages of English well-documented, texts going back to more than a thousand years.

Two main changes in the non-finite complementation patterns of English:

1. Massive increase in the frequency of the *to*-infinitive in Middle English (ME) and a decrease in the frequency of the bare infinitive → the two infinitives in competition, with the *to*-inf replacing the bare inf?
2. The rise of new structural types in ME:
  - (i) passive *to*-infinitives: *These clothes need to be washed.*
  - (ii) *to*-infs with perfective *have*: *He expected to have finished last Wednesday.*
  - (iii) independently negated *to*-infs: *They motioned to her not to come any further.*
  - (iv) ECM/subject-to-object raising: *They believe John to be a liar.*
  - (v) split infinitive constructions: *...to boldly go where noone has gone before*

Previous claim: all of these changes follow from a categorial change of the (*to*-)infinitive from noun to verb as part of the grammaticalization process, with the *to*-inf analyzed as a clause with a subject position, tense, and negation in ME. Two main assumptions, both unconfirmed: (i) the infinitive in Old English (OE) had the categorial status of a PP; (ii) the *to*-inf spread at the expense of the bare inf.

Problem: scarce evidence for the nominal behaviour of the infinitive.

Aim of volume: challenge and refute the two assumptions, reveal the most likely scenario for the rise and spread of the *to*-infinitive. Extensive corpus research. Synchronic analyses of OE *to*-infs.

### Main sources

Most influential monograph: Callaway (1913): *The Infinitive in Anglo-Saxon*

Identification of infinitives with nominal cases, not an explicit categorial statement + infinitives as subjects (but only of impersonal verbs as observed later in Bock (1931)).

Jespersen (1927): *Modern English Grammar on Historical Principles*

The *to*-inf as the object of a preposition (only after *about* in PE: *he was about to retire*): more frequently in ME, but as an innovation, not attested in OE.

Mustanoja (1960): *Middle English Syntax*

‘The infinitive, originally a noun of action, exists in OE in two forms, uninflected and inflected. The uninflected infinitive ends in *-an* (*bindan*). The inflected infinitive is a dative ending in *-enne* (*bindenne*) [...]. It is the form used after the preposition *to* (*to bindenne*). . .’ (Mustanoja 1960: 512–13); ‘. . . *to*- and the infinitive are looked upon as forming an inseparable unit equivalent to a noun and capable of being used, for example, as the subject and object of a verb’ (ibid. 514).

Visser (1963): *An Historical Syntax of the English Language*

‘The particle *to* preceding the infinitive was originally a preposition with the sense of “direction towards” which caused the change of e.g. *singan* to *singenne*’ (Visser 1963–73: 947), i.e. the *to*-infinitive is again regarded as being derived from the bare infinitive.

This, in spite of the author’s observation that the prepositional force of *to* was already weakened by early OE.

Lightfoot (1979): *Principles of Diachronic Syntax*

‘For ease of exposition I shall simply assume here, uncontroversially and with the traditional grammarians, that the old inflected infinitive was a NP. As the *to* form was introduced, it retained most of the NP properties, occurring, for example, quite freely after prepositions . . .’ (Lightfoot 1979 : 191). Arguments for categorial change in the transition to ME.

Categorial status crucial in the generative framework. Van Gelderen (1993): change = introduction of a new functional category (Tense Phrase).

Kageyama (1992): actual OE data with *to*-infinitives coordinated with a PP, supporting the claims for a nominal status (cf. parallel structure condition for coordination as part of UG). Categorial change from AgrP to CP.

- (6) . . . þæt he [...] mihte [...] undon his muð **to wisdomes**  
that he [...] could [...] undo his mouth to wisdom’s  
**spræcum**, and **to wurðianne God** <ÆHom 16, 184><sup>1</sup>  
speech, and to praise God  
‘. . . so that he [...] could [...] open his mouth to wisdom’s speech, and  
to praise God’

No solid evidence for the nominal status of OE infinitives (not used with determiners, other prepositions, genitive subjects).

Fischer and van der Leek (1981); van Kemenade (1992): the infinitive must be a V-head because it is able to assign structural case. To account for the dative-like inflection Fischer (1996) proposes that ‘. . . the best solution may still be to see the infinitives as essentially nominal [. . .] but with already some verbal features incorporated.’ Categorial change before OE? → an in-depth investigation of OE needed.

### **The two infinitives in competition?**

Distribution of the two infinitives? No coherent picture.

The choice of the infinitive is an idiosyncratic property of the selecting verb (=lexical) vs. verb complementation patterns are systematic cross-linguistically. Chaos in OE due to change in progress?

Callaway (1913:70) quoting Sweet 1903) to explain the lack of correlation between Case and the form of the infinitive – also adopted by many:

The substitution of the supine [=inflected infinitive] for the infinitive [=uninflected infinitive] began in Old English itself. Thus the supine of purpose, as in *hie common dēt land to sceawienne*, ‘they came to spy out the land,’ gradually supplanted the older infinitive with many verbs of desiring, intending, attempting, etc., so that while such a verb as *willan*, ‘will,’ continued—as it still does in Modern English—to take the infinitive only, other verbs of similar meaning, such as *wilnian*, ‘desire,’ together with such verbs as *onginnan*, ‘undertake,’ ‘begin,’ began to take the supine as well as the infinitive. (Sweet 1903: 118)

Same idea implicitly present when it is claimed that due to the loss of the infinitival endings in ME marking the infinitive as [-tense], *to* takes over this function (Van Gelderen).

The replacement theory emerges as a very natural suggestion due to (i) the similarity of forms (esp. after the loss of endings); (ii) the obvious increase of *to*-infs in ME accompanied by the restriction of bare infinitives to only a few environments (modals, accusative-with-infinitive (AcI) constructions with perception and causation verbs).

Ratio of bare infs to *to*-infs: 74.7% : 25.3% in OE, 18% : 82% in PE

**OTHER CHANGES IN ME INVOLVING FINITE COMPLEMENTATION ARE NOT USUALLY TAKEN INTO ACCOUNT**, the existing ones contain no proper quantitative study (bare + *to*-infs vs. indicative + subjunctive complements).

Problems with Callaway:

- (i) the semantic groups of matrix verbs are too broad
- (ii) adjunct and argument infinitives are not clearly distinguished,
- (iii) the classification is based on surface strings rather than underlying structures,
- (iv) Latin influence in translations.

The bare inf sustained its greatest losses in subject control constructions.

The distribution of the *to*-inf in OE: **EXCLUSIVELY IN CONTROL CONSTRUCTIONS** (with PRO subjects). → same constructions as in PE:

- (i) monotransitive subject control verbs (*intend, try*),
- (ii) ditransitive object control verbs (*persuade, order, allow*), and
- (iii) ditransitive subjectcontrol verbs (*promise*).

→ distinctions made on semantic and syntactic grounds.

The book follows the chronological emergence of the *to*-inf in its various functions, the earliest being that of the purpose adjunct (also one of the functions of the bare inf: “there may well have been some competition at this stage, but it appears that bare infinitives had come to express events that were simultaneous with rather than consecutive to the event expressed by the matrix verb.”

Bare infs: no longer purpose adjuncts in OE, but complements to perception and causation verbs (AcI), and verbs that are well on their way of becoming auxiliaries (modals as the periphrasis of the old subjunctive and verbs of motion, the rest turning into aspectualizers).

*To*-infs: their distribution first mirrored that of *to*-PPs. Not only as purpose adjunct but also goal argument with conative verbs with meanings like *try*, and verbs of persuading and urging → direct competition with the subjunctive clause, reanalysis as a non-finite subjunctive → *to*-infs appear with verbs meaning *intend*, commanding and permitting, and commissives (*promise*: arguments structure similar to verbs of commanding and permitting, but control properties similar to verbs of intention, with finite complement also surviving robustly into PE, “because finite complements allow the presence of modal verbs, which are needed to distinguish between the three different types of promises.”)

Categorial status of the *to*-inf in OE: it does not behave like a PP, but like a clause, coinciding with the distribution of the subjunctive *that*-clause → THE RISE OF THE *TO*-INFINITIVE OCCURRED AT THE EXPENSE OF THE FINITE SUBJUNCTIVE CLAUSE (confirmed by a quantitative investigation: “the massive increase in *to*-infinitives in ME is due to a corresponding decrease not in bare infinitives but in subjunctive *that* -clauses”).

→ analysis of OE *to*-infs as nonfinite subjunctive clauses: recategorization of PP to TP much earlier, also confirmed by the observation that the N-head contained in such *to*-PPs is invariably a nominalization of a verb, with derivational morphology. Only inflectional morphology accepts an entire major category as input.

*The Etymology of To-Infinitives* (e.g. *to berenne*)  
*to* (preposition) + *ber-* (verb stem) + *-\*anja-* (derivational suffix) + *-\*i* (dative singular inflection)  
Primitive Germanic: *\*to beranjōi* (p. 156)

“The *to*-infinitive contains an N-head built on the nominalizing suffix *-\*anja-* which, although originally derivational, must have competed so successfully with the other nominalizing suffixes that it eventually accepted any V-stem as input. From this point on, learners analysed it as inflectional rather than derivational morphology and hence no longer category-changing. This is how the *to*-infinitive came to be the non-finite counterpart of the subjunctive clause. The recategorization, then, may well have been abrupt.”

Syntactic status: a non-finite modal verb, developed into a free word in ME triggered by its finite counterpart, the finite subjunctive, increasingly signalled by a free modal.

*To*-inf in PE but not OE: ECM

*To*-inf in OE but not PE: the PE fossil *He is to blame*.

→ connection between these differences: loss of OV order, loss of V2 (see later).

Another consequence: the loss of *man* as an indefinite pronoun. Outcompeted by PRO in *to*-infs, and by the passive in finite contexts.

## Review (Nawata 2007):

### 1. Distribution

Los demonstrates that the occurrence of the bare and the *to*-infinitives is not unpredictable, but systematically regulated by a semantic criterion (temporally unsegmentable vs. segmentable event respectively) → bare inf more closely connected with aspectualizers. Only modals exclusively select the bare inf.

(8) Purpose adjunct > Goal argument (subjunctive!) > Theme argument

The *to*-infinitive was first introduced as the purpose adjunct modelled on the *to*-PP, and subsequently, it spread into the Goal argument, where it still retained its directional or purposive meanings. However, once the *to*-infinitive established its status as the Goal argument, it came to be interpreted as a nonfinite alternative to the subjunctive *that*-clause, and their distributional and functional similarity with each other led the *to*-infinitive to spread into the Theme argument, which was another thematic area where the subjunctive *that*-clause was productively used.

Persuasive demonstration. A novel picture of the distribution of the OE *to*-infinitive in terms of the modern linguistic framework and offers an alternative model to the conventional replacement theory.

Problems for Los:

- a. Why did the bare infinitive diminish in the complement of verbs of intention? (Los: modals base-generated in T, Nawata: why not intention verbs?)
- b. Verb-classes based on subcategorization patterns, still, semantic differences between the verbs that take the propositional Goal argument and those that take the propositional Theme argument remain somewhat vague (conatives are a subset of intention verbs). Difficult to determine based on meaning whether a *to*-inf takes a Goal or Theme. But: this ambiguity may have contributed to the extension from goal to Theme.

## 2. Categorical status

Coordination facts: alternative account: two CPs coordinated with subsequent deletion in the second conjunct:

(11) [<sub>CP</sub> þæt he mihte undon his muð to wisdomes spræcum] and  
 [<sub>CP</sub> ~~þæt he mihte undon his muð to wurðianne God~~]

Nawata's notes on coordination:

- (i) the *to*-infinitive can be coordinated with the *to*-PP even in PE.

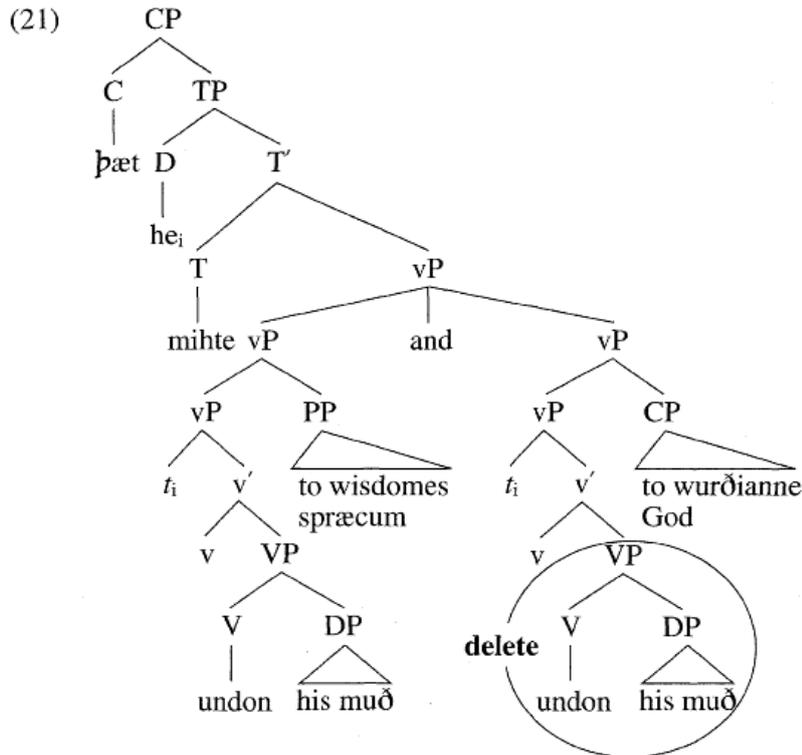
Interest rates are set, as I said, in a way that is compatible with our commitment [to the exchange rate mechanism and to bear down on inflation].

(Hansard extracts/BNC)

- (ii) Alternative account problematic: deleted part is not a constituent. Infinitive first removed from CP via Extraposition or Topicalization?

- a. [XP [CP ~~þæt he mihte undon his muð~~  $t_i$ ] [to wurðianne God]<sub>i</sub>]  
 b. [XP [to wurðianne God]<sub>i</sub> [CP ~~þæt he mihte undon his muð~~  $t_i$ ]]

But: Extraposition only to VP/TP-adjoined position, Topicalization across a CP-boundary prohibited(?). Proposed solution: vP-shell structure with vP-coordination and VP-deletion:



Los: *To*-inf behaves differently from PPs:

- (i) *to* as a preposition not necessarily adjacent to head noun (to paes haelendes slege ‘to the Saviour’s murder’);
- (ii) coordination of two PPs: the second *to* can be absent, infinitival *to* cannot;
- (iii) PPs can appear to the left or right of the matrix verb (14), *to*-inf always to the right (15)

- (14) a. Gif hwa to hwæðrum þissa genied sie on woh  
 if anyone to either of-these forced be unjustly  
 ‘If anyone is forced to either of these unjustly’  
 (LawAf 1, 1-1.1/p. 167)
- b. On þæm dagum Ualentinianus geniedde eft þa  
 on those days Valentinianus forced again the  
 Seaxan to hiera agnum lande  
 Saxons to their own land  
 ‘In those days Valentinian forced the Saxons back again  
 to their own country’ (Or 6 33.152.1/ibid.)

- (15) *ða eaðmodan [...] weorðen geniedde hiera unðeawas*  
 the humble                    be<sub>SUBJ</sub>    forced    their faults  
 to herianne  
 to praise  
 ‘the humble [...] would be forced to praise their faults’  
 (CP 41.302.18/ibid.)

Two versions of Gergory’s Dialogue (bw 870-890 and 950-1050) with systematic changes in the syntax:

- (16) a. *Dauid, þe gewunade, þæt he hæfde witedomes gast*  
 David who was-wont that he had of-prophecy spirit  
 in him  
 in him  
 ‘David, who was wont, that he had the spirit of prophe-  
 cy in him’ (GD 4.40.26, C/p. 180)
- b. *Dauid, þe gewunode to hæbbenne witedomes gast*  
 David who was-wont to have of-prophecy spirit  
 on him  
 in him  
 ‘David, who was wont to have the spirit of prophecy in  
 him’ (GD 4.40.26, H/ibid.)

→ *to*-inf as non-finite alternative to subjunctive *that*-clauses, clausal properties already in OE.

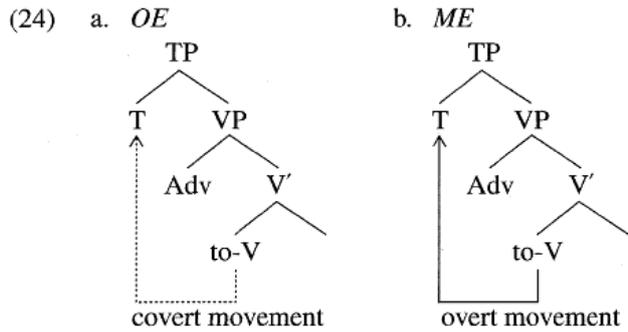
(17) Relative frequencies of *to*-infinitives and compatible subjunctive *that*-clauses in Old English and Middle English

function		OE1	OE2	OE3	OE4	total OE	ME1	ME2	total eME
purpose	<i>that</i>	1 (20%)	60 (52%)	91 (51%)	26 (59%)	178	6 (5%)	6 (8%)	12
	<i>to</i>	4 (80%)	55 (48%)	86 (49%)	18 (41%)	163	121 (95%)	72 (92%)	193
INTENTION	<i>that</i>	2 (100%)	164 (84%)	145 (82%)	69 (84%)	380	48 (38%)	35 (40%)	83
	<i>to</i>	0 (0%)	31 (16%)	31 (18%)	13 (16%)	75	80 (62%)	53 (60%)	133
manipulatives	<i>that</i>	11 (92%)	175 (86%)	183 (87%)	95 (90%)	464	44 (34%)	33 (38%)	77
	<i>to</i>	1 (8%)	28 (14%)	27 (13%)	11 (10%)	67	84 (66%)	53 (62%)	137

(p. 186)

The status of *to*:

Los: T-head throughout the history of English. Difference bw OE and ME: De-grammaticalization from clitic to independent grammatical word (parallelism bw *to*-inf and subjunctive *that*-clause for Los):



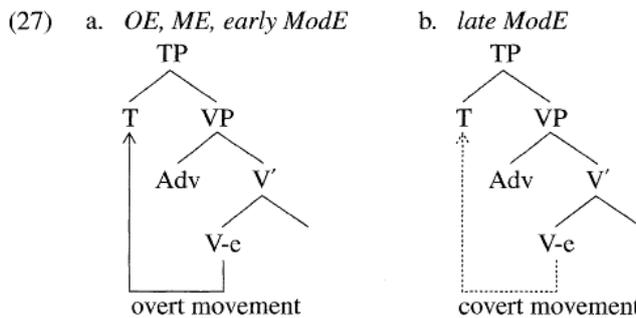
Problems for Nawata:

Conceptual: direction of morphological change: content item >> grammatical word >> clitic >> inflectional affix (Hopper and Traugott's (2003) generalization). Further problems to do with etymological origin: de-grammaticalization + relexicalization of a clitic: too complicated?

Empirical: subjunctive mood not realized exclusively by modals, some forms still represented by (zero) verbal affixes. Change contrary to (24):

(25) Beware that thou bring not my son thither again. → verb in T in ME

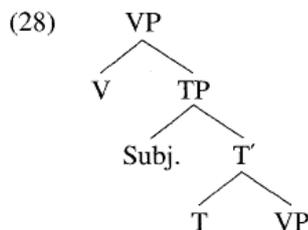
(26) I require that he not leave before 6. → *do*-support not triggered, T not lexicalized



→ no requirement for realizing subjunctive T, cannot be stated as a general rule.

Rise of the ECM construction in ME

*believe*-type ECM: Los: (28) is illegitimate



Arguments from the twofold peculiarity of ECM: rarely active, mainly passive + infinitival verb restricted to *be*, *have* and other statives → ECM not acceptable in English, a grammatical virus. Sobin (1997): "a device that can read grammatical structure and affect it, though it is

grammar-external", employed to produce prestige but linguistically deviant constructions, such as (29).

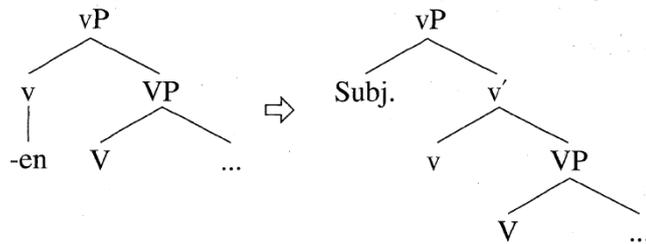
- (29) a. Mary and *I (me)* left early.  
 b. Mary is richer than *I (me)*.  
 c. There *are (-'s/is)* a cat and a dog in the yard.

**Alternative approach:** infinitive = CP in OE, infinitival *to* is not a clitic attached to V but a C (an independent functional head, no de-grammaticalization problem). OE infinitival suffix *-en*: external argument, the subject of the *to*-inf is never lexically realized. Nawata: dual property of being an external argument of infinitival verbs and the non-finite tense of the infinitival clause. With the decline of the infinitival suffix, the *to*-inf ceased to have an obligatorily empty subject.

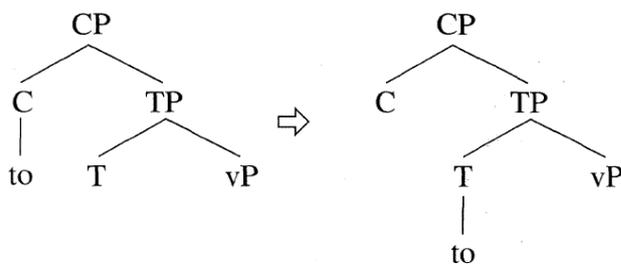
*to* + V-*en* form a complex head in C: adjacency effect accounted for; non-deletability of *to* in coordination as well.

(42) *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



The change in the syntactic status of *to* was not caused by the requirement for lexicalization of subjunctive T but by the decline of the infinitival suffix → the problems associated with subjunctive do not arise.

ECM also accounted for:

OE: inf = CP with no lexical subject → no ECM

ME: inf = TP, the external argument of infinitives came to be realized by nominals.

ECM as the reflex of core grammar, no need to invoke grammatical viruses.

## APPENDIX 1: Argument structures in OE

The distribution of the *to*-infinitive is parallel to that of the subjunctive *that*-clause rather than the bare infinitive in OE (previously unnoticed parallelism).

Inf as a GOAL:

- (2) *Expressions of the Purpose Adjunct*  
[*to*-PP]  
[subjunctive clause]  
[*to*-VP]
- (3) *Conatives* (e.g. *fundian* ‘hasten’, ‘try’; *hyhtan* ‘trust’, ‘hope’; *tilian* ‘exert oneself’, ‘strive’, ‘try’)  
GOAL  
[*to*-PP]  
[subjunctive clause]  
[*to*-VP]
- (4) *Verbs of Persuading and Urging* (e.g. *abisgian* ‘engage in’; *biddan* ‘ask’, ‘urge’; *gremian* ‘provoke’; *læran* ‘advise’, ‘teach’; *mynegian* ‘remind’; *spanan* ‘persuade’; *trymman* ‘encourage’; *underðeodan* ‘subject’, ‘force’)  
THEME                      GOAL  
[NP<sub>Acc</sub>]                    [*to*-PP]  
[NP<sub>Acc</sub>]                    [subjunctive clause]  
[NP<sub>Acc</sub>]                    [*to*-VP]

(3) and (4): Goal infs Themes in PE. Arguments for Goal role in OE:

- (i) arguments expressed by the same three categories as the purpose adjunct,
- (ii) postverbal NP cannot be interpreted as a Goal (restricted to dative in OE).

Inf as a THEME:

- (5) *Verbs of Intention and Aspectualizers* (e.g. *beginnan* ‘begin’; *behealdan* ‘take care’; *earnian* ‘deserve’, ‘strive’; *geliefan* ‘believe’; *hogian* ‘intend’; *leornian* ‘learn’; *lystan* ‘desire’; *onginnan* ‘begin’; *wandian* ‘hesitate’)

THEME

[NP<sub>Acc</sub>]

[VP]

[subjunctive clause]

[to-VP]

- (6) *Verbs of Commanding and Permitting* (e.g. *aliefan* ‘allow’; *beodan* ‘order’; *dihtan* ‘direct’; *don* ‘make’, ‘see to it’; *hatan* ‘command’; *lætan* ‘let’, ‘permit’; *sellan* ‘grant’; *tiðian* ‘grant’, ‘permit’; *tæcan* ‘teach’; *wissian* ‘guide’)

Ditransitive frame:

Monotransitive frame:

RECIPIENT THEME

THEME

[NP<sub>Dat</sub>] [NP<sub>Acc</sub>]

[NP<sub>Acc</sub> VP]

[NP<sub>Dat</sub>] [subjunctive clause] [NP<sub>Acc</sub> Pred]

[NP<sub>Dat</sub>] [to-VP]

- (7) *Commissives* (e.g. *behatan* ‘promise’, ‘threaten’; *beotian* ‘promise’, ‘threaten’, ‘boast’; *gehatan* ‘promise’, ‘threaten’; *swerian* ‘swear’; *ðeowan* ‘threaten’; *ðreatian* ‘threaten’; *wed-dian* ‘vow’)

RECIPIENT<sup>4</sup> THEME

([NP<sub>Dat</sub>]) [NP<sub>Acc</sub>]

([NP<sub>Dat</sub>]) [subjunctive clause]

([NP<sub>Dat</sub>]) [to-VP]

No competition in (6), *to*-inf selected argument, bare inf not (whole small clause as Theme argument).

Real competition bw *to*-inf and bare inf only in the case of verbs of intention and aspectualizers (same subcategorization frames). Three subclasses:

- (i) those that can take both the bare and the *to*-infinitives, e.g. *beginnan*, *earnian*, *hogian*, *leornian*, *onginnan* → not unpredictable but systematically regulated by a semantic criterion (temporal segmentability);
- (ii) those that can only take the *to*-infinitive, e.g. *geliefan*, *wandian*;
- (iii) those that can take only the bare infinitive, e.g. *behealdan*, *lystan*.

Replacement theory: plenty of verbs predicted to belong to (iii), not supported by data (only modals, even in OE).