

Reconsidering the Development of English Modals: With Special Reference to VP-ellipsis

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1. Introduction

Yamamura (2012, 2013) examines the possibility of VP-ellipsis (VPE) in Old English (OE) and Middle English (ME). It has been assumed that the licensing of VPE is peculiar to English auxiliaries which are base-generated on T because of the impossibility of VPE at the complement of lexical verbs as in (1b), and also because other Germanic languages, such as German, do not have VPE as in (2). In each example, the omitted constituents are represented as [e].

- (1) a. Because she shouldn't [e], Mary doesn't smoke.
(cf. Lobeck (1995: 47))
b. *Because Mary continued [e], John also started speaking French.
(cf. Lobeck (1995: 48))
- (2) a. *Hans wird heimfahren und Maria wird [_{VP} e] auch.
Hans will drive home, and Maria will [_{VP} e] too.
b. *Hans hat geschlafen und Peter hat [_{VP} e] auch.
Hans has slept and Peter has [_{VP} e] too.
c. *Maria ist ins Kino gegangen und Peter ist [_{VP} e] auch.
Maria is to the theater gone and Peter is [_{VP} e] too.
'Maria has gone to the movies and Peter has too.'
(Lobeck (1995: 158))

Recent research based on the recent minimalist framework, however, has reported the possibility of V-stranding VPE in which a lexical verb, rather than an auxiliary, is left as the verbal remnant, as in (3) and (4).

(3) Hebrew

- Q: (H-'im) Miryam hisi'a et vora
Q Miryam drive[Past3Fsg] ACC Dvora
la-makolet?
to.the-grocery.store
'(Did) Miram [drive Dvora to the grocery store]?'
(cf. Lobeck (1995: 158))

A: Ken, hi hisi'a

yes she drive[Past3Fsg]

'Yes, she drove [Dvora to the grocery store].' (Godberg (2005: 53))

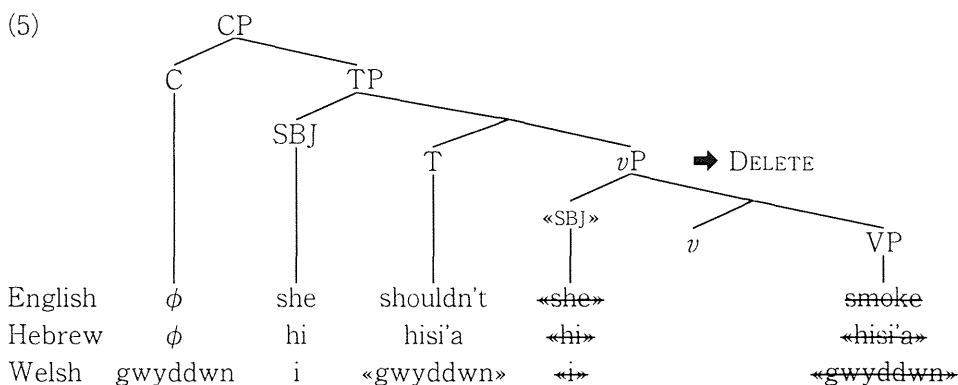
(4) Welsh

Mi wyddet ti bopeth a gwyddwn i hefyd.

Prt knew you everything and knew I too

'You knew everything and I did too.' (Rouveret (2012: 905))

Under the assumption that VPE is licensed by some property of T, it is argued that V-stranding VPE is possible in languages that have a V-raising phenomenon, and whether it is English-type VPE or V-stranding VPE, the derivation of VPE is accounted for by the same mechanism, which is briefly summarized as in (5).



In Hebrew and Welsh, the lexical verbs *hisi'a* and *gwyddwn*, respectively, move to higher positions than their own base-generated positions, namely T or C, and then *vP* is deleted. In contrast, the English lexical verb *smoke* does not move out of the *vP*, so it remains in the *vP* to be deleted. This analysis predicts that V-stranding VPE is possible in languages that have V-raising, such as OE and ME.

The aim of this paper is to reconsider the analysis of VPE in OE proposed in Yamamura (2012, 2013), which explains that VPE in OE and ME occurs only at the complement of ancestors of English modals (pre-modals), by indicating a problem that he assumes the categorical change of pre-modals from raising verbs to auxiliaries. The discussion of VPE and the status of pre-modals in OE are based on the result of the corpus research presented in Yamamura (2014), and the analysis proposed in this paper implies that not all instances of pre-modals should be treated as lexical verbs, but some are already used as auxiliaries, namely the realization of T. Section 2 provides an overview of the

argument that pre-modals in OE are treated as lexical verbs, and it considers what the conception of pre-modals as lexical verbs and the recent analysis of VPE, as in (5), predict for VPE in OE and ME. Section 3 shows the result of the corpus research in Yamamura (2014), which illustrates that V-stranding VPE is not attested. Section 4 attempts to explain the empirical fact provided in section 3, revising the analysis in Yamamura (2012, 2013).

2. Verbal Properties of English Modals and Theoretical Predictions of VPE in Old English

2.1. The Status of Pre-modals and Their Syntactic Behavior

It has been commonly argued that modals in Present-day English (PE) originally belonged to a lexical-verb class, but their category later changed to an auxiliary class in the course of the history of English. Pre-modals are normally treated as lexical verbs because they show more verb-like properties than modals. First, they apparently lack the distributional properties of modals. In PE, auxiliaries are distinguished from lexical verbs because of their distributional idiosyncrasies, which are summarized as NICE properties; NICE is an acronym for negation, inversion, code, and emphasis.

(6) Negation: Auxiliaries precede negation, while regular verbs do not.

- a. He has not seen it.
- b. *He saw not it. (cf. He did not see it.)

Inversion: Auxiliaries precede the subject in interrogative sentence, while regular verbs do not.

- c. Has he seen it?
- d. *Saw he it? (cf. Did he see it?)

Code: The complements of auxiliaries are coded in that their interpretation is recovered from the relevant linguistic context: elliptic construction.

- e. He has seen it and I have [e] too.
- f. *He saw it and I saw [e] too. (cf. ... and I did [e] too.)

Emphasis: Emphasis is realized by heavy stress on auxiliaries and not on regular verbs.

g. They don't think he's seen it but he HAS seen it.

h. *They don't think he saw it but he SAW it.

(cf. Huddleston and Pullum (2002: 93))

Modals, of course, show the same NICE properties as the aspectual auxiliaries above, as in (7), in which I ignore examples of heavy stress on modals:

(7) a. John will not buy a bicycle. [Negation]

b. Will John buy a bicycle? [Inversion]

c. John will buy a bicycle, and Bill will too. [Code]

Second, modals have a characteristic morphology: they lack non-finite forms (8a), and inflections for person and number (8b).

(8) a. *To can swim is useful (Roberts and Roussou (2003: 36))

b. *He cans swim.

In addition, modals cannot select constituents other than infinitives, so they cannot be iterated (9a) and also cannot take any object DP (9b).

(9) a. *He shall must do it.

b. *I shall you a penny. (cf. Roberts and Roussou (2003: 36–37))

Now, let us turn to the status of pre-modals. Pre-modals lack most of the peculiarities of modals presented above, and this fact appears to have obscured the status of pre-modals. First, negation precedes either finite pre-modals or finite regular verbs, and inversion is not restricted to pre-modals in OE:

(10) Negation

a. He ne andwyrde ðam wife æt fruman

he not answered the woman at first

'He didn't answer the woman at first'

(ÆCHom II, 8.68.45 / Fischer et al. (2000: 55))

b. ... þæt heora nan ne mehte nanes wæpnes gewealdan

that of-them none not could no weapon wield

'... that none of them could wield any weapon'

(Or 4.10.103.24 / Fischer et al. (2000: 54))

Inversion

c. Hwæt scealt þu þinum hlaforde?

what owe you your lord

'What do you owe your lord?' (ÆHom 17.142 / Fischer et al. (2000: 49))

- d. Hwi wolde God swa lytles þinges him forwyrnan
 why would God so small thing him deny
 'Why should God deny him such a small thing?'

(ÆCHom I, 1.14.2 / Fischer et al. (2000: 49))

Unlike modals, pre-modals can occur as non-finite forms and they also can select another pre-modal as their complements, as in (11).

- (11) Ælc cristen man sceal cunnan his paternoster and his credan
 each Christian man shall can his Lord's prayer and his belief
 'each Christian man will know his prayer and his belief.'

(coaelive, ÆLS[Ash_Wed]:261.2850: o3)

As for the inflectional system in OE, OE verbs are divided into four conjugational types, and most of pre-modals are members of preterit-present verbs. Table 1 is the inflectional paradigm of *cunnan*, which is a member of the preterit-present verbs and is an ancestor of the PE modal *can*:

Table 1 The Inflectional Paradigm of a Preterit-Present Verb *cunnan*

		Indicative	Subjunctive
PRES. SG	1ST	can(n)	} cunne
	2ND	canst	
	3RD	can(n)	
PRES. PL	1ST-3RD	cunnon	cunnen
PAST. SG	1ST	cuþe	} cuþe
	2ND	cuþest	
	3RD	cuþe	
PAST. PL	1ST-3RD	cuþon	cuþen

As we can see in Table 1, *cunnan* has morphological distinctions: indicative or subjunctive, present or past, singular or plural, and second person or not. These distinctions are true of other regular lexical verbs. Table 2 is the inflectional paradigm of a weak verb *fremman*, in which we can see the same distinctions as the pre-modal *cunnan* shows.

Table 2 The Inflectional Paradigm of a Preterit-Present Verb *fremman*

		Indicative	Subjunctive
PRES. SG	1ST	fremme	} fremme
	2ND	fremmest	
	3RD	fremeþ	
PRES. PL	1ST-3RD	fremmap	fremmen
PAST. SG	1ST	fremede	} fremede
	2ND	fremedest	
	3RD	fremede	
PAST. PL	1ST-3RD	fremedon	fremeden

Furthermore, their complementation is not restricted to infinitives. In (12a), *cann* takes the direct object *eow*, and in (12b, c), *cude* and *wille* take a complement clause.

- (12) a. ne cann ic eow
 not know I you
 'I do not know you' (Matt 25, 12 / Ono and Nakao (1980: 451))
- b. he soðlice ne cude þære soðfæstnysse weg
 he really not could that faithfulness way
 'he really did not know the way of faithfulness'
- c. Ic wille ... þæt þu forgyte þæt ic þe nu secge
 I want ... that you forget-SUBJ that I you now say
 'I want you to forget what I am telling you now'

(Byrhtferth's Manual 15.14, from Visser 841 / cf. Gelderen (2006))

These verb-like properties of pre-modals seem to make it plausible to assume that pre-modals belong to a lexical-verb class. Lightfoot (1973) argues that pre-modals were eventually isolated as a distinct class, namely auxiliaries, because they lost these verb-like properties. For example, they lost the ability to take a direct object as their complements; they increased the opacity of the relationship between the past morphology and the past meaning; and pre-modals selected bare infinitive only, while other lexical verbs began to select a *to*-infinitive. He proposes that the loss of these verb-like properties led to the change in syntactic categories, that is, from pre-modals to modals: from V-elements to T-elements. This change is assumed to have taken place in the sixteenth century, because of the last instances of non-finites forms of pre-modals in 1500s:

(13) Infinitival form

- a. that appered at the fyrste to mow stand the realm in great stede
 (1553 More, Works 885 C1, from Visser / Lightfoot (1979: 110))

-Ing form

- b. mayinge suffer no more the loue and death of Aurelio
 (1556 Aurelio and Isab. M ix / Lightfoot (1979: 110))

Clustering

- c. I fear that the emperor will depart thence, before my leters shall may
 come unto your grace's hands
 (1532 Cranmer, Letters / Lightfoot (1979: 110))

Have + -en construction

- d. if wee had mought conuenient come togyther, ye woulde rather haue chosin to haue harde my minde of mine owne mouthe

(1528 More, Works 107 H6 / Lightfoot (1979: 110))

The widely accepted scenario that Lightfoot argues is summarized as follows:

- (14) Development of Pre-modals into Modals

OE: Pre-modals as V ➔ 16th century: Modal as T

The next subsection will show that this scenario of the historical development conspires with a recent analysis of VPE to predict wrongly that OE allows V-stranding VPE.

2.2. A Recent Analysis of VPE and Its Predication for VPE in Old English

Remember the analysis of VPE presented in (5), which implies that languages with V-raising might allow V-stranding VPE. It has been widely assumed that OE has V-raising due to subject-verb inversion in interrogative sentences, such as (10c, d), and topic-initial main clauses (15), which lead us to consider OE to be a V2 language like German.

- (15) a. On ðam dæge worhte God leoht, and merigen, and æfen
on that day made God light and morning and evening
'On that day God made light, morning, and evening'

(ÆCHom I, 6.100.5 / Fischer et al. (2000: 50))

- b. Ðas ðreo ðing forgifð God his gecorenum
these three things gives God his chosen
'These three things God gives to his chosen'

(ÆCHom I, 18.250.12 / Fischer et al. (2000: 50))

In these examples, a finite verb appears as the second constituent, leaving its base-generated position. Therefore, the relevant analysis predicts that V-stranding VPE is possible in OE if it can derive VPE. Warner (1993), in fact, offers sufficient examples to confirm that OE has a grammatical option to derive VPE:

- (16) a. forðy is betere þæt feoh þætte næfre losian ne mæg ðonne þætte
mæg & sceal.

'therefore better is the property which can never perish [lit.: never perish not can] than that which can and will.' (Bo 11.25.24)

- b. Wenst ðu þæt se godcunda anweald ne mihte afyrran þone
anweald þam unrihtwisan kasere, ... gif he wolde? Gise, la, gese; ic
wat þæt he mihte, gif he wold.

'Thinkest thou that the heavenly Power could not [lit.: not could] take-away the empire (from) that unrighteous Caesar, ... if he would? Yes, O yees, I know that he could, if he would!' (Bo 16.39.30)

- c. & cwædon þæt hie þa burg werian wolden, gif þa wæpnedmen ne
dorsten.

'and said that they [=the women] would defend the city [lit.: the city defend would (subj.)], if the men (did) not dare.' (Or 194.12)

- d. hi ... gearowe wæron ehtnysse to ðoligenne. and deaðe sweltan gif hi
ðorfton

'they ... were prepared to undergo persecution and to suffer death [lit.: ready were persecution to suffer and death (dat.) die] if they needed' (ÆCHom ii.78.212)

- e. wa þam, þe godcunde heorde underfehð and napær gehealdan ne can
ne hine syfne ne þa heorde, þe he healdan scolde to godes handa; and
wyrst þam, þe can and nele.

'woe to -him who undertakes spiritual custody [lit.: siritual custody undertakes] and knows how to preserve [lit.: neither to-preserve not knows] neither himself nor the flock which he ought to guard on God's behalf [lit.: God's hand] and worst to him, who knows (how to) and will-not.'

(*Wulfstan: Sammlung der ihm zugeschriebenen Homilien* (ed. A. Napier, Berlin, 1883; repr. Dublin and Zurich, Wiedmann and Max Niehans, 1967) 267.14)

- f. deofol us wile ofslean gif he mot.

'(the) devil will kill us if he can' (ÆCHom i.270.10)

(Warner (1993: 112))

Although these examples reveal the possibility of VPE in OE, this fact is insufficient to decide which type of VPE is allowed in OE, that is, PE-type VPE

or V-stranding VPE, because pre-modals are assumed to be lexical verbs. The relevant analysis still does not abandon the possibility of V-stranding VPE with a 'regular' lexical verb.

To answer this question, Yamamura (2012, 2013) draws a conclusion that V-stranding VPE with a lexical verb is not attested in OE and ME texts from the corpus research. Further research in OE texts was conducted by Yamamura (2014), in which the range of research was limited to texts written in West Saxon that are not translations of Latin language into Old English, to avoid any interference from other languages. The results of the latest research are presented in the following section.

3. Corpus Research and Its Implications for the Development of English Modals

Employing *The York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE), corpus research was conducted to show the number of VPE instances and the types of verbal remnants in these instances. This research was expected to answer the question in (17).

- (17) a. Is VPE possible in OE?
- b. If possible, which type of VPE does OE have, PE-type VPE or V-stranding VPE?

The results of this research are summarized in Table 3.

Table 3 Verbal Remnants of VP-ellipsis in YCOE

will (102)	wlye	58	shall (20)	scyle	1
	willa	8		scealt	1
	willan	5		sceoldon	5
	wolde	28		scolðan	2
	wolden	1		sceolde	11
	woldon	2		can (13)	cunne
may (68)	mæg	9	cunnon		1
	mage	15	cude		1
	magan	6	dare (6)	dear	2
	magon	11		durre	2
	miht	2		dorston	1
	mihte	18	must (11)	sorste	1
	mihton	6		motan	2
	meahten	1		moton	3
need to (4)	þorfe	1		mot	2
	þorfte	1		mote	2
	þorfton	2	moste	2	
Neg form (15)	nellan	1			
	nelle	1			
	noldon	6			
	nołde	6			
	nołdest	1	Total hits		239

(Yamamura (2014))

Here follow some of the instances of VPE attested in YCOE. The translations in (18c, d) are taken from Baker (2012: 196) and from Ono and Nakao (1980: 455), respectively.

- (18) a. ... se Halga Gast þurh his godcundnysse his gife
 ... that Holy Ghost through his divine nature his gift
 eow forgið be þam þe he wyle;
 you gives since he want to
 '... the Holy Spirit gives his gift by his divinity since he want to;

(coaelhom,ÆHom_10:113.1459: o3 / Yamamura (2014))

- b. oððe sceoton to ðam biscope gyf man nyde sceole
 or (SBJ) shoot to that bishop if one necessarily shall
 'or shoot to the bishop if one must'

(cocanedgX,WCan_1.1.2_[Fowler]:7.6: o4 / Yamamura (2014))

- c. ... þe for heora prytan lewe nellað beorgan
 ... that-REL for their pride weakness will not defend
 ær hy na ne magon þeh hy eall willan.
 until they NEG not may though they all will
 'that will not protect themselves from injury until it is too late to do
 so even if they want to'

(cowulf,WHom_20.1:113.1629:o4 / Yamamura (2014))

- d. ... gif he ær geswican nolde. þa ða he mihte.
 ... if he previously leave-off would-not when he might
 & moste.
 must

'... if he would not cease previously, when he could and might'

(cocathoml,ÆCHom_I_19:331.167.3754:o3 / Yamamura (2014))

As an example, let us examine the instances of "*willan*-stranding VPE" carefully according to sentence types. In (19), *willan*-stranding VPE is attested in conditional *If*-clauses.

(19) *If*-clause

- a. hie moton hie gesomnian, gif hie willað, to þam were.
 they must them unite if they will to those people
 'they must unite themselves, if they will, to those people'

(colawaf,LawAf_1:19.77:o2 / Yamamura (2014))

- b. Nu mage ge broðru understandan gif ge willað þæt
 now may you brother understand if you will that
 twa þing sindon
 two thing are

'Now you brother can understand that two things exist if you want to.'
 (cocathoml,ÆCHom_I_20:335.17.3837:o3 / Yamamura (2014))

One may not want to regard these examples as instances of VPE because the *Oxford English Dictionary* (OED) provides a definition to the string *if you will* as '[it] is sometimes used parenthetically to qualify a word or phrase, [and it means] "if you wish it to be so called," or "if you choose or prefer to call it so"'. Even if they are idioms, it does not mean that OE does not have any VPE with *willan*, because *willan*-stranding VPE is also attested in other contexts. Here are instances in a comparative clause (20), a relative clause (21), an adverbial clause (22), and a complement clause (23).

(20) Comparative Clause

þæt hi ne magon geleaffulra manna heortan swa micclum
 that they not may full of belief man heart so great
 costnian swa hi willað.
 tempt as they will

'that they cannot tempt a faithful man's heart as much as they want to'

(cocathom1,ÆCHom_I,_24:374.86.4720: o3 / Yamamura (2014))

(21) Relative Clause

Þa andwyrde Thomas, Eala þu, min Drihten, send me þyder
 Then answered Thomas, alas you my Lord send me whither
 be þu wille
 that.REL you will

'Then, answered Thomas; alas you my Lord send me where you want to'

(coaelive,ÆLS_[Thomas]:22.7550: o3 / Yamamura (2014))

(22) Adverbial Clause

and todæld his gife mannum be ðam ðe he wile
 and divides his gifts to-men because he want to.

'and distributes his gifts to men because he want to'

(cocathom2,ÆCHom_II,_12.1:117.245.2545: o3 / Yamamura (2014))

(23) Complement Clause

& forðon ic ðe bebiode ðæt ðu do swæ ic
 therefore I you command that you do as I
 geliefe ðæt ðu wille.
 believe that you will

'and therefor I command you that you do as I believe that you wish,'

(coprefcura,CPLetWærf:19.9: o2 / Yamamura (2014))

The numbers of *willan*-stranding VPE in each sentence type are summarized in Table 4.

Table 4 Sentence Types of *Willan*-stranding VP-ellipsis in YCOE

will (102)	Relative clauses	46
	Adverbial clauses	24
	<i>If</i> -clauses	21
	Comparative clauses	9
	<i>That</i> -complement clauses	1
	Interrogative clauses	1

(Yamamura (2014))

As we can see, *willan*-stranding VPE is attested in a variety of sentence types. This result clearly provides an affirmative answer to the question in (17a), which is the same as Warner's (1993): VPE is possible in OE. It is noteworthy that the result of the corpus research does not include any other verbal remnant than pre-modals. This apparently means:

- (24) VPE is attested after pre-modals in OE and after modals in PE but not after lexical verbs.

Furthermore, the interpretation of an elided constituent corresponds to that of a preceding verbal constituent in each instance, which possibly indicates that pre-modals are divided into at least two groups although they might all have the same appearance. As illustrated in section 2, pre-modals show many verb-like properties, but they are distinct from other lexical verbs in that some of them allow the infinitival complement to be deleted as modals do. Suppose that pre-modals with an infinitival complement were already treated as T-elements in OE. If so, the answer to the question in (17b) would be that OE has PE-type VPE which can leave only T-elements as their (verbal) remnants. This prediction, therefore, allows us to consider another scenario for the development of modals, instead of the common one in (14).

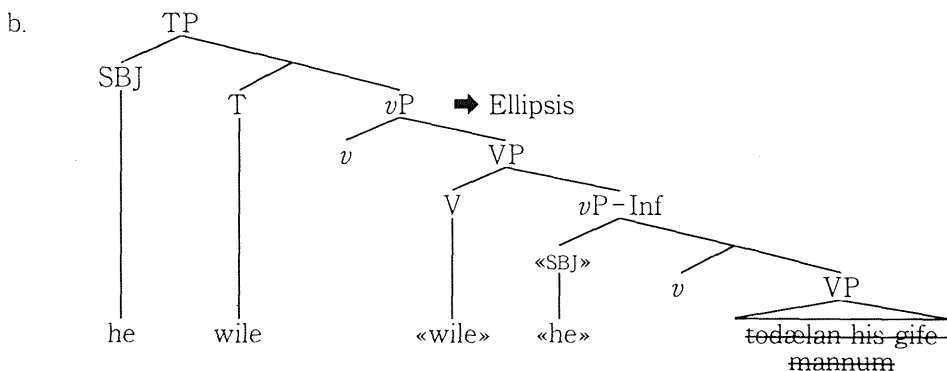
- (25) A Possible History of Pre-modals and Modals in English

OE:		PE:
Pre-modals as V-element	➡	OBSOLETE
(Pre-)modals as T-element	➡	Modals as T

Under this scenario, all the instances of pre-modals are not treated equally as regular verbs, but they are divided into two different categories: a lexical category and a functional one. What seems to be a change in categories is actually the loss of the V-pre-modal and the persistence of T-pre-modals as T-modals. The following section attempts to show that the conception of pre-modals as T-elements successfully explains the empirical facts presented in this section, revising the syntactic analysis of VPE proposed by Yamamura (2012, 2013).

4. A Theoretical Account for VPE in Old English

Yamamura (2012, 2013) explains that VPE in OE and ME occurs at the complements of pre-modals, but not of lexical verbs, under the LF-copy analysis



This analysis apparently derives the correct string of VPE in OE, but it fails to explain that OE does not have VPE with a “regular” lexical verb. Because all of the finite verbal elements undergo raising to T/C in OE, as in Hebrew and Welsh, it inevitably predicts such cases. Furthermore, control verbs also select bare infinitives as their complements as in (28), but again, the corpus research did not find any VPE instances with this type of verbs as the remnant.

(28) þa mynton we us gerestan,
 , then intended we us repose
 'then we intended to rest ourselves' (coalex. Alex: 19.2.215: o3)

Yamamura (2012, 2013) attempts to explain the possibility of Pre-modal-stranding VPE under the LF-copy analysis of elliptical constructions and the Agree system which has been entertained within the recent Minimalist framework. He assumes with Lobeck (1995) that the ellipsis site is not derived by deleting a full-fledged VP but is base-generated as a null constituent, which he calls E(llipsis)-*pro*. This null pronominal is licensed and identified under the following condition.

(29) Licensing and Identification of *E-pro*

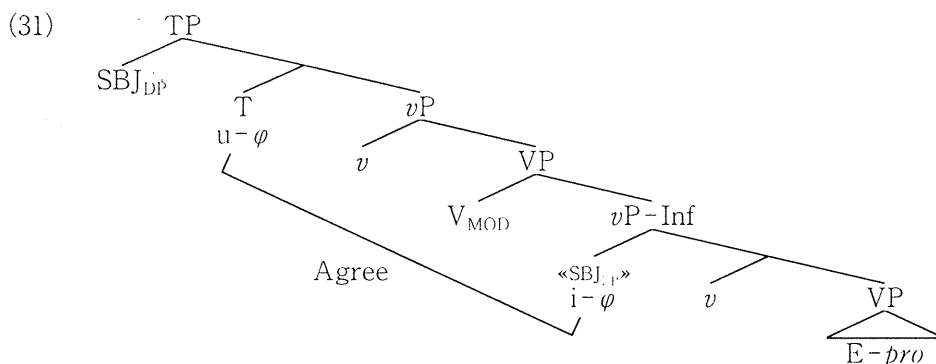
- E-pro* is licensed if the derivation of its host phrase converges.
- E-pro* is identified and made visible for LF-copying by the Agree relation, the result of which is morphologically realized on its probe.

(Yamamura (2012: 29))

When the identification condition is satisfied, *E-pro* is qualified to be assigned a proper interpretation at the component responsible for semantics. In addition, Yamamura assumes that pre-modals are raising verbs, which do not take an external argument because they lack subject selection, as shown in (30), in which the subject of the sentence is realized by an expletive.

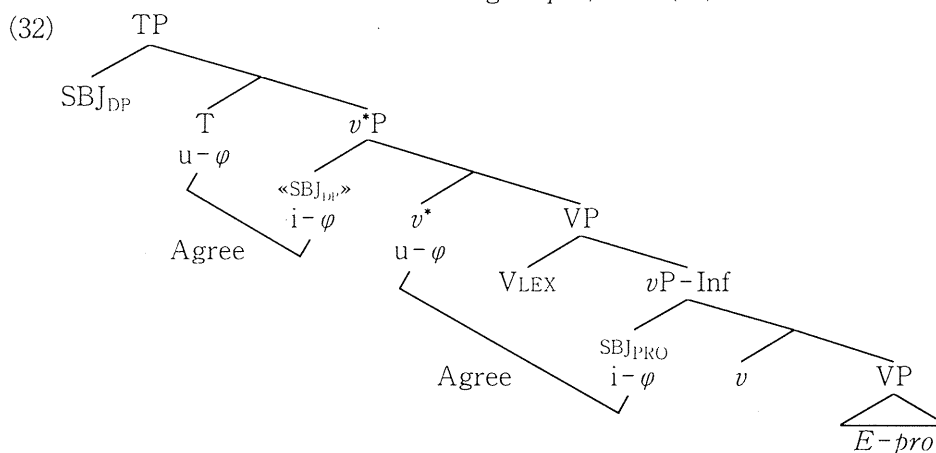
(30) þonne wene we þæt hit wile ðincan ðam ungelæredum
then believe we that it will seem to.that unlearned
to menigfeald
to manifold
'then we believe that it will seem to that unlearned people too complex'
(cocathom2ÆCHom II. 45:339.131.7611 : o3)

With these apparatuses, so-called Pre-modal-stranding VPE is explained by the following structure.



In this structure, the putative pre-modal as a raising verb selects infinitival *vP* containing *E-pro*. Because a raising verb does not select its own external argument, it lacks unvalued *j*-features ($u-\varphi$), which are associated with the ability of assigning the accusative Case. The Agree relation is established between $u-\varphi$ on T and valued *j*-features ($i-\varphi$) on subject DP and the valuation of $u-\varphi$ on T is achieved by $i-\varphi$ at the same time. Then, the derivation converges, which satisfies the licensing condition in (29a). The identification condition in (29b) is also met because the result of this Agree relation is morphologically realized on the pre-modal which subsequently moves to T with the relevant probe as subject-verb agreement.

At the same time, this analysis also provides a theoretical account for the impossibility of V-stranding VPE in OE, although it is a tentative one. Suppose that a finite control verb takes *vP* containing *E-pro*, as in (32).

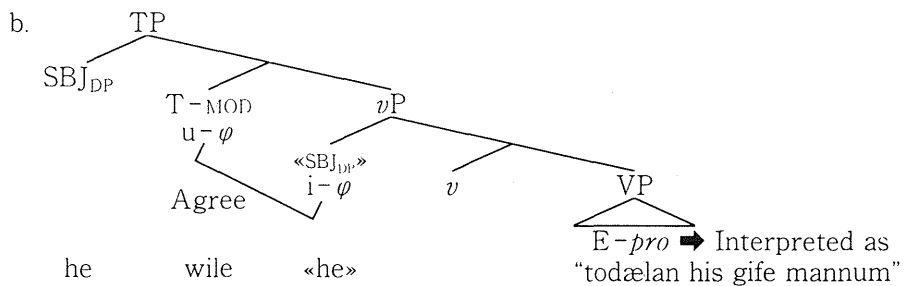


In this configuration, there are two Agree relations and both of them successfully converge in that $u-\varphi$ on T and v^* are valued from $i-\varphi$ on subject DP and subject PRO, respectively. In this sense, the licensing condition in (29a) is satisfied in (32).

The identification, however, fails in this case because the result of the Agree between $u-\varphi$ on v^* and $i-\varphi$ on subject PRO is not morphologically realized on its probe v^* , for English does not have object-verb agreement on finite verbs. Hence, *E-pro* is not acceptable in the complement of control verbs.

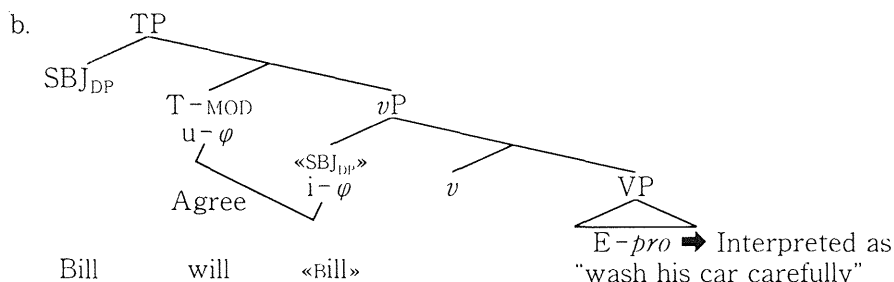
Yamamura's (2012, 2013) analysis explains the empirical fact that OE has pre-modal-stranding VPE only, particularly the impossibility of V-stranding VPE, but it is still problematic in that it cannot exclude the possibility of V-stranding VPE in which other raising verbs are left as remnants. This empirical problem is solved by the scenario of the development of modals proposed in this paper: OE has not only V-pre-modal but also T-pre-modals. Suppose that VPE in OE is possible at the complement of T-pre-modals. Then, the derivation of VPE in OE is described as follows:

- (33) a. and todæld his gife mannum be ðam ðe he wile
 (cocathom2,ÆCHom_II_12.1:117.245.2545: o3)



In (33), a T-pre-modal is base-generated in T. An Agree relation is established between $u-\varphi$ on T and $i-\varphi$ on subject DP which subsequently moves to Spec, TP. The whole derivation converges and the result of this Agree operation is morphologically realized on the T-pre-modal, so the licensing and identification condition of *E-pro* is satisfied. Under the *E-pro* analysis of VPE, PE-type VPE is also explained in exactly the same manner.

(34) a. John will wash his car carefully, and Bill will, too.



This means that the mechanism of deriving VPE and the syntactic environment for licensing VPE have not changed throughout the history of English. Furthermore, the empirical fact and its theoretical explanation confirm that there are two types of pre-modals, namely V-pre-modals and T-pre-modals. Recall the scenario proposed in (25), repeated in (35).

(35) A Possible History of Pre-modals and Modals in English

OE:

Pre-modals as V-element



PE:

OBSOLETE

(Pre-)modals as T-element



Modals as T

The putative categorical change of pre-modals into modals is actually the loss of V-pre-modals and the persistence of T-pre-modals as T-modals, and it is confirmed by the present analysis.

Before concluding this paper, let us consider a prediction made by Yamamura (2014) and what it theoretically implies. Yamamura (2014) draws the following conclusion from his discussion of VPE in OE.

(36) Type A: Some languages permit VPE when the relevant T-position is filled.

Type B: Others permit VPE only when a T-element occupies the relevant T-position. (cf. Yamamura (2014))

He argues that Hebrew and Welsh, for example, belong to the type A languages, in which VPE is possible regardless of what fills the T-position. In contrast, English has belonged to the type B languages since the OE period, so VPE is possible only at the complements of T-elements. Remember that, even if it has V-raising, German does not allow VPE, as in (2), repeated as (37).

- (37) a. *Hans wird heimgelassen und Maria wird [_{VP} e] auch.
 Hans will drive home, and Maria will [_{VP} e] too.
- b. *Hans hat geschlafen und Peter hat [_{VP} e] auch.
 Hans has slept and Peter has [_{VP} e] too.
- c. *Maria ist ins Kino gegangen und Peter ist [_{VP} e] auch.
 Maria is to the theater gone and Peter is [_{VP} e] too.
 'Maria has gone to the movies and Peter has too.'

(Lobeck (1995: 158))

This observation allows us to assume that German is a type B language, but it lacks T-elements, so it appears to lack the ability to license VPE. Yamamura concludes that the distinction between type A and type B comes from the difference in some property on T. Another possibility, however, is that type A languages use the deletion analysis of VPE, as in (26), while type B languages use the E-*pro* analysis of VPE, but discussions of this topic are left open to further research.

5. Concluding Remarks

This paper proposed an alternative scenario of the development of English modals, in which pre-modals in OE were not equally V-element, but some of them already behaved as T-elements. It also demonstrated how the proposed developmental scenario and E-*pro* analysis of VPE conspire to explain the empirical fact that was revealed by Yamamura (2014): VPE is possible after pre-modals in OE and modals in PE but not after other "regular" lexical verbs throughout the history of English.

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