ANGLICA

An International Journal of English Studies

31/2 2022

UNIVERSITY OF WARSAW

Anglica An International Journal of English Studies

ISSN 0860-5734

www.anglica-journal.com

DOI: 10.7311/Anglica/31.2

Publisher:
Institute of English Studies University of Warsaw
ul. Hoża 69
00-681 Warszawa

Nakład: 30 egz.

Typesetting:
Tomasz Gut

Cover design:
Tomasz Gut

Printing and binding:
Sowa – Druk na życzenie
www.sowadruk.pl
+48 22 431 81 40

TABLE OF CONTENTS

Anglica 31/2 2022
ISSN: 0860-5734
DOI: 10.7311/0860-5734.31.2.03

Concha Castillo
https://orcid.org/0000-0002-8301-9908
University of Málaga

The Status of English Modals Prior to Their Recategorization as T and the Trigger for Their Recategorization

Abstract: This is an account of English modals that invokes their exceptional morpho-syntactic tense properties as original preterite-present verbs in order to explain their becoming T elements. Within the framework of minimalist theory, I argue that modal verbs in OE and ME (up to approx. 1470) have an exceptional syntactic status that consists in that they merge directly under *v*, whereas strong verbs merge as a stem-by-default prior to *v*, and weak verbs merge as a root with a vowel-by-default also prior to *v*. Modals necessarily differ from both strong verbs and weak verbs in their τ–licensing, whereas they share with the latter (with both strong verbs and weak verbs) φ–licensing. A specific Probe of T is in charge of the latter for all verbs in the language. Modals pass on to merge directly under T when *v* ceases to be a locus of *interpretable* τ–features. A symptom that *v* loses such a capacity is the loss of the Pret.1/Pret.2 ablaut distinction.

Keywords: OE modals; strong verbs/weak verbs/preterite-presents; τ–licensing; φ–licensing; inherent *v*-status; recategorization as T by Late ME

1. Introduction

The finite T(ense) head in Present Day English (PDE) is standardly argued in generative theory to be not only the locus of tense or τ–features like [+/–past], and of agreement or φ–features like person and/or number, as is typically postulated cross-linguistically, but also the place where (core or pure) modal auxiliaries[1] (1) are merged externally into the derivation.[2] This circumstance distinguishes English from the rest of (Indo-European) languages and is justified in (synchronic) PDE terms by modals being exclusively or inherently finite elements (that is by their lacking both the infinitive and the participle forms).[3]

(1) can could may might must shall should will would

The issue of why T is lexical in English (aside from it being the locus of formal features) is nevertheless to be considered primarily a historical or diachronic issue. In this sense, the generalized consensus in the literature is that modals are recategorized as T elements (or I(nflection) elements, in former frameworks) in the early sixteenth century, that is at the beginning of Early Modern English (EMnE), an idea that parts from the seminal work of Lightfoot (1979, 78ff.). The original theory of Lightfoot, which incidentally abides by the framework immediately preceding the Government & Binding model, and makes use of AUX, postulates that *pre-modals*, the term that the author uses to refer to these elements, undergo a radical change from full or lexical verbs in Old English (OE) to the cited AUX in EMnE. This theory is subsequently revised in works like Aitchison (1980), Plank (1984) or Roberts (1985), and later in Warner (1993), Lightfoot (1991), or Roberts (1993), in the sense that the recategorization is analyzed as a gradual series of events.

A general consensus exists in the literature that modals in OE, and less and less markedly so through the first half of Middle English (ME), present a hybrid status between lexical verbs and auxiliaries, which shows quite prominently in regard to argument structure and subcategorization (see e.g. the ability of many of them to select for a direct object nominal on the one hand vs. their frequent co-occurrence with a lexical verb, in the form of a plain infinitive, on the other). Despite this ambiguity, the majority of works argue or have argued that modals are to a large extent regular main verbs from OE up to the beginning of the sixteenth century: Lightfoot (1979; 2006; 2017), Roberts (1985; 1993), van Kemenade (1993), Roberts and Roussou (2003). The original work of Lightfoot (1979, 78ff.) lists a number of changes that serve to identify the demise of properties that are typically found for original lexical verbs (see e.g. the loss of the above-cited object selection capacity; the breakdown in the present/past correspondence in meaning and form; the loss of the infinitive and the participle forms,…). While acknowledging these changes, the highly-influential work of Warner (1993, 103ff.) adopts a different perspective since it comes additionally to emphasize the properties that situate modals (and likewise the copula and the immediate ancestors or candidates to aspectual auxiliaries) much closer to the category of auxiliary verb already in OE than could be the case for any lexical verb proper in the language: namely, the modals' occurrence in verb-ellipsis structures, and similarly their occurrence in impersonal structures where the infinitive after the modal (rather than the modal) determines the case of the nominal; the restriction of some modals to finite forms; their exclusive categorial selection of the plain infinitive as against the *to*-infinitive. By way of relying on the theory that the lexicon is the place where the rules or principles of generative grammar and the principles of cognitive organization are to meet, the core of Warner's proposal as couched within a Head-Driven Phrase

Structure model is that modals (and potential candidates to auxiliaries in general) constitute a distinct *lexical subcategory* already in OE.

I assume that modals become T elements at some specific point in the history of English (see below), or using a minimalist term as above, that modals come to *merge externally* under T, and I adopt the position that modals constitute a separate syntactic class already in OE. As is the case with an important number of works in the diachronic generative literature, in this paper I am interested in analyzing what is the precise status of modals before becoming T (see (2a) below) and why they become T, that is what is the trigger for their recategorization as T (2b). Since the (likewise widely-discussed) phenomenon of V-to-T movement, or rather its loss, appears in the literature variously linked to the recategorization of modals, it is important to ask what connection exists between the loss of V-to-T and the recategorization of modals (2c). Due to space limitations, I deal with this last issue (2c) in a separate paper, though there are references to it in Section 7 of the present work.

(2a) the status of modals previous to their recategorization as T
(2b) the trigger for the recategorization of modals as T
(2c) the timing between the recategorization of modals and the loss of V-to-T movement

The gist of the analysis that I present in this paper is that OE modals get their τ–features licensed[4] in a different way from both strong verbs and weak verbs in the language, which is due to their being *preterite-presents*, and that this confers to them a distinct syntactic status ever since OE (very possibly from pre-OE times). The specific changes that come to affect τ–licensing in ME, approximately in the decades from 1450 to 1470, leave modals in such a situation that becoming T elements is the only way for them to keep their distinct syntax with regard to the cited τ–licensing. Had they opted for "regularizing" their mechanism of legitimization of τ–features, and indeed the raise of not previously attested non-finite forms in the ME period appears to point in that direction, then they would have become raising verbs or raising auxiliaries, as in other Germanic languages, but not T elements.[5]

Now, for the verbs that become modals to belong originally in OE (and prior to this, in Proto-Germanic (PGmc) and, according to a very extended view in the specialized literature, in Proto-Indo-European (PIE)) to an exceptional class of verbs that exhibit ablaut variation in the Present and create a Past form anew is of course widely acknowledged in the philological and in the linguistic literature.[6] However, Lightfoot (1979, 103) restricts itself in this sense to emphasizing their preterite-present trait of lacking a third person sg ending as a relevant fact that contributes to modals looking different from the rest of verbs and therefore being recategorized as new elements. And the same emphasis can also be found in Lightfoot (2006, 30-31) or in Lightfoot (2017, 387). And Warner (1993, 140, 259) does

indeed describe core differences between the morphology of preterite-presents on the one hand and both strong and weak verbs on the other, and also refers to "preterite-present morphology as a badge of auxiliary-hood" (Warner 1993, 214): it seems to me though that, in the wake of Warner's work, a specific analysis of the properties of preterite-presents as might allow modals to maintain an exceptional relation with T is needed, and such is the focus of the present proposal. Indeed, Warner's suggestion that there could be "already some real link between preterite-present morphology and non-prototypical verbal semantics in Old English" (Warner 1993, 143) could be considered from the perspective of the connections between e.g. *modality* and (perhaps) *defective* morphology as exhibited by the lack of non-finite forms, or also it could be considered from the perspective of the tense values or connections residing in *modality* as ones that are to be matched by elements that maintain a differentiated position with respect to T. My position in the present work is closer to this second sense, though my focus is not on the very content or interpretation of the modals' τ–features, but on the morpho-syntactic circumstances under which they are implemented.

More specifically, my focus is on the τ–licensing and φ–licensing[7] of modal verbs in contrast to the τ–licensing and φ–licensing of both strong verbs and weak verbs in OE, and most of the ME period. I would like to advance that φ–licensing will be argued to work in a similar way for both strong verbs and weak verbs on the one hand and for modals on the other: not so at all τ–licensing.

I therefore take the term *modal* as synonymous with *preterite-present* exclusively with regard to the morpho-syntactic operations (in core or narrow syntax) underlying tense markers and agreement markers. I do not deal then with non-modal structures, by which I mean that I do not set to analyze whether these verbs have a double set of categorial selection and/or argument selection properties (see at the beginning of this Section), or whether it is one and the same syntactic structure that needs some additional mechanism in order for any given thematic property to be made available.[8] In (3) below are listed (in OE form) the elements that are the focus of the present discussion: namely, so-called core modals plus the anomalous verb *willan* 'will'. In (4) is a list of the remaining elements from the group of preterite-presents in OE, that is, those verbs that have either disappeared from the language, or otherwise have become mixed modals, or just ordinary verbs.

(3) cunnan magan *motan[9] *sculan willan
(4) āgan *dugan durran mugan *-nugan *þurfan unnan witan

I assume that the elements under analysis are connected already in OE in a systematic way to the concepts of *possibility* and *necessity* or, using the terminology in the seminal work of Kratzer (1981; 1991), that these verbs have the capacity to have or construct a *modal base*, independently of the fact that not all of the uses that modals or would-be modals present in OE can be identified already as modal

uses proper (see Tanaka (2009) for a semantic classification), and independently of the monumental semantic shift that is to affect modals from Late OE and all through the ME period (see Lowrey (2012) and references therein).

The small sample of sentences in (5) is intended to serve the purpose of illustrating OE modals from the set in (3). They are borrowed from what would be characterized as secondary sources or references if the present study incorporated in itself a corpus search, which is not the case.

(5a) ðæt he þæs gewinnes **mehte** mare gefremman
that he the victory could better achieve
'so that he could achieve the victory all the better' (from van Kemenade (1993, 157))

(5b) Ne **magon** hie and ne **moton** ofer mine est þinne lichoman (…) deaþe gedælan
'They are not able and are not permitted, against my will (…) to separate your body after death.' (from Lowrey (2012, 15))

The paper is organized as follows. In Section 2, I specify basic assumptions that I endorse from the literature about the *interpretation* and *valuation* of formal features, and about the architecture of the verbal phrase. In Section 3, I present a list of morpho-phonological properties of modal verbs (or preterite-presents) that is generally acknowledged in the literature, and I dedicate Sections 4 and 5 to an analysis of τ–licensing and φ–licensing for strong verbs and for weak verbs in the language. Having done this, I focus in Section 6 on the analysis of modals (or rather, as I will refer to them in that specific Section, *preterite-presents/modals*). Finally, in Section 7, I give an account of what could possibly have acted as the trigger of the recategorization of modals as T, around 1470. Section 8 is a summary.

2. Assumptions from the literature

The majority of assumptions belong within three different sets or fronts: on the one hand, syntactic theory relative to the licensing of formal features; on the other hand, the basic verbal phrase and clausal architecture that I adopt with regard to OE, and lastly core notions about the semantics of modality. No issue is discussed in this paper explicitly on the semantics of modality, but since reference to τ–features is continuous throughout the discussion, it seems appropriate to specify some aspects.

With regard to syntactic theory, generalized strands within minimalism postulate that the derivation of verbs in core or narrow syntax typically proceeds through the licensing of formal features, as are τ–features (typically, ([+/–past]) and φ–features (that is, features of person and/or number and/or gender). τ–features are to be identified as the abstract counterpart in core syntax of morphological markers of tense, and similarly, φ–features are the abstract counterpart of morphological

agreement markers. As in standard accounts of Distributed Morphology (DM) (Halle and Marantz 1993 et seq.) licensing of features is therefore the morpho-syntactic operation which is subsequently the input to the morphological component, with its rules of *Vocabulary Insertion* (that is, exponency).

The account of OE modal verbs, and also strong verbs and weak verbs in the language that I provide in this paper hinges upon abstract morpho-syntactic objects or operations, and not on their morpho-phonological realization. However, though I assume the basic DM tenet that no correspondence can be *a priori* established between exponents on the one hand and the number and/or type of (prior) operations in core syntax on the other, it can prove useful and, very importantly, it is always enlightening to try and account for (potential) correspondences, a necessary condition for this being not to lose sight of what part of the overall derivation we are in. In this sense, I will frequently use the terms *marker* or *segment* or *exponency* to refer to the overt morphology, and also *Present* and *Past* (in capital letters) to refer similarly to the meaning or place in the corresponding paradigm of overt morphological words or exponents, as opposed to a morpho-syntactic notation proper like *[+/–past]*. With regard to the specific issue of lexical roots (√), I assume that these enter the derivation in a phonological form, that is that lexical roots abide by *Early Insertion* (as defended in Embick 2000 et seq.).

In accord with the framework of Chomsky (2000; 2001), two core operations apply at narrow syntax: *Merge*, which combines two syntactic units from the Lexicon/Numeration (external Merge) in order to form a new syntactic unit, and *Agree*, which applies whenever a *Probe* or syntactic unit that has a feature that is incomplete in some way and that must be legitimized, goes in search of a *Goal*, or syntactic unit that the Probe c-commands and that will make feature legitimization complete. The purpose of *Agree* is thus to license or legitimate a given feature. τ–features and φ–features are typical examples of features associated with *Agree*, and T is the head typically assumed in main strands within minimalism to act as a Probe of *v* (its Goal) in the licensing of τ–features and φ–features of finite verbs in Indo-European languages generally speaking. In a crucial way, τ–features and φ–features attend to the characterization *interpretable* [*i*F] vs. *uninterpretable* [*u*F] on the one hand, and *valued* [F: *val*] vs. *unvalued* [F: __] on the other. Following Pesetsky and Torrego (2007), *valuation* and *interpretability* work independently of each other. Feature-*interpretability* refers to the semantic content or contribution of a feature, and feature-*valuation* means that the feature in question is ensured to appear on a specific item. And there happens to be generalized consensus that τ–features in PDE (and in IE languages in general) are *interpretable* but *unvalued* on T, and *uninterpretable* but *valued* on *v*, and that φ–features are similarly *unvalued* on T and *valued* on *v*, but they are *uninterpretable* on both T and *v*, it being the DP nominal the source of interpretation. φ–features are thus both *valued* and *interpretable* on DP. It is important to emphasize that syntactic (or morpho-syntactic) operations are initiated or begun by a Probe, and that a Probe is

such if it has *interpretable* features itself to *value* against a viable Goal. Further, two observations are needed with regard to the interpretation *[+/–past]* as used or analyzed in the present discussion. One is that the interpretation corresponds here in all cases to the Indicative, since it is matrix T that matters above all. The other observation relates to Condoravdi's (2002) analysis of time for modals (see below in the Section).

With regard to clausal or sentential structure in OE, I assume the availability of a TP on top of the verb phrase, which verb phrase I analyze as being made up of *v*P and a VoiceP projection on top of it (see Pylkkänen 2008). The Voice head introduces the external argument and licenses accusative Case, among other things, and *v* acts as the verbalizer of the root (√), which is typically considered to be devoid of categorial features. Aside from the cited role of *v*, this head has a massive role to play in the licensing of formal features since it typically acts in conjunction with T in the corresponding Probe-Goal connection (see above and all through the paper).

In (6) is a simplified labelled-bracketing structure showing the architecture described immediately above, which is the one needed for the present discussion. Throughout the paper, the derivation of verbs will be shown by means of tree-diagrams rather than labelled-bracketing given the more explanatory power of the former. No root is shown in (6) since √ is not a functional head. Also, OE is typically analyzed in the literature as both head-final and head-initial in relation to T (that is, VP T alongside T VP) and in relation to V (that is, OV alongside VO). The configuration chosen in the present discussion is head-initial.

(6) [TP [VoiceP [*v*P]]]

Lastly, with regard to the semantics of modality, the seminal work of Kratzer (1991) postulates that a modal verb in any given proposition attends to a *modal base* on the one hand, which is broadly speaking either *epistemic* or *circumstantial* in the author's own account, and which is defined by the author as a conversational background which narrows down the set of possible worlds the modal quantifies over, and to an *ordering source* on the other hand, which is another conversational background covering values like speaker, addressee, time of utterance, place of utterance, etc. The modal's flavor or meaning (note e.g. 'permission', 'order', 'presupposition', 'ability', etc.) results from the conflation of these two conversational backgrounds, plus arguably other values or parameters. In the traditional literature, and likewise in the diachronic literature, the typical divisions of modality are *root* vs. *epistemic*, the distinction *deontic* vs. *dynamic* being also frequent within root modality. Incidentally, epistemic modality – or using, Kratzer's terminology – modals with an epistemic base are quite scarce in the OE period as compared to root modals. Now, Condoravdi (2002) endorses Kratzer's theory and comes to highlight a difference between the *temporal perspective* of a modal, which is the time at which the first of the two conversational backgrounds mentioned above is evaluated, and

the *temporal orientation* of a modal, which is the relation between the modal's temporal perspective and the time of the situation denoted by the lexical verb.

My focus in the paper is not on the content or interpretation of the modals' τ–features, but on the morpho-syntactic operations validating these. However, since there will be continuous reference to [+/–past], it must minimally be acknowledged that these values are massively enriched in the case of modal verbs, and a construct explaining this would be precisely Condoravdi's above-cited notions of *temporal perspective* and *temporal orientation*. Aside from the gross values [+/–past], which any verb can denote (once T acts as a Probe in the appropriate way), the value of *temporal perspective* would be unique to modals, and this in turn enriches the *temporal orientation* denoted by the structure where the modal belongs (though any given linguistic structure has its own *temporal orientation*). Throughout the discussion, I will just assume that Condoravdi's temporal perspective of the modal is an added value to the straightforward [+/–past].

Though I do not deal in this paper with the semantics of modals, I would like to say that I do not agree with the argument in Cowper and Currie Hall (2017) that the elements in (3) do not constitute a semantic class until ME. As observed in Section 1, the selection properties and subcategorization frames for these elements are diverse or heterogeneous in OE: this is nevertheless no obstacle for considering *modals* such elements as take infinitival complements and project no external argument (despite the difficulties in assessing the latter) while denoting modal meanings, that is while incorporating in themselves a root or an epistemic *modal base*.

3. Surface similarities and differences between modals and the two major groups of verbs

I contend that OE modals differ syntactically from both strong verbs on the one hand and weak verbs on the other as regards τ–licensing but not as regards φ–licensing. This way, as will be shown in Section 6, the morpho-syntactic principle ruling over subject agreement markers is the same for all verbs in the language, strong verbs, weak verbs, and modals. It is τ–licensing that works differently for strong verbs and for weak verbs, and still in an exceptional way for modals, despite the surface similarities shared by modals and strong verbs on the one hand, and modals and weak verbs on the other. In (7) below are listed the Present and Past (Indicative) forms of a verb like *scīnan* 'shine', which belongs to class I of strong verbs, a verb like *hīeran* 'hear', which belongs to one of the two major classes of weak verbs,[10] and the modal verbs *cunnan* 'can' and **sculan* 'shall'.

The segmentation above is to be taken as morphological (or virtually morpho-phonological) since the forms are *Vocabulary Items* proper. The segmentation will prove useful given that it can be held to correspond quite transparently with

(7)

	scīnan		hīeran		cunnan		*sculan	
	Present	Past	Present	Past	Present	Past	Present	Past
1sg	sc-ī-n-e	sc-ā-n-Ø	hīer-e	hīer-d-e	c-a-n(n)-Ø	c-u-ð-e	sc-ea-l-Ø	sc-(e)old-e
2sg	sc-ī-n-st	sc-i-n-e	hīer-est	hīer-d-est	c-a-n-st	c-u-ð-est	sc-ea-l-t	sc-(e)old-est
3sg	sc-ī-n-þ	sc-ā-n-Ø	hīer-þ	hīer-d-e	c-a-n(n)-Ø	c-u-ð-e	sc-ea-l-Ø	sc-(e)old-e
pl	sc-ī-n-aþ	sc-i-n-on	hīer-aþ	hīer-d-on	c-u-nn-on	c-u-ð-on	sc-u-l-on	sc-(e)old-on

the morpho-syntactic processes (that is, the feature-licensing operations) for the majority of items listed, as I aim to show in the following Sections. At this moment I would like to specify that the segments in final position correspond to subject agreement markers (person and number), and that the segments underlined would correspond to the markers for Past tense: the ablaut or apophonic vowel in the case of strong verbs, and the *-d-* suffix in the case of weak verbs and the modals.[11] More specifically on modals, and still from the point of view of morphological realization or exponency, these verbs present the widely-acknowledged traits in (8) below.

(8a) Modals in the Present exhibit ablaut variation, as is the case with strong verbs in the Past, though the cited ablaut variation is not organized as it is with strong verbs.
(8b) Modals in the Past exhibit the /*d*/ suffix, as is the case with weak verbs.[12]
(8c) Modals in the Present and in the Past exhibit subject agreement markers.

I begin Section 4 below by considering ablaut alternations and the /*d*/ suffix for strong verbs and weak verbs, respectively.

4. The core syntax underlying ablaut variation and the /d/ suffix for strong and weak verbs

The two main groups of verbs that can be distinguished throughout the OE period and likewise, clearly enough, in the first half or so of ME, are of course, as cited in Section 3, the group of strong verbs and the group of weak verbs, their most distinctive morpho-phonological trait being that the former make their Past through the mechanism of ablaut or apophony, that is by changing the vowel in the stem-segment, whereas weak verbs make their Past through the addition of a *-d-* (/*d*/) suffix. The ablaut vowels in strong verbs correspond with: 1- the Present tense, the Infinitive and the Present Participle; 2- the first and the third person sg of the Past tense; 3- the second person sg and the plural of the Past tense; 4- the Past Participle. As is well known, the specialized philological and historical literature relate ablaut in Germanic languages to distinctions of *Aktionsart* or lexical aspect for roots in PIE, and above all to aspectual distinctions operating on stems as formed from

roots, which distinctions follow a three-fold system of *imperfective*, *perfective* and *aorist* or *perfect* (Hewson and Bubenik 1997; Mailhammer 2007; Fulk 2018). Ablaut distinctions in OE strong verbs though (as in Germanic languages in general in their old stages) do not rely on aspect any longer but on tense. In contrast to ablaut, the /*d*/ suffix of weak verbs is considered to be an innovation in PGmc (see e.g. Bammesberger (1986, 63); Lahiri (2003, 91); Kastovsky (2006, 163)).

Now, I contend that the functional head T is in charge of *interpreting* the [+past] τ–features on weak verbs in OE (that is, the features that expone as the /*d*/ suffix) whereas it is *v* that *interprets* the corresponding [+past] τ–features on strong verbs (that is, the features that correspond with ablaut).

Focusing first on [+past] τ–features on weak verbs, on the assumption that for PDE to be a T-configurational language entails that a major task of T is actually to *interpret* τ–features (irrespective of the kind of verb)[13] and it being specifically the case that T in PDE *interprets* the features that expone as a /*d*/ suffix (for so-called regular or weak verbs in the language), then it seems logical or appropriate to conclude that OE T realizes the same task. With regard then to τ–features, the derivation of a form like e.g. *hīerde* 'I/you/he/she/it heard' from the corresponding column in (7) above would be as shown in the tree-diagram in Figure 1.

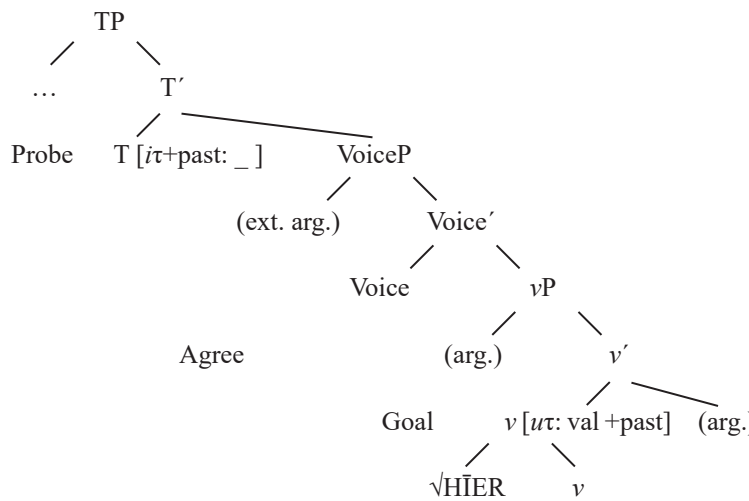

Fig. 1. Derivation of *hīerde* (licensing of τ–features)

The derivation is shown to begin with the root (√) merging in a phonological form with a so-called categorizing *v* head (see Section 2). Subsequently, the T Probe with its *interpretable* but *unvalued* τ–features goes in search of the corresponding Goal, which is the above-cited *v* head, on which τ–features are *uninterpretable* but *valued*, and *Agree* applies. The notation to the right of *v* in the tree-diagram above,

namely [*u*τ:val+past], corresponds with the result of the *Agree* operation, that is the stage when the features on *v* have already received the interpretation [+past]. The Voice head is the one in charge of projecting the external argument (see also Section 2). Incidentally, the Merge site for the external argument, as well as potential Merge sites for internal arguments, appear in Figure 1 within parentheses since their instantiation depends on the specific thematic properties of the verb (that is, whether the verb is transitive, or unaccusative,…).

In contrast to the situation with weak verbs just described, I argue that the T Probe is *not* the one that *interprets* [+past] τ–features for OE strong or ablaut verbs, that is those that exhibit morpho-phonological variation of the stem-segment, as in the column under Past of *scīnan* in (7) above. An absolutely relevant aspect to highlight in this sense is that those verbs exhibit, as is well known, two Pasts – so-called *Preterite 1* and *Preterite 2*, with vowels 2 and 3 from the set specified above in this Section, and that this distinction depends on whether the relevant nominal in the verb phrase (that which is to become the DP subject) is first or third person sg (Preterite 1) or otherwise second person sg or any person in the plural (Preterite 2). The relevance of the distinction in question is that it must be syntactically derived, that is it must be determined at core or narrow syntax, given that *Checking* of person/number with the cited nominal is needed prior to the stage where the corresponding functional head can possibly articulate τ–*interpretation*. T does not seem at all to be the candidate for such τ–*interpretation*, given that no distinction of person/number applies with regard to the Past forms of weak verbs as analyzed above in this Section: that is, the /*d*/ suffix does not co-vary with person and/or number. If T is not then the functional head *interpreting* [+past] τ–features on strong verbs, such a head must be *v*. And not only must *v* be in charge of *interpreting* [+past] τ–features on the cited strong verbs, but also [–past] τ–features, since these features surface or expone similarly as ablaut variation (column of forms under Present of *scīnan* in (7) above).

Now, in an absolutely significant way, for *v* to have the capacity to *interpret* τ–features means that *v* itself has the capacity to act as a Probe: the same as the Probe of T *interprets* the τ–features that it finds *valued* on the Goal of *v* (in the case of weak verbs), so the Probe of *v* is bound to *interpret* the τ–features that it finds *valued* on the Goal of a head that I will call v^{-0} (which entails that *v* is to be referred to properly speaking as v^{0}). Since v^{0} is synonymous with stem, then v^{-0} could be characterized as a kind of "stem-by-default". The cited head v^{-0} or "stem-by-default" would consist of the consonantal segments making up the root (√) plus *vowel number 1*, that is the vowel for the Present from the ablaut series.

The tree-diagram in Figure 2 shows the derivation of a form like e.g. *scān* 'he/she/it shone' if the nominal in question is third person sg: the "stem-by-default" or v^{-0} *scīn* will *value* the τ–feature basing upon that information, with the cited result. To note, the same derivation would ensue if the form to be derived were

e.g. *scīnaþ* ‘we/you/they shine’, the difference being that the “stem-by-default” or v^{-0} *scīn* would become the Goal of the *v* Probe and would *value* the corresponding τ–feature, which would be [–past] on such an occasion.

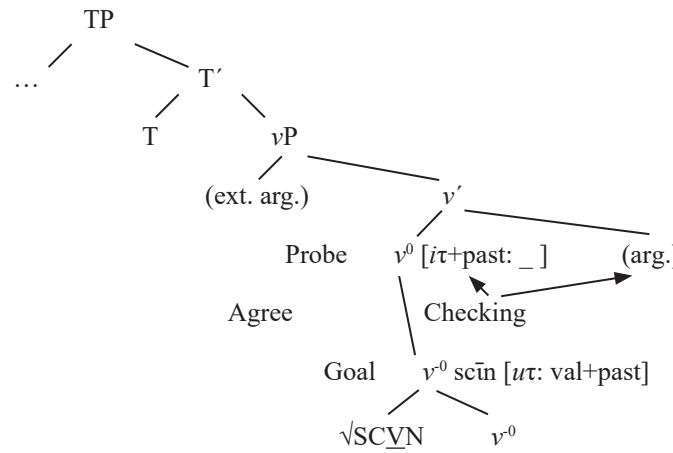

Fig. 2. Derivation of *scān* (licensing of τ–features)

As justified above, the tree-diagram in Figure 1 differs from that in Figure 2 in that the functional head acting as a Probe is T in the former while it is *v* in the latter, and likewise in the circumstance that the vocalic segment in the root (√) is specified for weak verbs (which vocalic segment figures throughout the full paradigm) but not so for strong verbs: note the use of *V* standing for *vowel* in the tree in Figure 2.[14] As argued above, the ‘vowel-by-default’ for strong verbs is the vowel for the Present, as with weak verbs, though the vowel in question is available in v^{-0}. To this must be added that no Voice Phrase is projected in Figure 2, in contrast to the tree-diagram in Figure 1. Since the *v* of strong verbs needs to establish a relation of Checking with the relevant nominal (that is, the nominal that is to become eventually the subject), then that nominal must merge on a site that is minimally m-commanded by *v* itself: the Spec position of VoiceP would not be local enough for m-command to apply, while the Spec of *v* position and the internal argument position would be m-commanded and c-commanded by *v*, respectively. Incidentally, note that the Checking relation is shown in Figure 2 to apply between *v* and an internal argument (which is to become subject) since a verb like *scīnan* ‘shine’ is to be analyzed typically as unaccusative (rather than agentive or unergative). Before analyzing τ–licensing for modals in Section 6, it is still necessary to account for φ–licensing for the two major groups of verbs in OE, that is strong verbs and weak verbs. This is the focus of Section 5 immediately below.

5. The core syntax underlying agreement markers for both strong and weak verbs

Together with tense markers, OE verbs (both strong verbs and weak verbs) exhibit subject agreement markers, to be identified with the last segment for the forms in (7) above. In an important way, if we compare the forms for *scīnan* and those for *hīeran*, we will see that the those for *hīeran* in the Present are the only ones consisting of just two segments. On the other hand, no analysis was presented in Section 4 above for [–past] τ–features on weak verbs: as will be recalled, whereas the tree-diagram in Figure 2 corresponds with either [+past] or [–past] τ–features on strong verbs (all of which expone as ablaut), the tree-diagram in Figure 1 corresponds with just [+past] τ–features on weak verbs. In current research of my own on the role played by T as a top-most functional head providing configurational status in languages descending from PIE,[15] I argue that the answer to both these queries lies in the availability of two T Probes (for virtually all IE languages, though with relevant parametric variations): on the one hand, a T Probe that *interprets* τ–features proper, that is features carrying values relative exclusively to [+/–past], and that I label *[$_T$T]* in the corresponding derivations; on the other hand, a T Probe that *interprets* τ–features with an additional φ–*interpretation*, that is features carrying [+/–past] values, and also person and/or number values, and that I label *[$_T$AgrT]*, as a short form for *Agreeing Tense*. Centring upon OE, *[$_T$T]* is the T Probe in charge of *interpreting* those features that expone as a /*d*/ suffix (note the very *[$_T$T]* node in Figure 1 above), whereas *[$_T$AgrT]* is the T Probe in charge of interpreting the τ–features with additional φ–*interpretation* that are to be found for all remaining cases, which includes all the features that expone as the above-cited last segment for the forms in the Present and Past of strong verbs and weak verbs alike. Incidentally, modals will be shown in Section 6 below to abide also in OE by a process of derivation with a *[$_T$AgrT]* node at the top, just as any other verb, which entails that their exceptional status does not lie in their subject agreement markers.

In order to show in a clearer way the capabilities of the final segment of both strong and weak forms in (7) above, that is the so-called subject agreement marker, let us consider the paradigms in isolation for the corresponding segments as found in such a widely-known historical work as is Lass (1992, 134). The set of forms in (9) are the endings provided by the author for strong verbs and for weak verbs in the (standard) West Saxon dialect. Van Gelderen (2000, 155-156) is similarly illustrative in this respect.

(9)

	Present		Past	
	Strong	**Weak**	**Strong**	**Weak**
1sg	-e	-e	-Ø	-e
2sg	-(e)st	-e(st)	-e	-(e)st
3sg	-eþ	-eþ	-Ø	-e
pl	-aþ	-aþ	-on	-on

For the above segments to indicate person and number on the one hand, and [+past] or [–past] on the other shows clearly in that exponents under the *Present* column do *not* coincide with those under *Past* (except for the syncretism in the first and second person sg in weak verbs: note *-e* and *-est*, respectively). I would like to note that the cited empirical observation has been made previously in the literature. One instance of this is Lahiri (2003, 99), who refers to the fact that "inflectional suffixes of the present and past tense of Germanic verbs are different". Her claim is made though on completely different grounds: more specifically, in order to support her insightful phonological theory about the Germanic /*d*/ suffix as originating as a verb (in a similar way as in Bengali). The co-variation between agreement and tense that can be discerned from (9) is held on the present account on the derivation/computation of verbs in OE to support a kind of generalized T Probe for all verbs.

I will put an end to this necessarily brief analysis of formal features of OE strong verbs and weak verbs by incorporating on the tree-diagrams in Figures 1 and 2 above the *[$_T$AgrT]* Probe that I defend is shared by all verb forms in OE generally speaking, whether they are strong verbs or weak verbs, in the Present or in the Past. The tree-diagram in Figure 3 completes that provided in Figure 1, and the tree-diagram in Figure 4 completes the one in Figure 2. As for Figure 5, the relevant tree-diagram would correspond to a weak verb in the Present, as in e.g. *ic hīere* 'I hear'. Incidentally, for weak verbs in the Present to necessitate of just one T Probe, by contrast with weak verbs in the Past, would be perfectly compatible with the characterization in the philological or traditional literature of the Present as the "tense-by-default": more specifically, it should be the tense exhibiting a "vowel-by-default", present throughout the full paradigm. As for strong verbs, their licensing results from the activity of two Probes, *[$_T$AgrT]* on the one hand and the *[v]* Probe on the other, though the latter is (crucially) to disappear in Late ME (see Section 7).

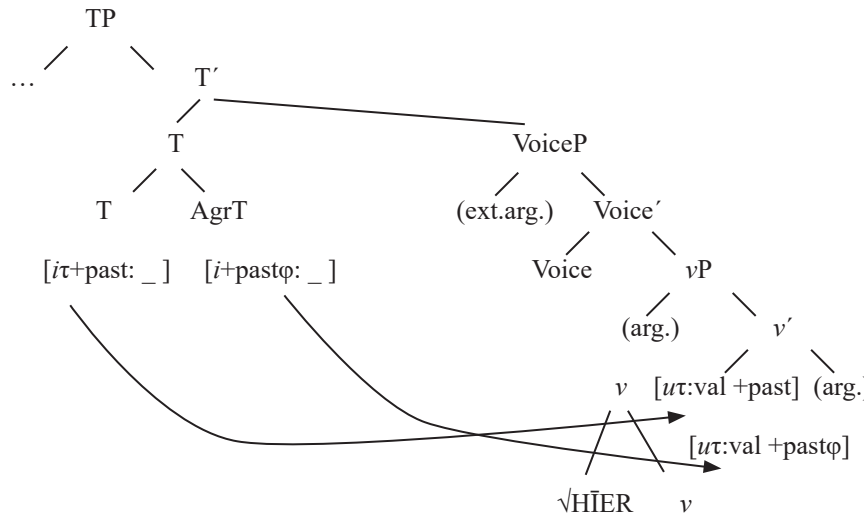

Fig. 3. Derivation of *hīerde* (licensing of τ–features and of τ–features with φ–interpretation)

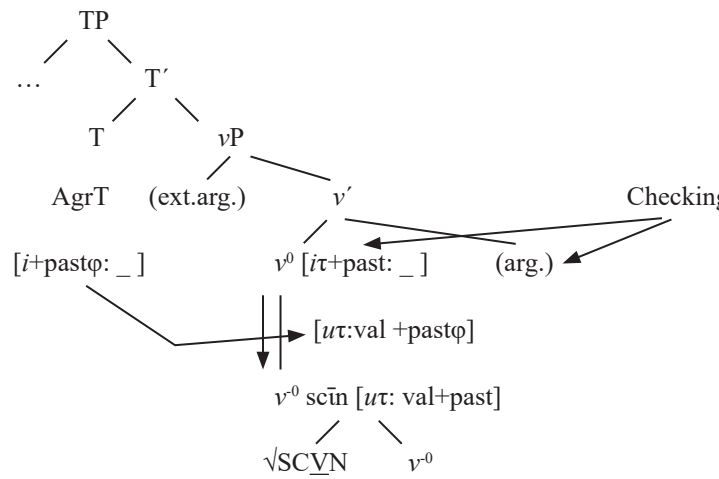

Fig. 4. Derivation of *scān* (licensing of τ–features and of τ–features with φ–interpretation)

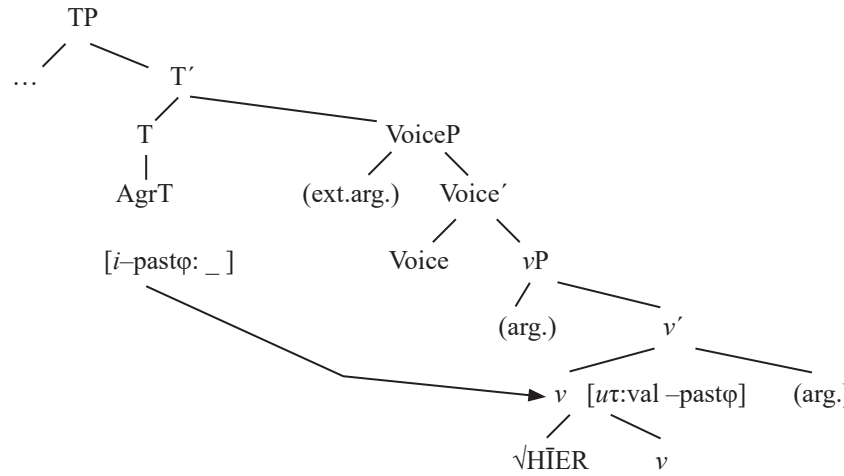

Fig. 5. Derivation of *hīere* (licensing of τ–features and of τ–features with φ–interpretation)

6. The exceptional core syntax of modal verbs: their inherent *v*-status

Having reached this point, the focus of the discussion is now on giving an answer to the issue (2a) from Section 1: namely, the status of modals previous to their recategorization as T. As observed in Section 1, the term *modal* is taken in this work as synonymous with *preterite-present* with regard to τ–licensing and φ–licensing, and therefore it is appropriate to use the term *preterite-presents/modals* in the discussion that follows, irrespective of the fact that the descriptive traits in (8a) and (8b) (see Section 3 above) appear customized for modal verbs.

Starting with (8a), the first aspect that must be noted is that there is no consensus at all in the literature about the specific class out of the seven classes of strong verbs each preterite-present/modal should or could be related to regarding ablaut variation, and this not only for OE but for all Germanic languages generally speaking: the reader is referred to e.g. Colman (1992, 243-254) or Wojtyś (2017, 16-17) for relevant descriptions and comments on this issue or also, prior to these, Birkmann (1987, chapter 1) where the author similarly concludes that some of the ablaut variations exhibited by the preterite-presents line up with those of Germanic strong verbs but not others.

Having said the above, and focusing on the fact that ablaut variation is actually the case for the majority of preterite-presents/modals in the Present (note e.g. *sceal* vs. *sculon*, or *canst* vs. *cunnon*, but *mōt*/*mōton* 'must'), the functional head that is in charge of *interpreting* the corresponding τ–feature (that is, the τ–feature endowed exclusively with a tense value, not the τ–feature with additional φ–*interpretation*)

should be in principle *v*. However, in a crucial way, for *v* to be such a head, that is for *v* to act as a Probe in search of the corresponding Goal, the latter must be available: but it is the case that there is no Goal, that is no v^{-0} (the head referred to in Section 4 as "stem-by-default") since there is no *vowel number 1* available as with strong verbs proper.

In effect, if preterite-presents/modals behaved as strong verbs proper, there would be expected to be a "stem-by-default" that is formed with the consonantal segments from the root plus a so-called *vowel number 1*, which "stem-by-default" would merge subsequently as *v* for this head to *interpret* its [–past] τ–feature. But we get none of this: rather, the forms for the singular exhibit ablaut variation *with respect to* the forms for the plural (and incidentally, they do not even follow the methodology of the Past of strong verbs since, as just observed, it is singular vs. plural, and not first and third person sg vs. second person sg and all the plural). In addition to this, if we look momentarily at (8b), the forms for the Past exhibit, on the one hand, a /*d*/ suffix, which means that it is a T Probe – specifically $[_{T}T]$ – that *interprets* the relevant [+past] τ–feature, but on the other hand, they make use of the vowel in the Present plural.

I would like to defend the view that, from a historical or diachronic perspective on the origin of the preterite-present phenomenon, two major possible analyses emerge. According to one analysis, there is an original "stem-by-default", whose existence has been obscured prior to or at the time of OE (and similarly at the time of the oldest stage of any other Germanic language), and that the elements that can be acknowledged for OE are, on the one hand, what would be identified as a *vowel number 2* for the Present singular (*can*(*n*), *sceal*), and on the other hand, what would be identified as a *vowel number 3* for the Present plural (*cunnon*, *sculon*), which happens additionally to be chosen to form the Past forms (*cuðe*, *sceolde*). According to one other possible analysis, instead of an "interrupted" ablaut series, there would just be no ablaut series in origin. More specifically, the forms for the Present singular (*can(n)*, *sceal*) would be originally some kind of past or preterite forms, though crucially not so the forms for the Present plural (*cunnon*, *sculon*): the vowel in these would have been created anew with a view to forming the Past forms (*cuðe*, *sceolde*). These observations relate, as just mentioned, to the issue of the origin of the preterite-present phenomenon on which, as is well known, there is quite a varied literature: note the so-called Grimm's theory (or strong verb theory), or the Perfect origin theory (defended by Birkmann 1987), or the theory of preterite-present forms as neologisms belonging to a period after PIE (as postulated by Tanaka 2009). The second analysis as sketched above in a completely informal way could possibly appear to be a combination of the Perfect origin theory and the neologisms theory, but I am not ready to discuss this issue in any depth at this moment.

The issue that concerns the present discussion is the derivation at core or narrow syntax of OE modals (or preterite-presents/modals), as compared to that of

strong verbs and weak verbs: more specifically, the focus at this moment is on the derivation of preterite-presents/modals in the Present (note such forms as *can*(*n*); *canst*; *can*(*n*); *cunnon* or *sceal*; *scealt*; *sceal*; *sculon* in (7) above).

Now, I would like to argue that, irrespective of the diachronic analysis that might be expected ultimately to be postulated, preterite-presents/modals in the Present are verbs that *merge* into the head *v directly* from the Lexicon, whereas all other verbs must go through a process involving either a so-called "stem-by-default" or v^{-0} (in the case of strong verbs) or a root with a "vowel-by-default" (as should be the vowel for the Present in the root of weak verbs). I contend that this entails that preterite-presents/modals in the Present bear inherent τ–licensing themselves, or the same they bear *interpretable* τ–features. They need the Probe of T to complete the derivation, as will be shown below, but the specific Probe of T as intervenes with all other verbs in the language, namely the Probe combining τ–licensing and φ–licensing (*[$_T$AgrT]*). The answer that I would like to give to the issue in (2a) above is specified in (10), where I turn to the term *modal*, rather than *preterite-present/modal*, for the discussion to be uniformly on modals.

(10) Modal verbs merge directly into *v* in OE and most of ME, prior to their recategorization as T.

The provisional derivation for modals (or preterite-presents/modals) in the Present is shown in the tree-diagrams in Figure 6 below: the diagram on the left would correspond to a form like e.g. *scealt* 'you shall (sg)', and the diagram on the right would correspond to a form like e.g. *sculon* 'you shall (pl)'.

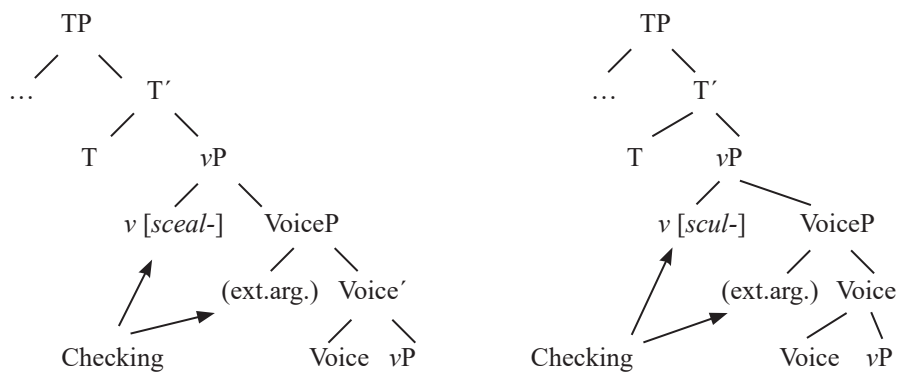

Fig. 6. Derivation of modals in the Present (licensing of τ–features)

As shown in the tree-diagrams, forms like *sceal-* or *scul-* merge in that very phonological form, just as if they were roots, though they merge under the *v* site:

they would thus have a kind of "inherent *v*-status". No τ–licensing in the form of [*u*τ…] or [*i*τ…], as in the tree-diagrams in Figures 1 or 2, or also Figures 3 or 4, is shown in Figure 6, precisely because such must be the way of formalizing that the very verbs bear *interpretable* τ–features themselves. What is needed is for them to establish a Checking relation with the corresponding nominal (as is incidentally also the case for strong verbs and for weak verbs), though in the structure with the modal proper the nominal belongs in the infinitival sequence following the modal itself.[16] Note in this respect that no VoiceP is projected on top of the *v*P where the modal is merged, and likewise no Spec,*v* position, since these would be potential positions for an external argument and modal verbs cannot select by their very thematic status any external argument or notional subject.

The issue of the status of the cited infinitival structure is of course a very important one, though not with regard to the analysis of formal feature licensing on the modal, which is the proposal here: its importance lies in resolving the puzzle whether the same kind of syntactic tree-diagram as those in Figure 6 would/could be valid for a preterite-present which is not (semantically/thematically) a modal and which specifically selects e.g. for a nominal (rather than an infinitival structure). In other words, the question would be whether the *v* head in the tree-diagrams in Figure 6 could actually select for a DP object. As observed in Section 1, I do not deal with that question or puzzle in this paper.

Let us now try and incorporate φ–licensing in the derivations above, that is the core syntax process underlying the subject agreement markers that modals (or preterite-presents/modals) in the Present exhibit. For that it is necessary nevertheless to consider also modals (or rather, preterite-presents/modals) in the Past, since the issue at stake is whether the empirical observation that was made in Section 5 above in relation to the subject agreement markers exhibited by strong verbs and weak verbs, namely for tense values and agreement values to co-vary with each other (let us recall (9)), is similarly to be made in regard to modals.

In effect, if we consider the list of forms in (11), we will in principle be able to be more specific about the description in (8c) above, repeated below in an amplified form.

(11)

	Present	**Past**
1sg	-Ø	-e
2sg	-(s)t	-est
3sg	-Ø	-e
pl	-on	-on

(8c) Modals in the Present and in the Past exhibit subject agreement markers.

In a more explicit way, modals in the Present exhibit markers that are identical to those of strong verbs in the Past, except for the second person sg, which coincides with the second person sg in the Present of strong verbs and weak verbs; as for modals in the Past, these exhibit markers that coincide with those of weak verbs in the Past.

As suggested above, the significant morpho-syntactic principle (that is, the significant core or narrow syntax principle) that appears to be operating in (11) is the same as that with strong and weak verbs in the language: namely, for there to be a Probe of T (in top-most position) that is in charge of *interpreting* τ–features with additional agreement or φ–*interpretation*. The cited Probe is labelled on the present account *[$_T$AgrT]*.

The complete derivation that I would like therefore to defend for modals in the Present looks like that in the tree-diagrams in Figure 7 below. The tree-diagrams in question are like those in Figure 6, with the incorporation of the T Probe *[$_T$AgrT]*. As in previous tree-diagrams, the Probe-Goal relation is shown with an arrow.

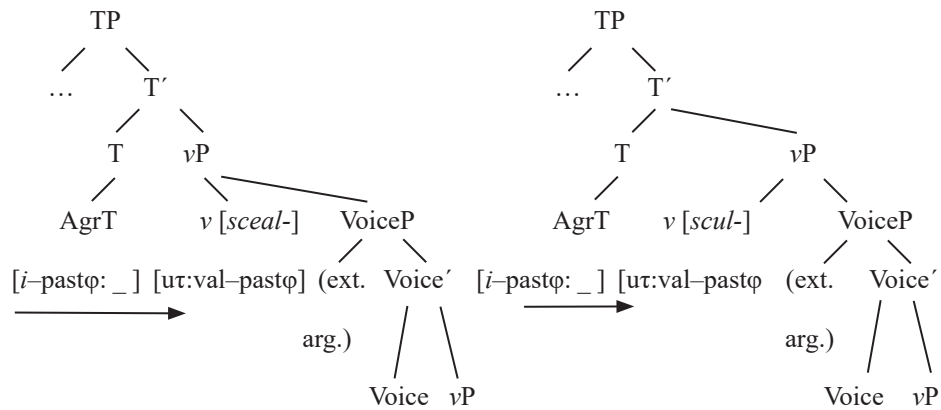

Fig. 7. Derivation of modals in the Present

The remaining issue regarding the derivation of modals is Past forms. We know already that the derivation of the features that expone as subject agreement markers will apply as with modals in the Present (tree-diagrams in Figure 7), and as a matter of fact as with all other verbs in the language (that is, by means of the*[$_T$AgrT]* Probe). But we need to analyze τ–licensing for the cited Past forms.

Now, as described in (8b), modals in the Past exhibit a /*d*/ suffix, which is a sign of weak verbs and makes us think of course of the corresponding *[$_T$T]* Probe as interpreting a [+past] τ–feature against the corresponding *v* Goal.[17] The big difference that modals in the Past would present as compared to weak verbs is that the cited Goal in weak verbs merges in *v* from a root (√) (one that contains the vowel in the Present), whereas the *v* Goal in the structure with a modal is again a *phonological*

form, specifically one containing the vowel in the Present plural. This way, (10) is also the case for modals in the Past: it must be so, given that, though these forms make use of a "regular" mechanism for τ–licensing as is the *[$_T$T]* Probe, they are built from forms that are themselves inherent *v*-elements. Modals in the Past are therefore to be analyzed also as inherent *v*-elements (though they not bear *interpretable* τ–features of their own). The tree-diagram in Figure 8 would correspond to a Past modal form like e.g. *sc*(*e*)*oldest* 'you should'.

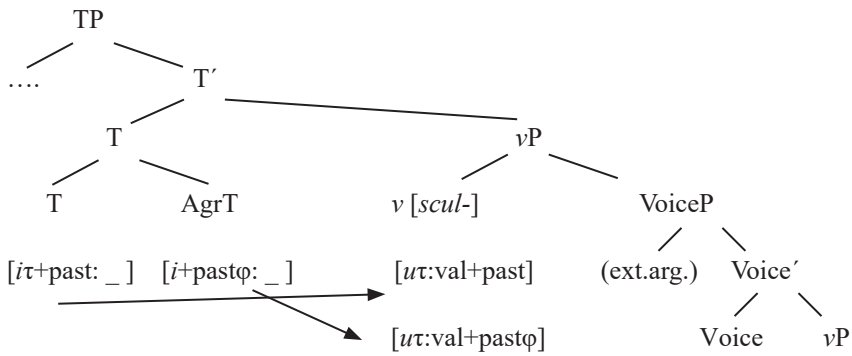

Fig. 8. Derivation of modals in the Past

While it could be thought that the account of the syntactic status of modals that I have proposed in this Section basically contributes a formalization in minimalist terms of statements that can be found in the general literature along the lines that modals bear their own tense values, or that modals bear inherent tense values, I would like to say that the account proposed makes it possible to differentiate τ–licensing from φ–licensing, while accounting for the fact that tense and agreement values co-vary with each other in the final segment of all verbs in the language in general.

The line of analysis proposed in this Section for modals should need to be completed with an analysis of the other (very conspicuous) verbal element that, as I defend, shares many of the morpho-syntactic properties of modals, and that also ends up ultimately merging as a T element: namely, the copula. The specific analysis of the copula is dealt with in a separate work. In Section 7 immediately below, I aim to provide an explanation why modal verbs stop merging externally as *v*-elements and become T elements instead.

7. The recategorization of modals as T

My focus in this last Section is on the recategorization of English modals as T elements: let us recall (2b) from Section 1. On the one hand, given the account

in the previous Section, I propose to explain why modals stop being "inherent *v*-elements"; on the other hand, the explanation to be provided will go hand in hand with an acknowledgment of the more or less precise period of time when this happens.[18]

Now, it is well known that ME and EMnE are periods in the language where the verbal system undergoes massive changes. On the one hand, there occur major changes affecting the realization itself of morphological markers, that is exponency, which changes are typically to be scanned by syntactic theory in order to acknowledge whether these correspond or not with changes in the process applying in core syntax. These changes consist in a generalized loss of morpho-phonological substance on several fronts: subject agreement markers begin a process of erosion already at the end of OE that gets stronger through ME and that consists in the generalized weakening of vowels to *-e-* (/ə/) and their demise in certain dialects, and also in the frequent and/or dialectal cancellation of the consonantal segment *-n*; weak verb classes initiate likewise a process of attrition by Late OE that continues all through the ME period and that leads to the disappearance of all class variants except one; lastly, strong verbs suffer an even more acute process of loss that affects them on several fronts: on the one hand, the mixing up of forms from one apophonic or ablaut class to another, on the other hand the conversion of many such verbs into weak verbs, and still on the other hand, and very significantly for the issue under analysis here (see below in the Section), the loss of the so-called Pret.1/Pret.2 distinction. The reader is referred to Lass (1992, 131ff.; 1997, 166ff.) for a detailed recording of all these changes.

On the other hand, that is aside from the attrition affecting agreement markers and/or tense markers, the massive changes occurring in the cited periods are identified in the literature as: the recategorization of modals, the loss of V-to-T, and the emergence of periphrastic *do*, and to these should be added the consolidation of the process of combination of auxiliaries (that is, of modals themselves, and of *have*, and *be*) and likewise the development and consolidation of manifold verbal periphrases.

I contend that the loss of the Pret.1/Pret.2 ablaut distinction for strong verbs (see within the former set of changes above) is a clear symptom that *v* stops having the capacity to act as a Probe. Of the two functional heads that, as I argued in Section 4, have the capacity from the beginning of OE to act as Probes since they have *interpretable* features of their own, namely T and *v*, it is only T that remains in such a role: as will be recalled, it was argued then, in Section 4, that *v*'s capabilities (or, in other words, the stem's capabilities) in this respect appeared to be a direct legacy from PIE times, with the caveat that the primary morpho-syntactic feature in the PIE period appears to be aspect rather than tense.

The answer that I would like to propose for (2b) is that modals are recategorized as T elements, that is as elements merging externally or directly from the Lexicon into T, because *v* ceases to be a site where τ–features are *interpreted*. As argued in Section 6, modals bear inherent τ–features, or the same modals have

inherent *v*-status, which means that they do not rely on any *v* Probe, in contrast to strong verbs: but still, *v* is identified throughout OE and part of ME as a locus of τ–*interpretation*, a circumstance that ceases to be. As a consequence of this, modals pass on to have a site of external Merge – actually, the only one in the language from that time onwards – where τ–features are *interpreted*, and that site is T.

Now, Lass (1992, 132), and prior to this Mossé (1952, 69), refer to the circumstance of the levelling to a single ablaut vowel for the Past of strong verbs (in other words, the loss of the Pret.1/Pret.2 distinction) as showing in quite a generalized way after approx. 1450. And Lass (1997, 177-178) mentions explicitly that the distinction singular *shal* vs. plural *shullen* (and similarly for *can*, *may*,…) disappears around the decade of the 1470s: hence the reference to this specific period (between 1450 and 1470) from the beginning of the paper (Section 1) as the period when English modals change their status. Incidentally, though variation between the preponderance of one of the two vowels over the other is attested (for strong verbs and for modals), a clear tendency is for the vocalic segment in Pret.1 to win over that in Pret.2 of strong verbs, and for the vocalic segment in the singular of the present forms of modals to win over that in the plural.

On the present account then, modals are inherent *v*-elements, and the timing of the loss of *v*'s capabilities as a Probe is argued here to lead to the recategorization of modals as T, no later than 1470. Now, in a logical way, independent evidence is needed to support this dating, which happens to antecede in a few decades that most frequetly postulated in the literature. In effect, the time period that is generally identified in the literature for the recategorization of modals is one roughly coinciding with the time of the beginning of the loss of so-called V-to-T movement: namely, the start of EMnE, that is aroud 1500.[19]

As I specified in Section 1, I deal with the issue of V-to-T (see (2c)) in a separate work due to space limitations. I would nevertheless like to advance that I defend the view that the loss of V-to-T is to be associated with the attrition of subject agreement markers (see at the beginning of the present Section), which is actually the most widely-defended position in the literature, whereas I contend that the recategorization of modals as T is to be associated, as discussed above in this Section, with the demise of *v* as a locus of τ–interpretation. However, I still need independent evidence to support the view that modals undergo the big change of becoming T no later than 1470, and I will invoke for this, in an interim way, data from a recent monumental corpus search in the literature, namely that reported in Haeberli and Ihsane (2020), that nevertheless appears to treat in a unified way what I analyze in my research as two distinct historical processes: on the one hand, the recategorization of modals (and the copula) as T and, on the other hand, the loss of V-to-T movement. In this sense, it is important to highlight the fact that modals do not just keep moving to T: rather, modals do become T elements themselves. The specific portion from Haeberli and Ihsane (2020) that I would like to invoke at this moment is that where the authors present detailed statistics of the position of V(erb)

and M(odal) relative to adverb-placement. One of the conclusions of Haeberli and Ihsane's fine-grained corpus analysis is that the decline of V-to-T in English (which will ultimately lead to its loss) starts in the middle of the fifteenth century, which seems to be perfectly in accord with the generalized argumentation in the literature that the loss of V-to-T is inseparable from the loss of subject agreement markers (see above). They go on to show that modals differ significantly from main verbs from the period 1500–1525 onwards, thus indicating that modals are in T then, but not main verbs, which cease to move.

"The periods 1350–1420 and 1420–1475 show the end of a gradual decline in the frequencies SAdvMV and SAdvV order from Old English onwards, with the low point being reached in 1420–1475. In the following period 1475–1500, we see a significant increase of SAdvX both with modals and with main verbs [….] But whereas this rise continues with main verbs in the period 1500–1525 [….] the rate of SAdvMV order drops in a statistically significant way". (Haeberli and Ihsane 2020, 163).

The criticism that I develop in a separate work consists in that the authors do not appear to give due importance to the contrast exhibited by SAdvMV as compared to SAdvV in the specific period 1420–1475. In this period, according to Haeberli and Ihsane's statistics (2020, 163), SAdvV amounts to 8.5% whereas SAdvMV, that is a sequence which would show the frequency of lack of movement on the part of the modal, is only 1.1%. The contrast between the two appears to be significant, and I would like to argue that it indicates that modals, in that period, are already T elements, hence the low frequency of the order where an Adv appears to their left.

8. Summary

I have argued that modal verbs (and arguably in principle preterite-presents in general) have an exceptional syntactic status ever since OE that consists in that they merge externally in *v*. By contrast, strong verbs merge as a "stem-by-default" (v^{-0}) prior to *v*, and weak verbs for their part merge as a root (which incorporates in itself the "vowel-by-default" of the Present) also prior to *v*. Whereas strong verbs rely on a *v* Probe in order to get their τ–features licensed, which expone as ablaut variation, and weak verbs rely on a T Probe in order to get their τ–features licensed, which expone as a /*d*/ suffix, modal verbs in the Present have *interpretable* τ–features of their own, and modal verbs in the Past must rely on a T Probe as weak verbs do, but they do so after merging externally in *v* (like modals in the Present). Modals necessarily differ from both strong verbs and weak verbs in their τ–licensing, whereas they share with the latter (with both strong verbs and weak verbs) agreement or φ–licensing. A specific Probe of T ($[_T AgrT]$) is in charge of the latter for all verbs in the language, since tense and agreement co-vary with each other in the subject agreement markers of all verbs. Modals pass on to merge directly under T when *v* ceases to be a locus of *interpretable*

τ–features. A symptom that *v* loses such a capacity is the loss of the Preterite 1/ Preterite 2 ablaut distinction.

Notes

1 In this paper reference is to core modals, and not to semi-modals or mixed modals like *ought to*, *dare* or *need*. Though the (morpho-syntactic) origin of some of these elements is the same as that of core modals, they demand specific argumentation relative to subcategorization or s-selection properties that cannot be included in the discussion for reasons of space.

2 As is well known, *external merge* is the technical term used in minimalist theory to refer to the mechanism by means of which any given element is selected by the speaker from the (abstract) Lexicon in his/her mind in order to operate with it in the syntax.

3 Such a characterization applies likewise to the copula forms *am*/*is*/*are* and *was*/*were* within the *be*-paradigm. See brief reference to the copula at the end of Section 6, and also note 13 below.

4 Feature licensing refers generally to the validation or legitimatizatioin of properties of elements in the syntax, in the case at hand, tense features (or also agreement features): see Section 2 for the *Agree* operation in this respect. Throughout the paper, the terms τ–licensing and φ–licensing will be frequently used.

5 See note 18 below.

6 As is well-known, Birkmann (1987) is a referential work within the philological literature of the preterite-present phenomenon covering the full range of Germanic languages. And Wojtyś (2017) is a fine-grained corpus search and analysis of contexts of use of those preterite-presents that have disappeared.

7 See note 4 above.

8 As one reviewer points out, it is relevant to highlight the fact that not all preterite-presents are attested as both modal verbs and verbs with full lexical capacity, at least not to the same degree at all. Thus, *cunnan* is the element that arguably exhibits both ways of meaning most profusely (‘know’ vs. ‘be able to’, ‘can’), while **motan* would represent the opposite end of the scale, since it appears to be used exclusively as a modal (‘may’).

9 Following conventions, the asterisk here means that the form in question (in this case, the Infinitives) are unattested.

10 As is well known, weak verbs appear variously divided in the literature into two, three or four classes, depending on the criteria implemented.

11 In *cuðe* and *uðe*, a fricative interdental rather than /*d*/ is the case.

12 More specifically, the Past forms of modals appear to be construed in a similar fashion to so-called irregular weak verbs, that is those weak verbs where only the Present reflects the efects of umlaut (as in *tēllan*/*tealde*, *sēcan*/*sōhte*).

13 As assumed generally in syntactic theory, for T to be the functional head providing configurationality means that the order of the subject and object(s) is regulated by the position of the finite verb, that is the verb *valuing* τ–features as *interpreted* by T.
14 *V* is actually the way in which the vowels of strong verbs are typically characterized in the philological literature whenever the corresponding root is cited.
15 See note 13 above.
16 Incidentally, the Checking relation is shown to apply between the modal and the external argument or subject of the infinitival structure in a completely aleatory way: that is, in case the infinitive verb is unaccusative, then Checking will apply between the modal and the internal object of the infinitive (since the latter would trivially select for no external argument).
17 See note 12 above.
18 As a matter of fact, one other major issue should be added to the two mentioned in the main text, namely, why modals in Germanic languages other than English do not become T, it being the case that, one, the relevant elements are also preterite-presents in those languages, and two, an analysis like the one provided here appears in principle to be on the right track also for those grammars. In separate research I contend that the answer to this puzzle would relate to the different connections existing between modals and the copula in those languages vs. the situation in English.
19 As is well known, there is a time gap between the period of loss of V-to-T according to the ordering of medial adverbs (a typical test for verb movement) and the period of loss of V-to-T according to the generalized use of periphrastic *do* (see Haeberli and Ihsane (2016; 2020) and references therein). The period that is the more relevant of the two for the analysis of the recategorization of modals is the first one.

References

Aitchison, Jean. 1980. "Review of *Principles of Diachronic Syntax* by D. Lightfoot." *Linguistics* 18: 137–146.

Bammesberger, Alfred. 1986. *Untersuchungen zur vergleichenden Grammatik der germanischen Sprachen*. Heidelberg: Winter.

Birkmann, Thomas. 1987. *Präteritopräsentia*. Tübingen: Max Niemeyer Verlag.

Chomsky, Noam. 2000. "Minimalist Inquiries: The Framework." *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*. Ed. Roger Martin, David Michaels, and Juan Uriagereka. Cambridge, MA: MIT Press. 89–155.

Chomsky, Noam. 2001. "Derivation by Phase." *Ken Hale: A Life in Language*. Ed. Michael Kenstowicz. Cambridge, MA: MIT Press. 1–52.

Colman, Fran. 1992. "A Touch of (Sub-)Class? Old English 'Preterite-Present' Verbs." *History of Englishes. New Methods and Interpretations in Historical Linguistics*. Ed. Matti Rissanen, Ossi Ihalainen, Terttu Nevalainen, and Irma Taavitsainen. Berlin & New York: Mouton de Gruyter. 241–261.

Condoravdi, Cleo. 2002. "Temporal Interpretation of Modals: Modals for the Present and the Past." *The Construction of Meaning*. Ed. David Beaver, Luis Casillas Martínez, Brady Clark, and Stefan Kauffmann. Stanford, CA: CSLI Publications. 59–88.

Cowper, Elizabeth, and Daniel Currie Hall. 2017. "The Rise of Contrastive Modality in English. A Neoparametric Account." *Linguistic Variation* 17: 68–97.

Embick, David. 2000. "Features, Syntax, and Categories in the Latin Perfect." *Linguistic Inquiry* 31: 185–230.

Fulk, Robert D. 2018. *A Comparative Grammar of the Early Germanic Languages*. Amsterdam & Philadelphia: John Benjamins Publishing Company.

van Gelderen, Elly. 2000. *A History of English Reflexive Pronouns*. Amsterdam & Philadelphia: John Benjamins Publishing Company.

Haeberli, Eric, and Tabea Ihsane. 2016. "Revisiting the Loss of Verb Movement in the History of English." *Natural Language & Linguistic Theory* 34: 497–542.

Haeberli, Eric, and Tabea Ihsane. 2020. "Micro- and Nano-change in the Verbal Syntax of English." *Syntactic Architecture and Its Consequences. I: Syntax Inside the Grammar*. Ed. András Bárány, Theresa Biberauer, Jamie Douglas, and Sven Vikner. Berlin: Language. 159–173.

Halle, Morris, and Alec Marantz. 1993. "Distributed Morphology and the Pieces of Inflection." *The View from Building* 20. Ed. Kenneth Hale and Samuel Jay Keyser. Cambridge, MA: MIT Press. 111–176.

Hewson, John, and Vit Bubenik. 1997. *Tense and Aspect in Indo-European Languages*. Amsterdam & Philadelphia: John Benjamins Publishing Company.

Kastovsky, Dieter. 2006. "Typological Changes in Derivational Morphology". *The Handbook of the History of English*. Ed. Ans van Kemenade and Bettelou Los. Malden, MA & Oxford: Blackwell Publishing. 151–176.

van Kemenade, Ans. 1993. "The History of English Modals: A Reanalysis." *Folia Linguistica Historica* 13: 143–166.

Kratzer, Angelika. 1981. "The Notional Category of Modality." *Words, Worlds, and Contexts*. Ed. Hans-Jürgen Eikemeyer and Hannes Rieser. Berlin: De Gruyter. 38–74.

Kratzer, Angelika. 1991. "Modality." *Semantik: Ein internationales Handbuch der zeitgenössischen Forschung*. Ed. Arnim von Stechow and Dieter Wunderlich. Berlin: De Gruyter. 639–650.

Lahiri, Aditi. 2003. "Hierarchical Restructuring in the Creation of Verbal Morphology in Bengali and Germanic: Evidence from Phonology." *Analogy, Levelling, Markedness. Principles of Change in Phonology and Morphology*. Ed. Aditi Lahiri. Berlin & New York: Mouton de Gruyter. 71–124.

Lass, Roger. 1992. "Phonology and Morphology." *The Cambridge History of the English Language.* Volume II*: 1066-1476*. Ed. Norman Blake. Cambridge: Cambridge University Press. 23–155.

Lass, Roger. 1997. "Phonology and Morphology." *The Cambridge History of the English Language.* Volume. III*: 1476-1776*. Ed. Roger Lass. Cambridge: Cambridge University Press. 56–186.

Lightfoot, David. 1979. *Principles of Diachronic Syntax*. Cambridge: Cambridge University Press.

Lightfoot, David. 1991. *How to Set Parameters: Arguments from Language Change*. Cambridge, Mass.: MIT Press.

Lightfoot, David. 2006. "Cuing a New Grammar." *The Handbook of the History of English*. Ed. Ans van Kemenade and Bettelou Los. Malden, MA & Oxford: Blackwell Publishing. 24–44.

Lightfoot, David. 2017. "Acquisition and Learnability." *The Cambridge Handbook of Historical Syntax*. Ed. Adam Ledgeway and Ian Roberts. Cambridge: Cambridge University Press. 381–400.

Lowrey, Brian. 2012. "Grammaticalisation and the Old English Modals." *Quaderna* 1: 1–29.

Mailhammer, Robert. 2007. *The Germanic Strong Verbs: Foundations and Development of a New System*. Berlin: Mouton de Gruyter.

Mossé, Fernand. 1952. *A Handbook of Middle English*. Baltimore: The Johns Hopkins Press.

Pesetsky, David, and Esther Torrego. 2007. "The Syntax of Valuation and the Interpretability of Features." *Phrasal and Clausal Architecture: Syntactic and Interpretation*. Ed. Simin Karimi, Vida Samiian, and Wendy K. Wilkins. Amsterdam & Philadelphia. John Benjamins. 262–294.

Plank, Frans. 1984. "The Modals' Story Retold." *Studies in Language* 8: 305–364.

Pylkkänen, Liina. 2008. *Introducing Arguments*. Cambridge, MA: MIT Press.

Roberts, Ian. 1985. "Agreement Parameters and the Development of English Modal Auxiliaries." *Natural Language and Linguistic Theory* 3: 21–58.

Roberts, Ian. 1993. *Verbs and Diachronic Syntax: A Comparative History of English and French*. Dordrecth, Boston and London: Kluwer Academic.

Roberts, Ian, and Anna Roussou. 2003. *Syntactic Change. A Minimalist Approach to Grammaticalization*. Cambridge: Cambridge University Press.

Tanaka, Toshiya. 2009. *The Genesis of Preterite-Present Verbs.* Faculty of Languages and Cultures, Kyushu University.

Warner, Anthony. 1993. *English Auxiliaries: Structure and History*. Cambridge: Cambridge University Press.

Wojtyś, Anna. 2017. *The Non-Surviving Preterite-Present Verbs in English. The Demise of* *dugan, munan, *-nugan, *þurfan, *and* unnan. Frankfurt am Main: Peter Lang.