

A *Bi*-clausal Account of English '*to*'-Modal Auxiliary Verbs

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Sungshim Hong. 2014. A *Bi*-clausal Account of English '*to*'-Modal Auxiliary Verbs. *Language and Information* 18.1, 33–52. This paper proposes a unified structural account of some instances of the English Modals and Semi-auxiliaries. The classification and the syntactic/structural description of the English Modal auxiliary verbs and verb-related elements have long been the center for many proposals in the history of generative syntax. According to van Gelderen (1993) and Lightfoot (2002), it was sometime around 1380 that the Tense-node (T) appeared in the phrasal structures of the English language, and the T-node is under which the English Modal auxiliaries occupy. Closely related is the existing evidence that English Modals were used as main verbs up to the early sixteenth century (Lightfoot 1991, Han 2000). This paper argues for a *bi*-clausal approach to English Modal auxiliaries with the infinitival particle '*to*' such as 'ought *to*' 'used *to*' and 'dare (*to*)' 'need (*to*)', etc. and Semi-auxiliaries including 'be *to*' and 'have *to*'. More specifically, 'ought' in 'ought *to*' constructions, for instance, undergoes V-*to*-T movement within the matrix clause, just like 'HAVEAux' and all instances of 'BE', whereas '*to*' occupies the T position of the embedded complement clause. By proposing the *bi*-clausal account, Radford's (2004, 2009) problems can be solved. Further, the historical motivation for the account takes a stance along with Norde (2009) and Brinton & Traugott (2005) in that Radford's (2004, 2009) syncretization of the two positions of the infinitival particle '*to*' is no different from the 'boundary loss' in the process of Grammaticalization. This line of argument supports Krug's (2011), and in turn Bolinger's (1980) generalization on Auxiliaryhood, while providing a novel insight into Head movement of V-*to*-T in Present Day English. (Chungnam National University)

Key words: '*to*'-Modals, one-word Modals, *bi*-clausal, mono-clausal, raising predicates, lexical/semantic features, V-*to*-T Head movement, expletive

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1. Introduction

Hudson (2002) in his Linguistic Association of Great Britain lecture reports that there is no language without auxiliary verbs. But its syntactic or morpho-syntactic patterns are quite different from one language to another. Therefore, in a language like English, there is a small group of verbs that can display the characteristics of auxiliary verbs. In other languages such as French and German, different rules and definitions should apply to characterize the group of words. And yet, more complex situation occurs when an agglutinating language like Korean is considered.¹

The classification of auxiliary verbs in English has attracted much attention from many scholars, some of which include Chomsky (1957, 1972, 1981, 1995), Jackendoff (1972), Emonds (1976), Quirk, et al (1985), Huddleston (1984), E. van Gelderen (1993), Celcia-Murcia & Marianne & D. Larsen-Freeman (1999), Huddleston & Pullum (2002), Hudson (2002), A. Radford (2004, 2009) and many others. They all have proposed diverse jargons and terminology. For example, Celcia-Murcia & Larsen-Freeman (1999) referred 'have to' as phrasal-modals.² Huddleston & Pullum (2002, pp. 201-205) use different names for some of the auxiliary verbs. Thus, the terms lexical modals and quasi-modal have been used in their work for 'have got' and 'be', respectively. Aarts (1999, 2002), on the other hand, left many of the "auxiliary-like" verbs untouched, concentrating mainly on the four major auxiliary verb types such as Modal auxiliary, Aspectual auxiliary (perfect and progressive), Voice auxiliary, and Dummy auxiliary.

Hudson (1971, pp. 58-59) has presented a different set of system in which he divides verbs into grammatical verbs and lexical verbs. Grammatical verbs again are subdivided into modal verbs and non-modal verbs. Modal verbs include 'will', 'must', 'may', etc., whilst non-modal verbs include DO, BE, and HAVE. Lexical verbs include copular verbs, intransitive verbs, and transitive verbs.

Quirk, *et al.* (1985) classify English verbs of intermediate functions as central modals, marginal modals, modal idioms, semi-auxiliaries, and catenatives. Quirk, et al's classification of English auxiliary verbs is much more comprehensive and thorough than that of many others. However, no matter how illuminating and comprehensive their classification might be, it is still far from being clear when it comes to the configuration of the English sentences.

The purpose of this paper is to argue that 'ought' (and the lexical part of other 'to'-Modals), just like 'HAVE/BE', undergoes overt Verb Raising, i.e., V-to-T movement. If I take 'ought' as a lexical verb and also consider 'to' to be Auxiliary in the embedded clause, then the internal structure of 'ought to' construction (hereafter, OTC) is unavoidably *bi*-clausal. The merit of this approach is that it can easily extend to other similar 'to'-Modals such as 'used to', 'need (to)' and 'dare

¹ Korean auxiliary predicates do not constitute a separate group of words. Rather they are attached to the main (lexical) verb which forms a serial predicate. The discussions on Korean auxiliary verbs (or auxiliary predicates, Nam K.-S., 2005) go beyond this paper, and therefore will be left open for further research.

² See Hong (2007) for an analysis of 'have to', in which 'have' in 'have to' constructions is a lexical verb, especially a raising one and the surface subject originates from the embedded clause, which means that 'have to' also receives a *bi*-clausal analysis. In its effect, this paper is an extension of the proposal.

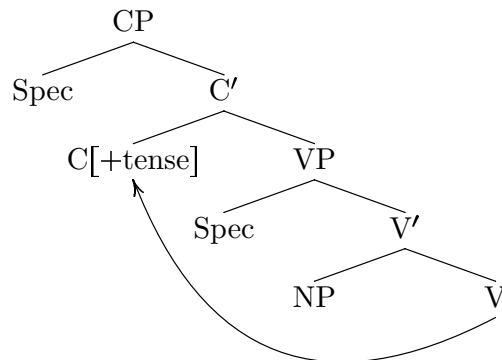
(to) and semi-auxiliaries like ‘be to’, ‘have to’ in a unified manner. Thus, we would attribute the whole shift of English auxiliaries from the status of lexical verbs (or equivalently main verbs) to the depletion/reduction of semantic features of those verbal elements as part of Grammaticalization (Norde, 2012).

The overall organization of this paper is as follows: In Section 2, the two tier *bi*-clausal structure of the sentences with ‘to’-Modals is proposed based on etymological background of ‘ought’, the internal structure of English Phrase markers, the Double Modal Constructions (DMC), the cross-linguistic evidence from varieties of the English language. The consequences of this proposal are mentioned as well. In Section 3, the conclusion follows.

2. Backgrounds: T-node and English Auxiliary Verbs

In recent generative syntax research, many scholars argue that the infinitival particle ‘to’ position under the T-node.³ According to van Gelderen (1993) and Lightfoot (2002), it was around 1380 when the T-node appeared in the English language. This period coincides with the shift of the then main verbs into auxiliary verbs such as Modals. Language change, of course, is gradual and the following structures from van Gelderen (1993, pp. 83-84) would show that structural shifts in a schematic fashion.

- (1) a. before 1200

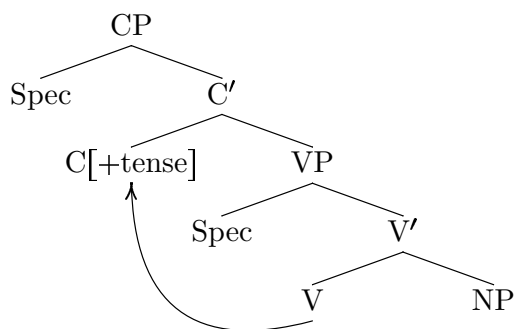


³ This motivation covers the following contrast:

- (i) It is important for John to study generative syntax
- (ii) It is important that John should study generative syntax

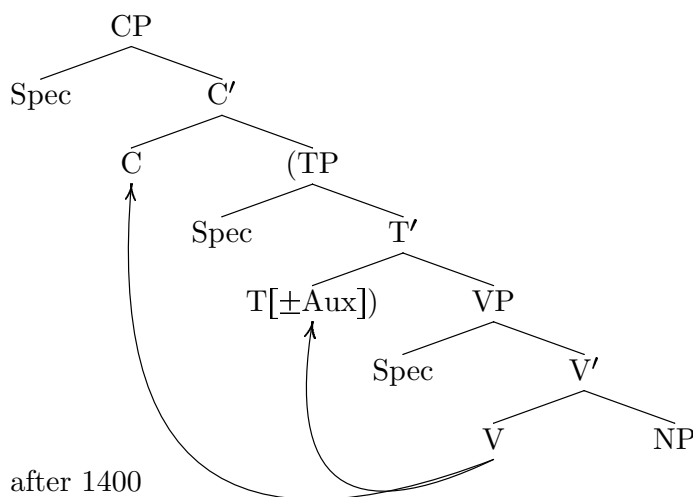
Thus, based on the paraphrasability of the examples immediately above, we establish that ‘to’ and ‘should’ position under the same structural position, T-node. For further argument, see Radford (1997, 2004, 2009).

b. between 1200-1380

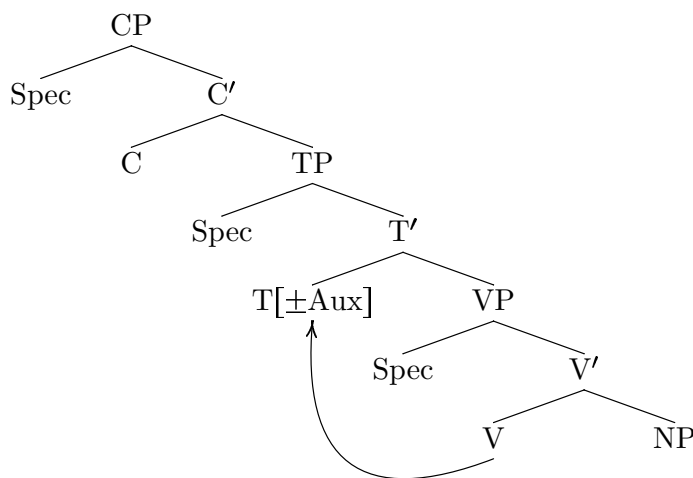


For (1a), V-to-C movement takes place in Old English. Note further that in (1a) the basic word order of OE VP is NP-V. Between 1200- 1380, the Middle English period, the surface word order has become SVO, as (1b) shows. Still, the verb directly Head-moves to C[+tense].

(2) a. 1380-1400



b. after 1400



(2a), according to van Gelderen’s explanation, TP-T is optional. When it shows up, the tense features exist in T, otherwise in C. Two arrows mean that wherever the tense features are, V Head-moves to that Head, either T or C. Like van Gelderen and many others, I adopt the feature of $[\pm\text{Aux}]$ for each and every Functional Projection (FP) including $F_{\text{HAVEPERFP}} > F_{\text{BePROGP}} > F_{\text{BeVOICEP}}$ (Ellison’s (46), 2007), and the phrase structures of those ‘to’-Modals and Semi-auxiliaries are to be presented below.⁴

In what follows, I will pinpoint some inconsistency and conceptual problems that Radford has faced with respect to the internal structure of OTCs and potentially other ‘to’-Modals.

3. Internal Structure of ‘ought to’ construction and ‘to’-Modals

In this Section, I propose that first, ‘ought’ starting as a lexical verb undergoes overt V-to-T movement in PDE, just as English auxiliary verbs like HAVEAux and BE do. My argument receives some empirical supports from Scottish English and some varieties of English in which ‘ought’ is still used as a lexical verb. Likewise, ‘used’, ‘need’, and ‘dare’ are all lexical/main verbs are still on the verge of V-to-T Head movement as part of Grammaticalization. This proposal means that these ‘to’-Modals are the instances of V-to-T movement.⁵ As a matter of fact, this proposal supports Krug (2011) and Bolinger (1980) in that “...the moment a verb is given an infinitive complement, that verb starts down the road of auxiliariness”.⁶ In my proposal, their generalization can be interpreted as the following: If a V starts to take infinitive complement, that indicates that the V starts losing its lexical features and is more susceptible to Head-movement of V-to-T. In other words, OTC receives an analysis of ‘seem’-type of verbs.

- (3) a. John $[_{T'}[_{VP} \text{seems } [_{TP} \text{John } [_{T'} \text{to work hard}]]]]]$
 b. John $[_{T'} \text{ought } [_{VP} \text{ought } [_{TP} \text{John } [_{T'} \text{to work hard}]]]]]$

The only difference is that ‘ought’ undergoes verb raising, whereas ‘seem’ is still too lexical so that it receives ‘do’-support.

Note that the Grammaticalization of the central Modals was completed at around the 16th century and most of the Modals were no longer used as a main verb (Lightfoot 1999). However, I argue that ‘ought’ in ‘ought to’, ‘used’ in ‘used to’, ‘dare’ in ‘dare (to)’, ‘need’ in ‘need (to)’, and ‘be’ in ‘be to’ all originate from the lexical V position, undergoing Verb Raising. In what follows, the internal structure of ‘to’-Modals, especially OTCs, is presented.

⁴ The rule of tense lowering is argued to be after 1600. Here, F stands for Functional, we assume.

⁵ See Hong (in preparation) for V-to-T Head-movement in PDE.

⁶ Etymology dictionaries provide the following definitions of the word ‘ought’:

‘Old English *ahte* “owned, possessed,” past tense of *agan* “to own, possess, owe”. As a past tense of owe, it shared in that word’s evolution and meant at times in Middle English “possessed” and “under obligation to pay.” It has been detached from owe since 17c., though *he ought me ten pounds* is recorded as active in East Anglian dialect from c.1825. As an auxiliary verb expressing duty or obligation, it represents the past subjunctive” (Online Etymology Dictionary)

3.1 Radford's problems with 'ought to' construction

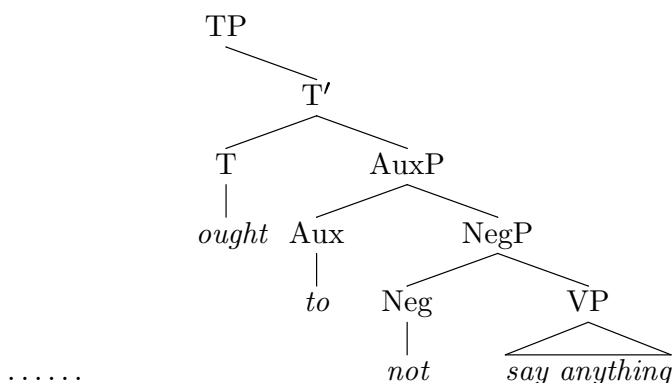
We know that 'ought' in OTC as auxiliary verb is interesting, since it takes 'to'-infinitival complement. Thus, 'to'-Modals casts a problem with respect to their tree-diagrams, since both 'ought' and 'to' are taken to position under T on the basis of the standard or thus far assumed theory of generative syntax. If I also follow the standard assumption that there is only one T-node in one TP, which seems quite difficult to dispute, then there is no way of accommodating both 'ought' and 'to' under single T. Which one of the two, 'to' and 'ought' should be in T?⁷ Or are both under T?

Radford (2004, 2009) has discussed the very issue. Based on the following pair of examples, he proposes a functional projection, AuxP, for two potential positions of Neg in OTC.

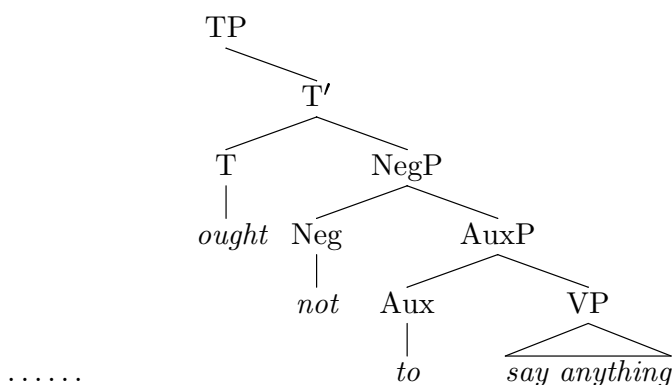
- (4) a. John [_{T'} ought [_{T'} to [_{NegP} not [_{VP} say anything]]]]
- b. John [_{T'} ought [_{NegP} not [_{T'} to [_{VP} say anything]]]]

Radford has proposed the following structures for (4a) and (4b), respectively.

- (5) a. Radford's analysis of (4a)



- b. Radford's potential analysis of (4b)

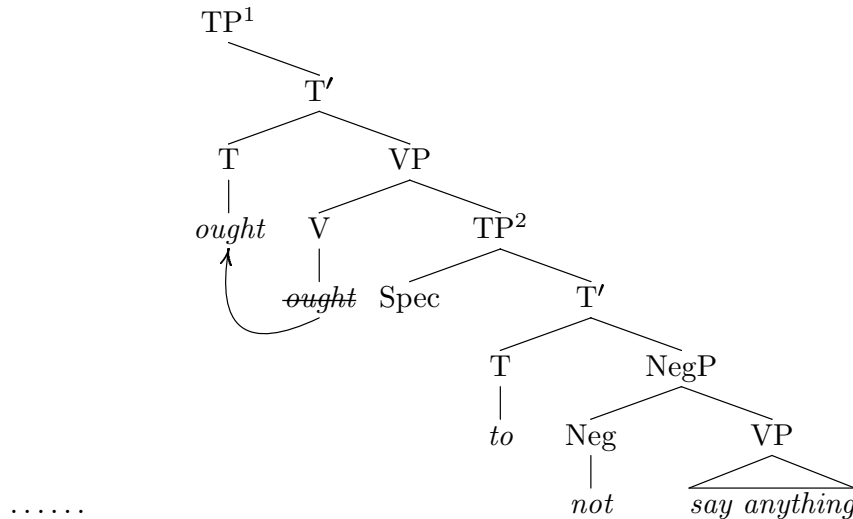


⁷ One may propose that 'ought' and 'to' should be amalgamated or reanalyzed as one Modal. This potential proposal seems to be fine because 'ought to' can be substituted with 'should'. However, that alternative is not what we are seeking for, since we need to posit another mechanism to put 'ought' and 'to' together.

In short, under Radford’s account, two problems occur; first, the two elements ‘to’ and ‘ought’ are fighting for one position, T, unless there is an extra FP called AuxP. The second problem is that even if I adopt an extra FP, the position of the FP is ad hoc: in (5a) AuxP is above NegP and in (5b) AuxP is below NegP, and we give up on the generalization that ‘to’ usually occupies T.⁸

His wrinkles will disappear under my approach. Suppose that every instance of ‘to’ there is a TP. That is, ‘to’ always occur under T, and ‘ought’ in OTC originates from V as a lexical V. This assumption is neither novel nor ad hoc. Rather it is a standard generalization under the current Minimalist framework. It is tantamount to saying that English ‘to’-Modals are all *bi*-clausal. Then, the matrix clause has its lexical verb, ‘ought’, ‘need’ ‘used’ ‘dare’, and ‘be’ which undergo V-to-T movement, leaving its copy behind. The copy in situ will receive the semantic interpretation, whereas the moved copy in the C-commanding position receives the phonetic interpretation. The structures of (3a)-(3b), I propose, are the following two tier representations, rather than mono-clausal (5a) and (5b), respectively.

(6) =Structure of (3a)



(6) shows that ‘not’ is above the embedded VP, nothing novel or extraordinary from the current framework; NegP is above VP and below T’ and ‘to’ is as usual under T of the complement clause. Turning to (3b), the structure I propose is the

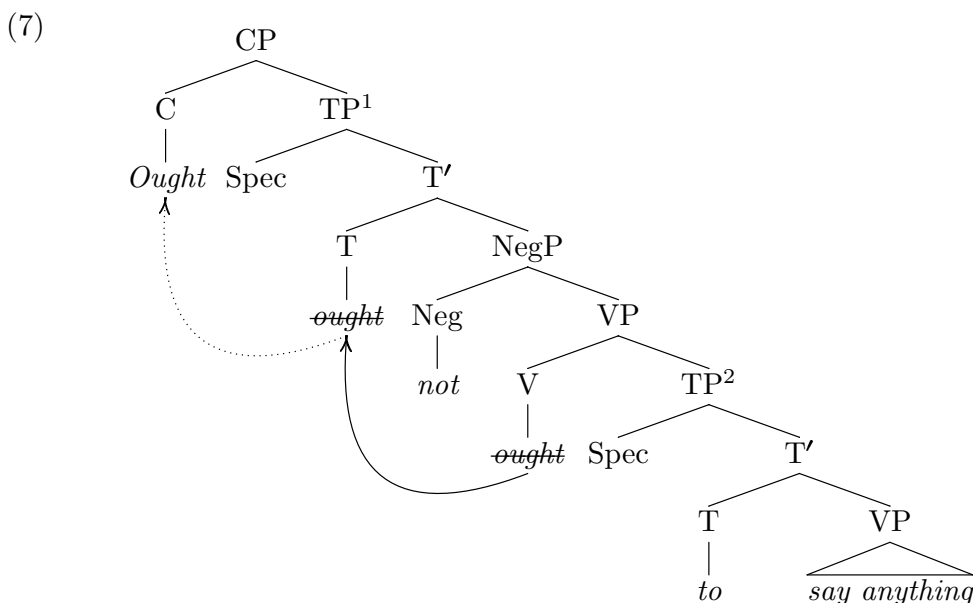
⁸ Here, we mean sentential negation. An anonymous reviewer (R2) raises the following sentence to consider:

- (i) He can’t not say anything.

Theoretically speaking, the current analysis supports that at one point of the historical development of the English language, ‘can’, ‘will’, and other core Modals were all lexical. However, these core Modals have already undergone grammaticalization, and do not have explicit ‘to’ infinitival particle. In (i), ‘can’ is base-generated under T, yielding a mono-clausal.

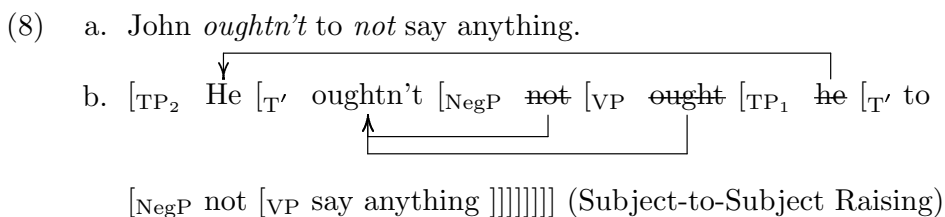
Note that we do not have any particular argument as to the categorial status of ‘not’ here. As Haegeman and Gueron (1999) point out, ‘not’ can be either in Spec-NegP or in Head of NegP. Or the third option, which I prefer, is that both of the positions are available for ‘not’. It is left for further discussion, since its status would not affect my analysis.

following:



Note that both (6) and (7) are consistent with the current syntactic structures, with no further additional assumptions or device.⁹ Neither new mechanisms nor additional functional projections are needed, if I recourse to V-to-T Head movement which I already need to allow in the cases of 'HAVEAux' and all instances of 'BE' in PDE. All I have to additionally say is that 'ought' is lexical in situ, but has become "light" enough so that it raises to T.¹⁰

One prediction under my analysis is to see if there is any potential sentence with two Negs such as the following:



The above double negative example is particularly interesting and supportive to my analysis. NegP is above VP, the kind of consistency I want to maintain. 'Not' is contracted to the adjacent T, 'ought' Head-moves to T, and consequently, 'He' undergoes Subject-to-Subject Raising. Further, NegP is below T' both in TP1

⁹ R1 raises a question of subsequent Head movement from T-to-C. For example, 'ought' in (7) can further Head-move to C for an interrogative counterpart, leaving 'to' behind as in 'Ought he to say anything?' Or if 'not' contracts to 'ought' in T, then the complex (via adjunction, presumably) T would Head-move to C, yielding 'Oughtn't he to say anything?'

¹⁰ When the draft of this paper was being completed, Robert's footnote(1998, p.116) came to my attention: He mentioned that Bob Borsley, through their personal communication, Modals other than HAVE/BE may raise. Modals other than HAVE/BE is 'ought'. Neither Roberts nor Borsley provided an argument or an analysis on the issue, to the best of my knowledge, however.

and TP2. Neither new functional categories nor *ad hoc* positions of them would be called for. The grammaticality of (8) is borne out, as desired.¹¹

3.2 Some Dialects of English use ‘ought’ as lexical verb in PDE

In this section, I provide some cross-linguistic empirical evidence for my proposal. By doing so, I establish the direct connection between the lexical status of ‘ought’ and its modal-lexical-like property in the standard English.¹² Interestingly, I find some dialects/varieties of the English language in which ‘ought’ is used as lexical verb. This kind of evidence indirectly supports my *bi*-clausal analysis of OTC. Consider the following examples which indicate the actual auxiliary verb ‘do’ (contracted with ‘n’t’) is supported in OTC.

(9) John didn’t ought to go (Roberts & Roussou, 2003)

(10) Quirk, *et al.* (1985)¹³

- a. They didn’t ought to do that sort of thing
- b. Did we ought to have done it?

(11) a. The love and duty I long have ought you
b. He said you ought him a thousand pound.

The above examples show that ‘ought’ stays in situ when negated. In other words, ‘do’-support has applied to the sentences. ‘Ought’ in OTC is definitely lexical in this variety of English. Note that ‘ought’ in PDE does not have preterite counterpart, just like ‘must’ does not.

3.3 English Double/Multiple Modal Constructions

Also, observe what has been called Double Modal Construction,¹⁴ which is concentrated in the Southeastern United States, Hawick Scots, and Scotland. The DMC/MMC reported in Brown (1991, pp. 74-98), Battistella (1995), Miller (2004), Ellison (2007), and Hasty (2012) show Double/Multiple Modal constructions. All (b)s in (12)-(17) are the glossary interpretations of all (a)s.

(12) MUST+ CAN

- a. He must no *can* do it.
- b. *It must be the case that he does not have the capability to do it*

¹¹ In order to account for “*Mightn’t he not have seen her?*” Radford (2009, p.173) has pointed out that there can be another NegP above TP and below CP. He speculates that *n’t* is an independent lexical item. More example of this kind he provides is “*The president can’t not ratify the bill*” (= It is not possible that the president does not ratify the bill). The syntax of ‘*n’t*’ is not the main concern here.

¹² I have no intention of defining ‘standard’ in ‘standard English’ here. I use the terminology in a very general usage. English in the Inner Circle (Kachru, 2010) can be taken as ‘standard’.

¹³ This construction, according to Quirk, *et. al.*, is the least popular alternative in a test with British English teenage informants.

¹⁴ Ellison (2007) used Multiple Modal Constructions (MMC), allowing more than two modal auxiliaries under investigation. I do not particularly concern myself on that matter here.

- (13) SHOULD+CAN
 a. He should *can* go tomorrow
 b. *He ought to be able to go tomorrow*

- (14) WILL+CAN
 a. He'll *can* get you one
 b. *He will be able to get you one*

'can' and 'could' can appear as 'to'-infinitives as well.

- (15) 'to' infinitive + CAN
 a. I want to *can* do that
 b. *I want to be able to do that*

- (16) MAY+ WILL
 a. I may *would* go if you will stay with grandma
 b. *Perhaps I would go if you stayed with grandma*

- (17) MAY+CAN
 a. John might *may* go to the party
 b. *It is possible that John is allowed to go to the party*

There is a garden variety of DMC/MMC reported in the aforementioned literature. What is interesting here is the fact that although 'ought to' also appear in the DMC/MMCs, it is definitely rare in the first place. Even so, in all cases, 'oughta' (=contracted form of 'ought to') is always preceded by other "true" Modals.¹⁵

- (18) Hasty 2012 for (a)-(d), Battistella (1995) for (e)
 a. Might oughta
 b. Could oughta
 c. Should oughta
 d. Would oughta
 e. shouldn't oughta

In Hasty(2012), he reports other combinations of DMCs/MMCs. The deontic Modals such as 'must' and 'should' may precede 'can', 'could', 'will', and 'would'. However, 'ought to' in the form of 'oughta' is always preceded by "true" Modals like 'should', 'could', and 'would', etc. Consider the following:

- (19) a. You might oughta get your coat
 b. I might should oughta take these out of the oven.

¹⁵ To answer R1's question on the negative forms of these MMCs, (18e) is a negative sentence. Thus, it should be clear enough. In the case of (18a), Ellison (2007) quotes Labov(1972) that "she still might don't even like the thing" in Southern US.

There is no example of English that allows DMCs in which ‘oughta’ precedes other (true) Modals. I take these sets of data to be evidence that ‘ought’ is highly lexical still in PDE. The “true” Modals (this terminology is attributed to Battistella, 1995) above the T in which ‘ought’ positions will function as a question operator or host for negative affix. Those true Modals are already grammaticalized under T sometime in the Middle English Period. It was shown that Modal verbs were used as main verbs up until 16th century (Lightfoot 1991, Ellison 2007, Han 2000), and I argue that the lexical part of ‘*to*’-Modals originates from V, overtly Head moves to T, and subsequently to C, if necessary.

3.4 Scope-taking property of ‘ought to’ construction

In what follows, I discuss scope-taking property of English Modals. It has long been observed that English Modals take scope, either wide or narrow.¹⁶ Interestingly, OTC, too, take wide scope as follows: Assuming movement as Copying and Deletion (Chomsky 1995, 2000, Radford 2004, 2009), the sentence with ‘ought to’ can be paraphrased as (20b):

- (20) a. John ought not to say anything
 b. It is OBLIGATION [John Neg (say anything)]
 (=It is obligatory that [John Neg (say anything)])

Therefore, it is plausible to posit a two tier structure for OTC, yielding a *bi*-clausal configuration. In the upper tier, i.e., the matrix clause, there is Modality (OBL); in the embedded tier, the thematic subject and predicates remain.

Likewise, Ellison (2007) has discussed the following pair:

- (21) a. James shouldn’t swim across the river’ (OBL > not)
 b. It is OBLIGATION that James [Neg (swim)]
- (22) a. James can’t swim across the river (not > ABILITY)
 b. Neg that James [ABILITY (swim)]

The above paradigm indicates that one-word Modals of English, once lexical, have Scope taking property. They have lost semantic/lexical features and became so “light” that it Head-moves to T in the Middle English period.

3.5 Consequences of the *bi*-clausal approach to ‘to’-Modals in PDE

In the previous sections, I have discussed that the first part of ‘*to*’-Modals are lexical, undergoing Head movement from V to T (and sometimes to C, although I have not gotten into the details). Verb Raising or V-to-T movement, just like ‘HAVE_{AUX}’ and all instances of ‘BE’, adds no further mechanism or device. This being the case, let us discuss some consequences of my proposal. Recall that T in PDE became “weaker” so that T may not be able to attract lexical verbs any more, whereas in Early Modern English, lexical verbs did Head-move to T. Since

¹⁶ See Ellison (2007), Radford (2009) for further Scope-taking phenomena of English one-word Modals.

I have argued that ‘ought’ in OTCs involves Verb Raising, some consequences are to follow:

First, the surface subject of ‘ought’ in ‘ought to’ originates from the thematic position of the embedded complement. Thus, the structural representation of (21a) is (21b), in which ‘ought’ Head-moves from V to T, and the surface subject ‘John’ originates the [Spec-TP] of the embedded clause to the [Spec-TP] of the matrix clause.

- (23) a. John ought to study generative syntax
 b.
$$\begin{array}{ccccccc} & & \downarrow & & \uparrow & & \\ & & \text{[TP John [T' ought [VP ought [TP John [T' to [VP study generative} \\ & & & & & & \text{syntax]]]]]]]} \end{array}$$

If (23b) is the correct representation of (23a), then ‘ought’ assigns no thematic role to its external subject. The external subject of the embedded predicate ‘study’ does have an agent role of ‘study’, and then it later A-moves to [Spec-TP] of the matrix clause.

This being the case, I predict that the surface subject position of ‘ought’ can be occupied by an expletive. This prediction is confirmed as I provide empirical supporting evidence. Here is a random selection of some examples with ‘there’-expletives in OTC (from [www.british national corpus](http://www.britishnationalcorpus.org)).¹⁷

- (24) ‘Ought to’ with ‘ θ -less subject
- a. There is no need to be intimidated by the formality of a staid institution’s catalogue, or to neglect popular magazines; as for writing in various academic disciplines, *there ought to be no barrier* to learning about an interesting topic. (**A04 147**)
 - b. *There ought to be a law* against cutting off power supplies in the middle of February. (**ADA 114**)
 - c. There were plenty of Garda around, and *there ought to have been* plenty more, as I saw a group of wild children steal chocolates from a shop and then run off down the road. (**ADM 228**)
 - d. Ideally *there ought to be one standard level of stiffness* and severity for galloping courses like Cheltenham, Newbury or Sandown Park and another for fast tracks like the Mildmay. (**AKE 1560**)
 - e. That is why the game is called a dilemma, why it seems so maddeningly paradoxical, and why it has even been proposed that *there ought to be a law* against it. (**ARR 343**)
 - f. Nails said defiantly, ‘*There ought to be a reserve* in this team, in case (**AT4 2030**)
 - g. *There ought to be scope for feedback*, a chance for you to express whatever thoughts or concerns you may have at the time. (**B08 451**)
 - h. Well, if, if there isn’t anybody else who wishes to compete with you for the Chair, er, then I think *there ought to be a Vice Chair*. (**DCH 856**)

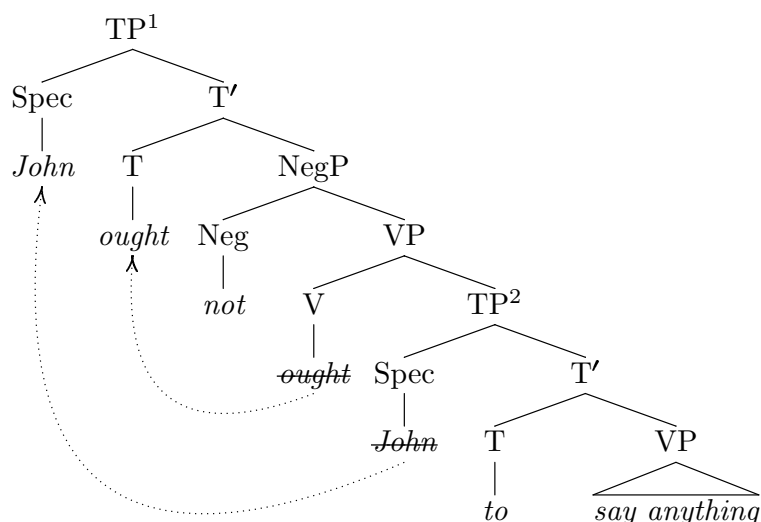
¹⁷ Reference numbers are in parentheses.

- i. *There ought to be a few strict rules* which are obeyed to the letter.'
(ECN 1131)
- j. But while there has been little analysis of the social relations of earlier, equally formal though smaller, or less formal and indeed informal institutions and associations, *there ought to be some theoretical hesitation*.
(FPC 606)
- k. I think the drive next year *there ought to be a theme*. (FUK 3038)
- l. *There ought to be something very distinctive about the theory* that describes the universe. (FYX 901)
- m. So if there are objects called black holes into which things can fall but not get out, *there ought to be other objects* that things can come out of but not fall into. (FYX 1622)
- n. *There ought to be something special* and simple about the theory of everything. (FYX 1756)
- o. *There ought to have been keys* hanging by the door to the utility room, but they weren't there. (GOA 2097)
- p. *There ought to be some principle* that picks out one initial state, and hence one model, to represent our universe. (H78 1106)
- q. '*There ought to be wine and music and a boat on the river,*' he said dreamily. (H85 94)
- r. 'Yes, *there ought to be somebody* to bring him soup and toast and cooling drinks. (HA4 1655)
- s. *There ought to be moonlight*, starlight or sunset, music, ... (HA7 4315)
- t. 'There's plenty of room up here for me to stay quite comfortably and *there ought to be someone* on hand to milk the cows, however bad the weather.' (HHC 2454)
- u. Her face tilts to look up into the sky where *there ought to be stars*. (J13 910)
- v. It *ought never to* happen that firms with incompatible ideas as to the sort of service to be provided for their clients should ever come together with a view to merger. (J6P 798)

Thus, I have ample data that shows that 'ought' takes an expletive subject. (24v) differs from (24a)-(24u) in that all other examples contain the pleonastic 'there'-subject whereas (24v) contains the expletive 'it'. This means the surface subject position is θ -less position, just like the surface subject position of 'seem'-type predicates is. The final derivation of OTC is as follows:¹⁸

¹⁸ I will not concern myself with VP-Internal Subject Hypothesis here; rather, I simply assume that there was A-movement from [Spec-VP] to [Spec-TP] prior to Subject-to Subject Raising we are discussing.

(25)



Secondly, I also find some examples in which an adverbial ‘never’ intervenes between ‘ought’ and ‘to’ in PDE.¹⁹ Consider the following from BNC:

(26) ‘Ought’ and ‘to’ can be split by ‘never’

- a. I ought never to have let it start.’ (ACE 1268)
- b. The tract also admitted that ‘there are churches that *ought never to* have come into existence, churches of dispute and personal pique or eccentricity. (AE6 901)
- c. You *ought never to* have joined up. (B0U 1164)
- d. She *ought never to* have trusted him. (BP1 471)
- e. *ought never to* have listened to you. (BP1 2160)
- f. I *ought never to* forget about the kiddy. (CDB 66)
- g. You *ought never to* see nutrient deficiencies because they are a sign of incorrect feeding. (CMM 1249)
- h. The Copenhagen school had made a special point of emphasising that one *ought never to* think of quantum mechanical systems without also annexing to them the array of classical measuring instruments with which it was proposed to make the observations. (EW6 1347)
- i. In my judgment, this was an order which *ought never to* have been made at any stage of the case. (FCW 275)
- j. I *ought never to* have hugged you last night or said any of those things.’ (FSC 1707)
- k. ‘I *ought never to* have kissed you or let things get to this stage,’ Julia admitted. (FSC 1805)
- l. Lorrimer thinks I *ought never to* have been promoted. (G3E 497)

¹⁹ This point has been raised to me by an anonymous reviewer (R1). A similar argument was made by the author in Hong (2007) when ‘have’ and ‘to’ in ‘HAVE TO’ are split by adverbials, like ‘never’, ‘so’, and ‘yet’, etc.

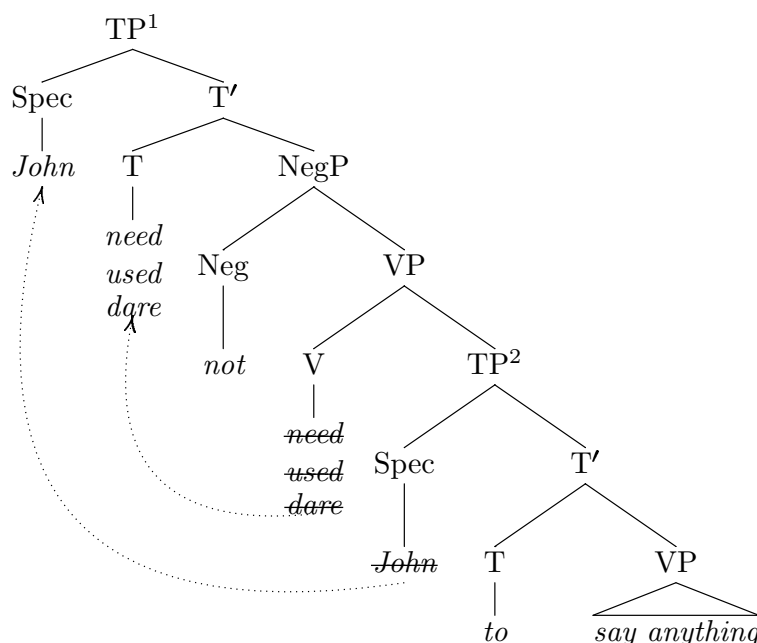
- m. If a theory of normal language processing were proposed in which there were a single processing system responsible for dealing with spoken language — a system used both for perceiving and for producing speech — then one *ought never to* see patients with intact speech perception and impaired speech production, nor patients with the opposite disorder. (**GVA 1409**)
 - n. He *ought never to* have listened to Chambers’ advice on that. (**HP0 2676**)
 - o. It *ought never to* happen that firms with incompatible ideas as to the sort of service to be provided for their clients should ever come together with a view to merger. (**J6P 798**)
 - p. I *ought never to* have accused you of letting him die. (**JYE 3703**)
 - q. The Coroner said: This is something which *ought never to* have happened. (**K1L 174**)
- (27) ‘*Ought*’ and ‘*to*’ can be split by ‘*still*’²⁰
- a. William Assheton’s attitude to the design of the conversion was based on the view that although the building might function as a house, it *ought still to* be recognisable as a church. (**A79 576**)
 - b. The Church appeared no longer to be the guiding force that she believed it once had been, and felt it *ought still to* be. (**CRU 674**)
 - c. That is, if it can overcome the notion of some Apaches, who reportedly think some provision *ought still to* remain for Microsoft Corp Windows NT. (**CTP 23**)

From (27), I know that adverbials like ‘never’ and ‘still’ can intervene between ‘ought’ and ‘to’. The above examples indicate that ‘ought’ and ‘to’ can be split. Recall that ‘not’, if it is a negative adverbial, intervenes between ‘ought’ and ‘to’ in OTC.

If we may extend my *bi*-clausal approach to all other ‘*to*’-Modals, the following structure would be a suitable example for sentences with ‘need’, ‘dare’, ‘used’, etc:

²⁰ ‘dare’ and ‘need’ also allow adverbials like ‘never’ or ‘not’ in between ‘dare/need’ and ‘to’. (www.americancorpus.org)

(28)



Note that in American English, ‘need’, ‘used’, and ‘dare’ are still highly lexical so that they are preferred to have *do*-support, when negated (Quirk, *et al.*, 1972):

- (29) a. John doesn’t need/dare to say anything’ (preferred in American English)
- b. John needn’t/daren’t say anything (preferred in British English)

4. Conclusion

In this paper, I argue for a *bi*-clausal approach to English ‘to’-Modals, especially ‘ought to’ constructions. English sentences with ‘to’-Modals are complex sentences so that ‘to’ is positioned under the embedded [T-TP] and ‘ought’ (and potentially, ‘need’, ‘used’, and ‘dare’) is base-generated under V of the matrix clause. The supporting evidence comes from Double Modal constructions in some varieties of English, Scope phenomena, and more importantly the possibility of intervening adverbials between ‘ought’ and ‘to’. The advantage of this approach is that it can be extended to ‘used to’, ‘need (to)’, and ‘dare (to)’, and Semi-Auxiliaries like ‘be to’ ‘have to’. Although I have not discussed ‘be to’ case, it should be obvious that ‘be’ in ‘be to’ is also a V, undergoing VR, as ‘He will be to leave for Italy soon’ or ‘He is never to leave for Italy’ shows. Furthermore, this approach solves Radford’s problem of having more functional projections in an ad hoc manner.

This Verb Raising, like all others, is (to be) accelerated by the depletion or reduction of the semantic features of the main verbs. Thus, as Chomsky (1995, 2000) has put it, the weight of the lexical verb ‘ought’ has become (or is becoming) ‘lighter’ by losing its semantic features. This process has been called Gramaticalization, *per se* (van Gelderen 1993, 2008).

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