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Revisiting *be supposed to* from a diachronic constructionist perspective

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Deontic *be supposed to*, illustrated in (1)-(3), sometimes called a “semi-modal”, a “quasi-modal”, a “periphrastic modal”¹ or a “lexical modal”,² recently became the centre of attention of a number of corpus and frequency-based diachronic studies,³ after having received passing mention in earlier work on modality⁴ and grammaticalization.⁵

- (1) By the time the meeting was over I was in such a state of excitement and fright that I forgot all about the clothing parcel I *was supposed to* collect. (BNC B0U 2508)⁶
- (2) Authors *are not supposed to* avenge themselves in their writings, but they do, and if they were to be prevented, there would be far fewer books. (BNC A05 252)
- (3) “It seems that not only *are you supposed to* enjoy sex, but you're *supposed to* talk about how much you enjoy it. That I find tiresome, I must say.” Doris Saatchi, art collector (BNC BLW 1798)

The principal aim of the dedicated studies referred to was to chart the history of this deontic construction: when and how did it develop? An issue taken to be relevant by all of them is the question of whether or not this development constitutes an exception to the reportedly quasi-universal grammaticalization path from deontic to epistemic constructions⁷ and, more generally, whether or not it can consequently be put on the list of potential counterexamples to the hypothesized unidirectionality of grammaticalization.⁸ Indeed, next to the deontic construction there is another *be supposed to* construction, illustrated in (4)-(6), which some have taken to have an epistemic meaning, perhaps not entirely unjustifiably, in view of the inherently epistemic nature of the verb *suppose* in Present-day English (as exemplified in [7]).

- (4) Sunbathing *is* traditionally *supposed to* help spotty skins because the sun's drying tendency unblocks greasy pores and encourages quicker cell renewal. (BNC CDR 1948)
- (5) THE obituaries for Philip Larkin included an account of his attendance at an amateur boxing match in Hull. It was a bout of poor quality and the writer *is supposed to* have murmured: “Only connect.” (BNC A35 101)

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¹ Cf. Depraetere and Reed, 272.

² Huddleston and Pullum, 173.

³ In chronological order: Ziegeler; Visconti; Mair; Berkenfield; Moore.

⁴ Bolinger; Perkins; Myhill and Smith; Westney; van der Auwera and Plungian; Palmer, “Modality in English”.

⁵ Bybee, *Morphology*; Traugott.

⁶ BNC refers to *British National Corpus*. The source codes of the BNC examples identify extracts and sentence numbers.

⁷ This is subscribed to, for instance, in Bybee, *Morphology*, 168; Bybee and Pagliuca, “Cross-linguistic Comparison,” 66; Bybee and Pagliuca, “The Evolution of Future Meaning,” 119; Bybee and Fleischman, 5; Traugott 43; Sweetser, 74; Heine et al., 176; Heine and Kuteva, 116; Hopper and Traugott, 85.

⁸ On this hypothesis, see chapter 5 in Hopper and Traugott.

- (6) Hitachi Ltd's open systems division is rumoured to be working on a deal with Sun Microsystems Inc to use Sparc RISC boards running Solaris that'll be used as a front-end, handing off network data to its OSF/1-based mainframes. Presumably Hitachi is a member of Sparc International too. The firm *is supposed to* be doing a RISC-based Unix mainframe and is already a licensee of HP's PA chip which it uses in its 3050 line of Unix workstations. (BNC CT4 537)
- (7) Just before she had gone up to rest and change for dinner, Robert's daughter, Alice, had come down to see the company. Lily had almost forgotten her existence. A thin, nervous child, with drab mid-brown hair and pointed features, she was ill at ease. Her face had a close, guarded look — one that Lily had seen already on Robert. She *supposed* her to be about twelve or thirteen. (BNC FPH 2498)

It is undeniable that the kind of *be supposed to* illustrated in (1)-(3) only started flourishing long after the kind exemplified in (4)-(6) had become prolific (for details presented in the literature, see below) and this apparent temporal sequence has led to the conclusion that “epistemic” *be supposed to* not only existed before the deontic construction, but also that the latter developed from the former, an evolution which, if it indeed occurred, cannot but be an exception to the purportedly unidirectional change from deontic to epistemic meanings. Larry Horn and Paul Hopper have made statements to this effect in personal communication to Elizabeth Traugott⁹ and much more recently Mair has written that “[w]hile in the grammaticalisation of modal auxiliaries deontic meanings generally precede epistemic ones, the reverse seems to hold in the present case [of *be supposed to*] — clearly an effect of the epistemic meaning of the verb *suppose*, the lexical source”.¹⁰ Berkenfield, as well, talks of “a counterexample to the grammaticization patterns exhibited cross-linguistically in the domain of agent-oriented modality”.¹¹

Others have come to the rescue of the unidirectionality hypothesis, however. The majority view in the more recent research is that the construction in (1)-(3) did develop from the one in (4)-(6), but that though the latter may appear to be an epistemic construction, it is something else altogether¹² and the change is therefore not a deviation from the deontic-before-epistemic rule (more on this below).¹³ Traugott, on the other hand, had much earlier saved the hypothesis by positing that “there were two coexistent paths of development from the two senses ‘expect’ and ‘hypothesize’ that were borrowed with the form *suppose* from Middle French”.¹⁴ In other words, the “epistemic” construction is not the source of the deontic one, but the two constructions are the result of separate developments.

Traugott made this claim in a footnote with very little elaboration and it is quickly discarded in the later work without much investigation.¹⁵ Our aim in this paper is to give it the attention it is due, prompted by earlier research,¹⁶ which invites one to place the history of *be supposed to* in the context of the historical evolution of similar, so-called “nominative and infinitive” (or “NCI”, short for “nominativus cum infinitivo”) constructions like *be said to*, *be thought to*, *be found to*, etc., which can function similarly to *be supposed to* in (4)-(6), and an

⁹ Traugott 45, n. 11.

¹⁰ Mair, 137.

¹¹ Berkenfield, 66.

¹² Ziegeler, 48; Visconti, 181; Moore, 119.

¹³ The point that examples like (4)-(6) are not instances of an epistemic construction can also be found in van der Auwera and Plungian, 96, though in their framework there is no general claim that epistemic meanings may come from deontic ones (they argue that both can derive from what they call “participant-external” meanings).

¹⁴ Traugott 45, n. 11.

¹⁵ Viz. by Ziegeler 44; Visconti 182; Moore 130.

¹⁶ Noël, “The Nominative and Infinitive”.

NCI construction like *be expected to*, which can have a deontic function very similar to *be supposed to* in (1)-(3). Such a “diachronic constructionist” approach,¹⁷ which unlike previous research does not deal with the pattern in isolation, sheds a whole new light on the evolution of deontic *be supposed to*, casting doubt on the currently seemingly accepted wisdom that the constructions in (1)-(3) and (4)-(6) have developed from the same source construction and encouraging one to reconsider an alternative suggestion.

In the first section of the paper, we will return to Traugott’s proposal and review the most important subsequent work, starting in each case from the extent to which it takes this proposal into account and how it deals with it, and summarizing the most relevant claims of each contribution. Traugott’s assertion pushes one to take a closer look at the history of *suppose* and this we will do in section 2, using data from the online *Middle English Dictionary* and the online *Oxford English Dictionary*. We will then offer typological support for the developmental path VOLITION > OBLIGATION, which is at the centre of the claim (section 3). Subsequently, we will cast doubt on the more recent consensus that deontic *be supposed to* developed from a construction with a ‘believe’-type meaning (section 4). Finally, we will turn to *be expected to* and the verb *expect* to argue that *suppose* and *expect* used to be virtually synonymous and that this parallel past explains the current similarity between *be supposed to* and *be expected to* (section 5).

1. Traugott and subsequent work on the history of deontic *be supposed to*

As explained in the introduction, the primordial difference between Traugott and subsequent work on the history of deontic *be supposed to* (Ziegeler; Visconti; Mair; Berkenfield; Moore) is that whereas Traugott recognizes two separate source constructions for each of the two constructions exemplified in (1)-(3) and (4)-(6) respectively, later work claims them to derive from a single source. Traugott posits that when *suppose* entered the English language as a borrowing from Middle French, it had two meanings, ‘expect’ and ‘hypothesize’, and argues that the one led to deontic *be supposed to* and the other to what she calls “epistemic” *be supposed to* (note, however, that she subsumes evidential meanings under epistemic meanings¹⁸). We will quote her argumentation in full.¹⁹

The meaning ‘expect’ is associated with *for to* complements, as in R. Brunne, Handl. Synne 6970: *Whan Seynt Ihon herde that seye, þat Troyle supposed for to deye* ‘When St. John heard it said that that [Bishop] Troilus expected to die’ (1303). *Suppose* then developed a deontic of intention, as in Caxton, Chesse II.i.22: *Whan he sawe Alixandre he supposid to have axid his requeste* ‘When he saw Alexander he intended to make his request’ (1474); and ultimately it developed a stronger deontic of obligation, as in R. Connor, Glengarry Days ii.43: *Girls are not supposed to be soldiers, are they, Margaret?* (1902). (This latter use appears to have been too recent or too colloquial for inclusion in the original OED of 1933; the example is cited in the 1986 Supplement of the OED.)

The other path, ‘believe, imagine, hypothesize’, was epistemic, as in Hampole Pr. Consc. 3776: *We shuld trow, and suppose ay þat all er save* ‘We should trust and believe always that all are saved’ (1340); and it has continued to be so until the present time. There is no need to suppose that it was the origin of the obligative *supposed to*. (All citations are from the OED.)

¹⁷ Cf. Noël, “Diachronic Construction Grammar”.

¹⁸ Traugott, 31.

¹⁹ *Ibid.*, 46, n. 11.

Later work assumes the opposite to be true, irrespective of whether it shows an awareness of Traugott's footnote. When it does, the claims made in it are quickly rejected. Ziegeler simply calls them "assumptions" "applying to the active form of the verb", implying that they are not relevant to the "passive" *be supposed to* pattern.²⁰ On the basis of the quotation database of the *OED Online*, she does a diachronic frequency study of two meanings of the pattern, counting the examples of a 'believed to' meaning and an 'expected/intended to' meaning (not counting 'obligation' separately because it is "a natural consequence arising from the combination of 'intention' or 'expectation' meanings with a human subject"²¹). She observes a sharp drop in the frequency of 'believed to' after the 19th century and a concomitant strong rise in the frequency of 'expected/intended to'. The latter is consequently called a "newer" meaning²² and the frequency changes are interpreted as one meaning developing into the other: "It is clearly illustrated that, as Visconti (200[4]) suggests,²³ there is a chronological development from expressing the belief or hypothesis of an unnamed source to gradually increase its range of functions to express intention or expectation imposed on the subject."²⁴ As the reference to an "unnamed source" already suggests, the "pre-obligation" meaning is rejected to be "epistemic" but taken to be "evidential", because sentences with the 'believed to' kind of *be supposed to* "report on what is claimed by other people rather than express the speaker's opinions on the truth of a situation" and they can be converted into questions, which is impossible with sentences with epistemic modal verbs.²⁵ Below we will express reservations about this question argument, though we will agree that the 'believed to' kind of *be supposed to* can be an evidential.

Visconti dismisses the Traugott footnote by saying that "'believe'/'expect' is not a polysemy for *suppose*; rather, the 'expect' meaning arises from the 'believe' meaning when the event time of the proposition is future (later than...)"²⁶ In other words, 'expect' is not a meaning of *suppose* but an "invited inference".²⁷ She agrees with Ziegeler that the obligation meaning of *be supposed to* developed out of an evidential stage and also concurs that "the onset of modality can be safely placed in the 20th century".²⁸ Visconti's specific contribution, however, is her argument that the development of *be supposed to* confirms the unidirectionality of the change from deontic to epistemic because of "the existence of an epistemic inference in PDE *be supposed to*", when the pattern "evokes a possible world, a state of affairs which would be expected to occur but does not", often in co-texts containing "counterfactual signals" like *but, in fact, in reality, ...* Examples (8)-(10) could count as illustrations of this kind of epistemic *be supposed to*, whose function is "to mark the Speaker's non-identification with the source of the evaluation, hence the Speaker's non-commitment towards the realization of the proposition".²⁹ She posits that this is the "primary function" of *be supposed to* in Present-day English.

- (8) The race *was supposed to be* taking place in blazing sunshine, but the sun refused to come out and there was even some rain. (BNC HRF 1117)

²⁰ Ziegeler, 44.

²¹ *Ibid.*, 50.

²² *Ibid.*, 55.

²³ Ziegeler, 52, refers to the 2002 conference version of Visconti, presented at the *New Reflections on Grammaticalization 2* conference held in Amsterdam. Visconti, 181, in turn, refers to the 2002 conference version of Ziegeler, read at the 12th *International Conference on English Historical Linguistics* in Glasgow.

²⁴ Ziegeler, 52.

²⁵ *Ibid.*, 60.

²⁶ Visconti, 182.

²⁷ *Ibid.*, 183.

²⁸ *Ibid.*, 184.

²⁹ *Ibid.*, 185.

- (9) The Government *are supposed to* support small firms, but is not the reality that they have been betraying them? (BNC HHV 4051)
- (10) I didn't think much of the first time really. It wasn't how I imagined it. I thought you *were supposed to* enjoy it, and it was half and half really. (BNC FU1 147)

Visconti (2004: 186) therefore proposes a three-stage development:³⁰

The path appears to follow three stages: (i) it is believed by someone else (evidential); (ii) it is expected by someone else (deontic); (iii) it is expected by someone else, not me: Speaker's non-commitment (epistemic). Shifting from evidential to deontic then epistemic, the construction is not a counterargument to the claim that epistemic meanings arise later than deontic ones.

As mentioned above, Mair is in accord with Larry Horn and Paul Hopper, though probably unwittingly because he makes no reference to Traugott. He simply counts the instances of *be supposed to* in the quotation database of the *OED Online* without distinguishing between different meanings and concludes from the results that “the modal idiom *be supposed to* [...] arose in the Early Modern English period and started spreading rapidly during the 18th century”,³¹ implicitly situating the spread of deontic *be supposed to* no less than two centuries earlier than Ziegeler and Visconti.³² He does do a qualitative analysis of “the earliest (pre-1600) attestations of the construction” and observes:³³

As is to be expected, the lexical use of *be supposed to*, as the passive equivalent of “somebody supposes something to be the case”, is more strongly in evidence than it is today. While in the grammaticalisation of modal auxiliaries deontic meanings generally precede epistemic ones, the reverse seems to hold in the present case — clearly an effect of the epistemic meaning of the verb *suppose*, the lexical source.

Of 21 relevant pre-1600 examples, a mere three allow a deontic interpretation, and in only one instance is such an interpretation really the most likely one [...]

Mair does not seem to doubt, therefore, that “lexical”, “epistemic”, “passive” *be supposed to* evolved into “modal”, deontic *be supposed to*.

Berkenfield makes mention of Traugott but does not address the relevant footnote directly. She does write, however, that *be supposed to* is “a construction that has exhibited anomalous behavior in terms of the theoretical model of grammaticalization”, because “the epistemic function appears before the deontic function historically”³⁴. She applies the term “epistemic” in roughly the same way as Visconti, distinguishing an evidential kind of *be supposed to* from an epistemic kind, but the evolutionary path proposed by Berkenfield is more complex than Visconti's. Berkenfield first of all distinguishes between an evidential construction and a passive construction, the latter allowing a paraphrase with ‘Someone “assumed” something or someone to X’.³⁵ (11)-(13) could be relevant present-day examples.³⁶

³⁰ Visconti, 186.

³¹ Mair, 136.

³² Moore, 127-128, offers a different interpretation of Mair's, 136, frequency graph.

³³ Mair, 137.

³⁴ Berkenfield, 66. Also see the quote with this reference in the introduction.

³⁵ Ibid., 52.

³⁶ For a more elaborate discussion of the distinction between a passive and a seemingly passive evidential construction, see below.

- (11) The mechanism *supposed* by Miller (1948) to underlie acquired equivalence is that introduced by Hull (1939) with his notion of secondary generalization. (BNC APH 1337)
- (12) “You *were* always *supposed* to be the intelligent one,” sighs Molly, “but I think Mama — God rest her soul — was maybe a little prejudiced in your favour.” (BNC HGN 1807)
- (13) QUOTAS which restrict imports of Japanese cars to Europe are to be dropped from the end of 1992, in return for greater access to the Japanese market for European carmakers, the EC Commission said yesterday. The Commission also confirmed that there would be no repeat of the row, earlier this year, over the local content of Nissan cars built in Britain and exported to the rest of Europe. “Cars produced in Europe *are supposed* to be European cars”, Mr Frans Andriessen, the EC's External Relations Commissioner said. (BNC A8U 29)

In Berkenfield's account, this passive construction developed into the evidential one, but that is where this particular developmental path stops. The development of obligative and epistemic *be supposed to* follows two additional, partially separate paths starting from the passive construction. Though historically prior to obligative *be supposed to*, epistemic *be supposed to* was therefore not the source of the other construction. (Berkenfield's Figure 2 visualizes the three separate evolutionary paths she proposes: from passive to evidential, from passive to epistemic possibility, and from passive to obligation.³⁷)

Moore, finally, explicitly links up with Visconti again and subscribes to the evolution proposed by the latter from evidential over obligative to epistemic *be supposed to*. She only mentions Traugott's footnote in a footnote and leaves it alone.³⁸ Instead, her focus is on how the obligative construction could develop from the evidential one influenced by genre (viz. speech and “speech-related written texts such as fiction”) and frequency, and by ambiguity “assisting in the initial spread of the grammaticalized [obligative] usage and then suppressing the older pregrammaticalized [evidential] form”.³⁹ The following quote summarizes Moore's main argumentation:⁴⁰

The deontic (and later the epistemic) senses began to be available as possible interpretations several centuries ago. But only in the nineteenth century did the rise in deontic and epistemic usages in speech-related written genres (and probably also in speech, since the study of present-day English shows that speech is the most advanced genre) together with a rise in ambiguous uses of *be+ supposed to* create a “feedback loop” of sorts, in which the pragmatic impulse to avoid the ambiguity encouraged writers in less formal genres to choose other options instead of the evidential *be+ supposed to*. This feedback loop reinforced the dominance of the grammaticalized form, and the deontic use gained at the expense of the evidential use. Once a “tipping point” had been reached, the semimodal began to be analyzed as the default sense of the construction in these progressive genres.

All of the recent research on the development of deontic *be supposed to* therefore considers an “older” *be supposed to* construction paraphrasable with ‘be assumed/believed/thought to’ to be its source, irrespective of whether this is called a passive,

³⁷ Berkenfield, 67.

³⁸ Moore, 130, n. 6.

³⁹ Ibid., 117-118.

⁴⁰ Ibid., 125.

evidential or epistemic construction. Calling the ‘believe’-type construction “evidential” rather than “epistemic” hardly safeguards the unidirectionality hypothesis of grammaticalization theory, however, for though evidentiality and epistemic modality are generally considered to be separate domains,⁴¹ there is no denying either that in many languages, including English, there is a close relation between the two.⁴² Traugott’s earlier suggestion that deontic *be supposed to* and the ‘believe’-type construction have, to a large extent, separate histories is either ignored or brushed aside and remains without proper investigation. The arguments with which it is dismissed are not very convincing, though. It can hardly be maintained that whatever happened to *be supposed to* has nothing whatsoever to do with the meaning of the verb *suppose*, as implied by Ziegeler.⁴³ If this verb originally had an ‘expect’ meaning in addition to a ‘believe’ meaning, this needs to be taken into proper account, therefore. Denying, as Visconti does, that *suppose* used to be polysemous by calling the ‘expect’ meaning an “invited inference”⁴⁴ only seems a technical way out and glosses over the difficulty of distinguishing between “meanings” and “inferences”: polysemy has been recognized to be mainly caused by invited inferences.⁴⁵ This is not the road we wish to take, therefore, and in the next section we will instead continue what Traugott started and take a closer look at the early history of *suppose*. Our information will come from the online versions of the *Middle English Dictionary (MED)* and the *OED*.

2. The English history of *suppose*

The verb *suppose* entered the English language fairly late in the Middle English period as a loan from Middle French. The earliest example in the entry for *supposen* in the *MED* dates from 1386, supplied under sense 1, ‘to believe’. The first two examples with a *to*-infinitive are from Chaucer’s *Canterbury Tales* (c1390), one listed under sense 2a, ‘to take (sth.) for granted, be sure of, assume’ (14) and one listed under sense 2b ‘to anticipate (sth.), expect; expect (to do sth., to be sth.); expect (that sth. will occur); ?also, intend (to do sth.) [last quot.]’ (15).

- (14) This is thy doghter which thow hast supposed To be my wyf.
 ‘The person you assumed to be my wife is your daughter.’
- (15) She goth..To euery place wher she hath supposed By liklyhede hir litel child to fynde.
 ‘She went to every place where she expected in all likelihood to find her little child.’

Notice that the sense description for 2b mentions ‘intend to do something’, which links up with the “deontic of intention” in Traugott’s footnote. The “last quotation” pointed to at the end of the sense description is one from a version of *Melusine* dating from around 1500 (16).

- (16) Tell your lord that we..suppose not to dommage his land in no wyse..it is the kinge of Anssay..and Regnald..with theirre puyssaunce that supposen to goo reyse the siege of praghe.
 ‘Tell your lord that we in no way intend to damage his land. It is the king of Anssay and Reginald who intend to raise the siege of Prague with their army.’

⁴¹ De Haan; Aikhenvald.

⁴² See, e.g., Nuyts, 27.

⁴³ Ziegeler, 44.

⁴⁴ Visconti, 183.

⁴⁵ See, e.g., Traugott and Dasher.

However, if we search the *MED* quotations for forms of *suppose* followed by *to*, earlier examples with an unmistakable ‘intend’ meaning crop up, the earliest of which is (17), from *The Master of Game*, a book on hunting dating from around 1410.

- (17) If he supposeþ..to fynde hur, þan shal he say, ‘La douce, how here, how here, how here, how here, douce, how here, how here’..And if it happe þat..þei retrieve hur nought so sone as þei wold, þan shal he say, ‘How sa, amy, sa sa acouplere, sa arere, sohow.’
‘If he intends to start the animal from its resting place, he should say “La douce, how here, how here, how here, how here, douce, how here, how here”. And if it happens that he does not flush it out as soon as he would have liked to, then he should say “How sa, amy, sa sa acouplere, sa arere, sohow.”’

Another example is from the *Dialogue between Reason and Adversity*, dated as a1425:

- (18) Aduersite: Þe lord þat I serue is to me a tiraunt. Reason: if þou suppose to wynne ought of his daunger, let hope be þi mynstrelle.
‘Adversity: To me the lord I serve is a despot. Reason: if you intend to gain some of his power, let hope be your servant.’

We could even go further than Traugott, therefore, and say that when *suppose* entered the English language, it had at least three meanings: i) to believe something to be the case (as in (14)), ii) to expect something to happen (as in (15)), and iii) to intend to do something (as in (16)-(18)).

Interestingly, there is also an early case where the infinitive has a subject, which results in the meaning ‘to intend to have someone do something’, or in simpler terms ‘to want someone to do something’. Its composition is dated as a1425:

- (19) Why supposeste þou me to receyve that thyngge whiche wille not do servyce to me, also that wolde make me a seruaunte of a liberalle man? (*Higden's Polychronicon*)
‘Why do you want me to accept something that will not be of any help to me and that would make me a servant of a free man?’

Wanting someone to do something evidently comes very close to obligation. As Verplaetse puts it: “the expression of volition [...] may extend its scope over another participant in the projection than the subject of the volition itself, so that it becomes an indication of deontic necessity or obligation”.⁴⁶ Or in the words of Palmer: “telling someone what is wanted is often a direction for action”.⁴⁷

Active *suppose* no longer has the volitional nor the deontic meaning in Present-day English, but they seem to have persisted until well into the 18th century. Here are two active 18th-century examples from the *OED Online* quotation database where *suppose* has a clear ‘intend’ meaning:

- (20) King Augustus with their main Army had begun to draw a Line from Grypsswald to Trebeses,..by which he supposed to pin up the Swedish Army in Straelsund. (1715 *Hist. Wars Charles XII. King of Sweden* 366)

⁴⁶ Verplaetse, 155.

⁴⁷ Palmer, *Mood and Modality*, 134.

- (21) I rather suspect that you do not allow yourself sufficient air and exercise; the physicians call them Non-naturals. I suppose to deter their patients from the use of them. (1788 W. COWPER *Let.* 19 June (1982) III. 181)

The following are a late 17th-century and a late 18th-century example where the infinitival complement of active *suppose* has a subject, resulting in the ‘obligation’ sense:

- (22) Why may not we suppose Subministers of the Fates to write their actions, some under Clarks to the Committee of Destinies? (1687 SETTLE *Refl. Dryden* 55)
- (23) [for as there must be a procession] I suppose Thames [and all his tributary rivers] to compliment Britannia with a fête in honour of the victory. (1779 SHERIDAN *Critic* III. Wks. 1873 II. 184)

A clear example of a passive pattern with an ‘intend’ meaning (rather than ‘obligation’ because of the non-human subject) is this early 17th-century one:

- (24) Upon this line I make a pricke, which is the very station where the instrument is supposed to stand. (1607 J. NORDEN *Surveyors Dialogue* III. 129)

(25) and (26) are examples of the passive pattern with an ‘obligation’ meaning, one dating from the mid-17th century and one from the first half of the 18th century:

- (25) Every man that lives under a law is supposed to be knowing of it. (1659 *Burton's Diary* (1828) IV. 480)
- (26) You are not supposed to be very gracious among those who are most able to hurt you. (1727 SWIFT *Let. to Writer of Occas. Paper* Wks. 1778 XI. 129)

Examples of active *suppose* with an ‘intention’ or ‘obligation’ meaning are rare, as are pre-20th-century examples of deontic *be supposed to*, and indeed they only show up in vast resources like the *MED* and the *OED Online* quotation databases.⁴⁸ Previous research recognizes the existence of early (even Early Modern English) examples of deontic *be supposed to*,⁴⁹ but such examples are treated as inferences from a passive/evidential construction with a ‘believe’ meaning which, because of their low frequency, have not conventionalized yet, read not grammaticalized yet. They are not linked up with “late” occurrences (apparently up to the second half of the 18th century) of active *suppose* with an ‘intention’ or ‘obligation’ sense. Even though the latter are rare, we cannot simply brush them aside, however, and insist that there is no relation between them and the almost equally rare early deontic examples of the passive pattern. In other words, diachronic data seem to hold up the Traugott hypothesis that deontic *be supposed to* started out as a passive of volitive/deontic *suppose*, i.e. that a previous stage in its development is a volitional one. As the next section will outline, typological data can lend further support for an evolution from a volitional to a deontic construction.

⁴⁸ See Hoffmann and Mair on the extent to which a dictionary quotation database is a corpus and on its advantages and disadvantages compared to regular corpora.

⁴⁹ See Ziegeler, 51; Visconti, 184; Mair, 137; Moore, 125.

3. More examples of volitive > deontic

As implied above, one person's wishes are another's duties and it is consequently not unusual for deontic constructions to originate in volitive ones. We will here offer a short list of other examples of such a development, found in literature on genealogically unrelated languages.

- In Mandarin Chinese the form *yào* ('want') can be used with equi-clauses (27) as well as "switch subject" complement clauses (28), and the latter "can be viewed as the basis of the imperative in Mandarin".⁵⁰

(27) *Wǒ yào qù shìchǎng.*
 1SG want go market
 'I want to go to the market.'

(28) *Wǒ yào nǐ qù zuò (zhèjiàn shì).*
 1SG want 2SG go do (this:CL matter)
 'I want you to do this.'

- In the Amazonian language Tucano a 'want' auxiliary, *ia*, developed a sense of 'impersonal obligation' when combined with impersonal subjects.⁵¹

(29) *ba?a-ro ia-?a*
 eat-PART want-PRES:IMPERS
 'One should eat.'

- In numerous central dialects of Slovakia, e.g. Lučivná Romani (30) and Dobšiná Romani (31), there is a de-volitional modal, subject-inflected *kamp-*, which expresses 'weak obligation'. *Kamp-* derives from the volition verb *kam-* ('want') to which the accusative form of the singular reflexive pronoun *pe(s)* has been agglutinated, which subsequently underwent phonological erosion and externalization of verb inflections.⁵²

(30) *Furt kampes avka te kerel.*
 always be_needed.PRES.2SG so COMP do.SUBJ.2SG
 'You should always act like this.'

(31) *Kampav te zal andro foro.*
 must.PRES.1SG COMP go.SUBJ.3SG[=INF] in.DEF town
 'I have to go to town.'

- Both Hindi-Urdu and Bangla employ an invariable relic form of a 'want' verb to express obligation, *cāhiye* in Hindi-Urdu (32) and *cāi* in Bangla (33), both literally meaning 'is wanted'.⁵³

(32) *Mohan ko jānā cāhiye*
 Mohan to go-INF should
 'Mohan should go.'

⁵⁰ Chappell, 270. This is also the reference for the examples.

⁵¹ Bybee, Perkins and Pagliuca, 186.

⁵² Elšik and Matras.

⁵³ Van der Auwera, 336.

- (33) *āj o-r par-ā cāi*
 today DIST-SG GEN study-VN should
 ‘Today he should study.’

Returning to English, 2nd-person *want to* is often used in contexts where it can be replaced with *should* or *ought to*, i.e. with a “weak necessity meaning of advice”,⁵⁴ as in the internet examples that follow. Interestingly, this kind of *want* sometimes combines with a bare infinitive instead of a *to*-infinitive, which can be taken as a sign that deontic *want* has started grammaticalizing.

- (34) There are probably as many jokes about getting a mule's attention with a two-by-four as there are pickup trucks in Texas. When you are teaching your horse to heed, you must keep bringing its attention back to you. But you don't *want* to use a two-by-four. You don't *want do* a lot of exciting or loud things that will cause the horse to do a lot of exciting or loud things. You *want* to use body position and body language that is noticeable to the horse to keep its attention or send it in the direction you want. I call this “heeding.” (<http://www.meredithmanor.com/features/articles/drm/attention.asp>)
- (35) To have an organization that's creative, you have to work at it. One of the things you don't *want do* is to hire people who are similar to you, which we tend to do. You *want* to hire people who are different than you because you want to have people speak freely. You have to be able to listen to what you think are hair-brained ideas because sometimes there's a good one. And you *want* to encourage all the people you buy from to give you their ideas.
 (<http://www.entrepreneur.com/entrepreneurextra/fiveminuteswith/article29698.html>)
- (36) Food combining takes into consideration that foods digest at different rates. So, if you eat two foods that take about the same amount of time to digest, it is easier on the stomach. However, if you eat two foods that are at opposite ends of the “time to digest” spectrum, they are more difficult to digest. In other words, if you already have stomach problems and IBS [irritable bowel syndrome], you don't *want eat* food combinations (steak and baked potato, chicken and rice, shrimp pasta) that are going to keep feeding the irritation.
 (http://natratech.info/Articles/article_03_foos_to_avoid.htm)

These examples of parallel evolutions in diverging languages underscore the plausibility of the proposed development from volitive to deontic *suppose* and, by extension, to deontic *be supposed to*. We will now go on to argue that the alternative view that the ‘believe’-type construction is the source of deontic *be supposed to* is not very likely, even though it appears to have become the received opinion. One major objection to it which has gone unnoticed is that an evolution from an evidential/epistemic construction to a deontic one would amount to a development from a non-“content” modal construction into a “content” modal one,⁵⁵ which would conflict with the “firmly established” “unidirectional change of content modals > epistemic modals”.⁵⁶ Indeed, as we will argue below, calling the purported source construction “evidential” rather than “epistemic” does not change the fact that, in spite of appearances to the contrary perhaps, it is not a content construction. To make this argument convincingly we need to put evidential *be supposed to* in the context of other so-called “nominative and infinitive” (or “NCI”) constructions. This will then show up

⁵⁴ Verplaetse, 162.

⁵⁵ Cf. Sweetser.

⁵⁶ Traugott and Dasher, 77.

additional reasons for the unlikelihood of a development from an evidential to a deontic *be supposed to* construction.

4. *Be supposed to* as a nominative and infinitive

Be supposed to is not only identical in morphosyntactic form with patterns like *be said to, be thought to, be found to, be seen to, be known to, be believed to, be reported to*, etc., it can also express all of the meanings most of these patterns share. Noël has argued that three formally identical but semantically distinct NCI constructions need to be differentiated: a plain passive one, an evidential one and a descriptive one.⁵⁷ The first one, the plain passive NCI, is strictly speaking not a construction in its own right but a combination of an “accusative and infinitive” construction of the kind illustrated in (37) and (38) and the general (patient topicalizing) passive construction.

- (37) The head of Northend claimed that he *thought* the self-appraisal *to* be the most important aspect of the exercise for the school. (BNC HNW 204)
- (38) Hume described Berkeley’s attack on abstract ideas as “the most important development of late in the republic of letters”. The purport of that attack was to prove that generality could never be an intrinsic property of a mental content. Berkeley’s reason for thinking this was that he *believed* mental contents *to* be mental images, and there cannot be a general image. (BNC A0T 77)

In a plain passive NCI, the meaning of the lexical verb entering it is very much part of the propositional content of the sentence. This is what happens in (39) with *think* and in (11)-(13) above with *suppose*, the first of which we repeat here as (40) for convenience.

- (39) Since *The Machine Gunners* found the biggest audience, it is useful to look in some detail at the range of reasons offered by teachers for its popularity.

Why Teachers Use *The Machine Gunners*

Teachers felt that this text offered them many opportunities for the development of the understanding of parental roles and it *was thought to* be a book from which all sorts of related topic work could be derived. (BNC H83 629)

- (40) The mechanism *supposed* by Miller (1948) *to* underlie acquired equivalence is that introduced by Hull (1939) with his notion of secondary generalization. (BNC APH 1337)

(39) is about teachers’ opinions about a certain book and *was thought to* is simply an alternative to “teachers felt that” used a bit earlier in the example to introduce a second opinion. In (40) (*be*) *supposed to* presents the suppositions of an individual called Miller in a 1948 publication. In both cases, therefore, the meaning of the “main” NCI verb is very much “on-stage”.⁵⁸

This should be contrasted with cases like (41) below and (4)-(6) above, the last one of which we repeat here as (42).

- (41) Talks *are believed to* have been held with Thorn EMI, whose defence interests are up for sale. A successful merger could create a defence company with estimated

⁵⁷ Noël, “The nominative and infinitive”.

⁵⁸ Cf. Langacker.

sales of £800m. Ferranti's naval and avionics businesses *are thought to* have a turnover of about £500m. (BNC A1E 402)

- (42) Hitachi Ltd's open systems division is rumoured to be working on a deal with Sun Microsystems Inc to use Sparc RISC boards running Solaris that'll be used as a front-end, handing off network data to its OSF/1-based mainframes. Presumably Hitachi is a member of Sparc International too. The firm *is supposed to* be doing a RISC-based Unix mainframe and is already a licensee of HP's PA chip which it uses in its 3050 line of Unix workstations. (BNC CT4 537)

Unlike (39), (41) is not about spatiotemporally locatable beliefs or thoughts, nor does (42) deal with the suppositions of a particular individual or group of individuals. Indeed we can remove the NCIs from (41) and (42), in the latter case not just *is supposed to* but also *is rumoured to*, and be left with two fragments, (41') and (42'), containing exactly the same propositions as the originals. Were we to do the same with (39) and (40), these fragments would convey different meanings from the originals.

(41') Talks have been held with Thorn EMI, whose defence interests are up for sale. A successful merger could create a defence company with estimated sales of £800m.

Ferranti's naval and avionics businesses have a turnover of about £500m.

(42') Hitachi Ltd's open systems division is working on a deal with Sun Microsystems Inc to use Sparc RISC boards running Solaris that'll be used as a front-end, handing off network data to its OSF/1-based mainframes. Hitachi is a member of Sparc International too. The firm is doing a RISC-based Unix mainframe and is already a licensee of HP's PA chip which it uses in its 3050 line of Unix workstations.

In other words, different from the plain passive NCIs in (39) and (40), the meanings of the main verbs of the NCIs in (41) and (42) is very much “off-stage”. Notice that we also left out *presumably* from (42), which can be argued to have a similar function to that of the deleted NCIs, viz. an evidential one. We consider *are believed to* and *are thought to* in (41) and *is rumoured to* and *is supposed to* in (42) to be instances of an “evidential NCI construction”.

Before moving on to a third kind of NCI, it is interesting to observe that the offstageness of evidential NCIs prevents sentences containing them from being converted into questions. A question like *Is the firm supposed to be doing a RISC-based Unix mainframe?* can only be paraphrased either with ‘Is there someone or are there people who suppose that...’ or with ‘Is it expected of the firm that...’, the first paraphrase being indicative of a plain passive NCI and the second of deontic *be supposed to*. There is no interrogative paraphrase that can point to an evidential meaning. We disagree with Ziegeler, therefore, who posits, as mentioned above, that the question test can be used to argue that evidential *be supposed to* is not an epistemic construction.⁵⁹

Our proposal to distinguish a “descriptive NCI construction” was inspired by the *Oxford English Dictionary* entry for *say*, where the passive of *say* followed by an infinitive is explicitly said to have two different meanings: “the predicate may denote an alleged or reported fact, or a descriptive term used”.^{60 61} (43) is an example of the descriptive NCI with *be thought to* and (44) could count as an example with *be supposed to*.

⁵⁹ Ziegeler, 60.

⁶⁰ *OED* s.v. *say*, sense 2.f.(c).

⁶¹ See also Goossens, who suggests two different linguistic descriptions for *be said to* in Dikian Functional Grammar terms, one for what he designates as the ‘report’ sense and one for what he calls the ‘describe’ sense.

- (43) It is not easy to know how far Kafka's fictions can *be thought to* answer descriptively to the historical realities of his time, let alone to those which his fictions are often thought to have predicted. (BNC A05 765)
- (44) The facts of political geography are alone sufficient to suggest that there might be many occasions when the Duke of Aquitaine found himself at odds with the Taillefers and the Lusignans. Indeed feuds with these families had been part of the staple political diet of the early twelfth-century Dukes, though neither Eleanor's father nor grandfather can *be supposed to* have been introducing "Anglo-Norman methods of government". (BNC EFV 487)

(43) questions the extent to which Kafka's fictional writings can be characterized as offering a historically accurate description of his time. In (44) it is denied that the politics of Eleanor of Aquitaine's father and grandfather can be described as introducing Anglo-Norman methods of government. This descriptive NCI can be considered to be an "off-stage" construction, like the evidential NCI, but it does not play a role in our argument, so we will leave it here. The evidential NCI, on the other hand, is highly relevant to the discussion at hand.

Distinctions like the one we have made between "on-stage" plain passive NCIs and "off-stage" evidential NCIs have been made before in the literature on *believe*-type "matrix" verbs. Aijmer, for instance, has remarked that "psychological predicates" (matrix clauses with verbs like *believe*, *think*, *suppose*, etc.) can "have the function of qualifying the sentence rather than describe a psychological state".⁶² Nuyts has taken up this distinction between "non-qualificational" and "qualificational" meanings of what he terms "mental state predicates". Qualificational mental state predicates qualify a reported state of affairs, whereas non-qualificational ones do not but refer to states of affairs in their own right.⁶³ Verhagen similarly distinguishes between "objective" matrix clauses, which describe events (of thinking etc.), and "intersubjective" ones, which invite "an addressee to identify with a particular perspective on an object of conceptualization that is itself represented in the embedded clause".⁶⁴ Evidential NCIs are qualificational or intersubjective constructions in this sense. Applying Sweetser's terms, they do not express relationships in the "content domain", i.e. "the 'real world' events and entities, sometimes including speech and thought [as in the case of the plain passive NCI, DN & JVDA], which form the content of speech and thought".⁶⁵

Since evidential *be supposed to* is a non-content construction and deontic *be supposed to* a content construction, by virtue of it being a deontic modal construction, it is very unlikely that the latter is a development from the former, because content constructions turn into non-content ones rather than the other way round.⁶⁶ Our point here is the following, however: given that there are so many possible instantiations of the evidential NCI (Noël counted a 110 of them in Present-day English, the most frequent ones in descending order of frequency being *be said to*, *be thought to*, *be found to*, *be seen to*, *be known to*, *be believed to*, *be reported to*, *be considered to* and *be shown to*⁶⁷), how could it be that only one other pattern, viz. *be expected to*, developed into a deontic construction? We will argue below that deontic *be expected to* is not a grammaticalization of evidential *be expected to*, but supposing for the sake of argument that deontic *be supposed/expected to* were developments from the

⁶² Aijmer, 39.

⁶³ Nuyts, 113.

⁶⁴ Verhagen, 79.

⁶⁵ Sweetser, 11.

⁶⁶ Sweetser, chapter 3.

⁶⁷ Noël. "The nominative and infinitive".

respective evidential constructions, it remains unexplained why these were the only two to evolve in this way and why, for instance, *be thought to* did not follow the same path. Like *be supposed to*, *be thought to* is an NCI pattern that was already quite frequent towards the end of the Early Modern English period, as evidenced by frequency data from the *Corpus of Late Modern English Texts* (CLMET) presented by Noël and by Noël and Coleman, and reproduced here in Table 1 and Table 2.⁶⁸ The difference in meaning between evidential *be thought to* and evidential *be supposed to* is minimal, however, so if the evidential were the source construction for the deontic construction in the case of *be supposed to*, why is there not also a deontic *be thought to* construction? If there is a difference in meaning between evidential *be supposed to* and evidential *be thought to*, it should be one that predisposes *be supposed to* to develop into a deontic construction, but it is difficult to see what this could be. The absence of deontic *be thought to* therefore makes evidential *be supposed to* a doubtful source of the deontic construction.

Table 1: frequency of *be supposed to* and *be expected to* per million words in the four CLMET sub-corpora⁶⁹

verb in pattern	1640- 1710	1710- 1780	1780- 1850	1850- 1920
suppose	35.39	72.05	37.73	32.11
expect	1.01	6.70	20.94	22.94

⁶⁸ The CLMET is diachronic corpus compiled at the University of Leuven by Hendrik De Smet, with texts drawn from the *Project Gutenberg* and the *Oxford Text Archive*. It spans a period from 1640 to 1920, divided into four sub-periods of 70 years each (for an account of the principles behind the compilation of the corpus, see De Smet). The version of the CLMET used by Noël, “The nominative and Infinitive”, and by Noël and Coleman, was the so-called “extended version”.

⁶⁹ Table 1 is culled from Table 1 in Noël and Coleman.

Table 2: frequency of the NCI per million words in the four CLMET sub-corpora, excluding *be supposed to* and *be expected to*⁷⁰

verb	1640-1710	1710-1780	1780-1850	1850-1920
allege	0	0.32	0.52	1.15
assume	0	0	0.52	1.80
believe	1.01	1.91	4.15	5.08
claim	0	0	0.17	0.66
consider	0.51	0.96	1.56	3.44
deem	0	0	0.87	0.16
estimate	0	0	0	0.33
feel	0.51	0	1.04	1.47
find	9.61	24.55	23.71	15.07
hold	0.51	1.59	2.60	6.23
know	18.71	15.94	22.16	16.88
report	2.53	5.42	2.08	3.11
say	78.85	77.47	55.04	32.11
see	8.59	4.46	5.37	7.37
show	1.52	0	1.04	2.95
take	7.58	0.96	0.35	2.46
think	28.31	14.67	7.44	5.99
understand	13.65	5.42	4.33	2.62
TOTAL	171.89	153.35	132.43	107.73

Another weak point of the argument in favour of the evidential > deontic path in the recent literature on *be supposed to* is that the development of the deontic construction from the evidential one is situated in spoken language, on the evidence of the higher frequency of the deontic construction in so-called “speech-related” written genres (e.g., fiction, drama, letters) as compared to other written genres.⁷¹ The problem with this is twofold: a) the evidential NCI is very untypical of such genres⁷² and evidential *be supposed to* is no exception to this,⁷³ and b) the closeness of resemblance between conversational English and these speech-related written genres can be called into question. English is not a language in which “every statement must specify the type of source on which it is based — for example, whether the speaker saw it, or heard it, or inferred it from indirect evidence, or learnt it from someone else”.⁷⁴ Consequently, true evidentials tend to be rare in English conversation (*pace* Chafe, but many of the evidentials he recognizes in conversation are purely epistemic expressions: *certainly, probably, maybe, must, ...*). Various substantive instantiations of the evidential NCI in particular have been established to be most typical of either journalistic or scientific texts, or both, in Present-day English, and though there is evidence that some of them used to be more common in fiction (a “speech-related” genre) than is the case nowadays,⁷⁵ it does not follow that people also used to use them more in their daily conversational interactions. Moore observes with relation to *be supposed to* in the British

⁷⁰ Table 2 is culled from Table 1 in Noël, “The Nominative and Infinitive.” The verbs included in this table are the twenty verbs that most frequently enter the NCI pattern in Present-day English (based on a count in the BNC) minus *suppose* and *expect*.

⁷¹ Berkenfield, 41; Moore, 118, 122.

⁷² See Noël, “The *Be Said To* Construction.”

⁷³ See Table 5 in Berkenfield, 61.

⁷⁴ Aikhenvald, 1.

⁷⁵ Noël, “The Nominative and Infinitive.”

National Corpus, a corpus of late-20th-century English, that “there are almost no evidential usages from recorded speech examples”.⁷⁶ There is no evidence, however, that evidential *be supposed to* used to be more common in speech than it is today, or towards the end of the 20th century. If grammaticalization is something that happens in everyday speech, as is claimed for deontic *be supposed to*, the rarity of the evidential NCI in speech makes evidential *be supposed to* an unlikely source of the deontic construction.

A final problem with the evidence in the evidential > deontic argument is that the recent literature relates a drop in the frequency of ‘believe’-type *be supposed to* with a late-19th century and 20th-century rise in the frequency of the deontic construction, which is construed as a replacement and this in turn as evidence that the deontic construction developed from the ‘believe’-type one.⁷⁷ The difficulty with this argument is that the evidence is based on data of a predominantly literary nature, i.e. the Chadwyck-Healey Database of Nineteenth-Century Fiction (Moore), the “speech-related” genres of the ARCHER (Berkenfield; Moore) and the *OED Online* quotation database (Ziegeler; Mair), which has been recognized to have a literary bias.⁷⁸ However, Noël’s investigation of the NCI pattern in the CLMET,⁷⁹ yet another diachronic corpus with a literary bias,⁸⁰ has revealed that between the 17th and the start of the 20th century there is a decline in the frequency of the NCI generally in the language of fiction, as can be seen in the bottom row of Table 2. More precisely, most substantive NCI patterns that had become frequent by the 17th-century diminished in frequency in the ensuing centuries, most notably *be said to* and *be thought to*. The observed fall in the frequency of evidential *be supposed to* can simply be part of that trend and there need not be a causal relationship with the observed increase in the frequency of the deontic construction.

A diachronic constructionist approach to *be supposed to*, which does not treat the pattern in isolation but considers it against the background of other, similar patterns (i.e., analogous morphosyntactic configurations that can instantiate the same schematic constructions), therefore puts certain observations made in the literature in a whole new perspective and casts doubt on the conclusions based on them. Such an approach also invites one to put the evolution proposed for *be supposed to* next to the history of *be expected to* and, by extension, to compare the English history of *suppose* with the story of *expect*.

5. The English history of *expect*

Though deontic *be expected to* has occasionally been mentioned in the literature in connection with deontic *be supposed to*,⁸¹ the diachrony of the constructions has so far not been put side by side. It could be worthwhile to do so, however, because just like *be supposed to*, *be expected to* can instantiate the evidential NCI construction (45) as well as a deontic construction (46), which we could now call the deontic NCI construction as a generalization of the two substantive constructions.

- (45) By the year 2000, of the 40 million *expected to* be infected with the virus causing AIDS, 36 million will be in the developing world. (BNC A02 189)

⁷⁶ Moore, 122.

⁷⁷ Ziegeler, 55; Mair, 137; Berkenfield, 51; Moore, 125.

⁷⁸ Harris, 935; Mair 124; Willinsky 5, 7.

⁷⁹ Noël, “The Nominative and Infinitive.”

⁸⁰ De Smet, 72.

⁸¹ E.g. Perkins; Palmer, “Mood in English.”

- (46) Compulsory chores are a thing of the past, although you *are expected to* leave rooms tidy. (BNC AHK 1582)

As was the case for *be supposed to*, there is no reason why we should completely dissociate the history of *be expected to* from the history of the active verb *expect*. This verb bears a remarkable semantic similarity to *suppose*, though it entered the English language much later, having come in during the Elizabethan era as a loan word from Latin (*expectare*). The earliest quotation in the *OED Online* entry for *expect* dates from 1560. It seems it could immediately be used with a *to*-infinitive, the earliest example with an equi-clause found among the hits of a query for forms of *expect* in the quotation database dating from 1588 (47) and the first example with a switch-subject clause from 1591 (48).

- (47) That wealth whereby we should expect to haue our houses so dystinguished and multiplyed with offycers. (1588 T. KYD tr. Tasso *Housholders Philos.* f. 16)
'This wealth which should lead us to expect our houses to become distinguished and filled with servants.'
- (48) She [Phœnix] sits all gladly-sad expecting Some flame..To burn her sacred bones to seedfull cinders. (1591 SYLVESTER *Du Bartas* I. v. 626)
'She sits there feeling both happy and sad, expecting some flame to burn her sacred bones to fertile cinders.'

As these examples show, *expect* shared a meaning with *suppose* from the start, i.e. the meaning we glossed as 'to expect something to happen' as a second meaning for *suppose* above (we could rephrase it here as 'to believe that something will happen', to avoid the use of the descriptum in the description). Furthermore, when the infinitive in the equi-construction is an action the subject can control, the resulting sense comes very close to the third meaning we recognized for *suppose*, 'to intend to do something', as in the present-day BNC example (49) and the 17th- and 18th-century *OED* examples (50) and (51).

- (49) "Liberals must speak out," he [Elia Kazan] declared and, having listed the films he had made, added: "The motion pictures I have made represent my convictions. I expect to continue to make the same kind of pictures." (BNC ACS 1194)
- (50) Men..must not expect to be alwaies on the offering hand, but be content to take such money as they use to give. (1656 P. HEYLYN *Surv. France*)
- (51) They expected us, and we expected to come. (1724 DE FOE *Mem. Cavalier* (1840) 172)

When the matrix clause subject can control an action of the (switched) subject of the infinitive, we get very near to 'obligation' again, as in the present-day examples (52) with active *expect* and (53) with the passive pattern, and the older examples (54) and (55).

- (52) For some types of work your District Council may expect you to apply for a grant as a tenant. (BNC A0J 1888)
- (53) You are expected to take adequate steps to protect yourself. (BNC A0M 290)
- (54) They rolled our casks down to the boat, but always expected a white face to assist them. (1726 G. SHELVOCKE *Voy. round World* (1757) 406)

- (55) Those that are expected to new-mould the way to languages, must draw their course by Vse and Custome, till Babel be reformed by Zorobabel. (1622 J. WEBBE *Appeale to Truth* 38)

Judging by the dates of the *OED* examples of the ‘intention’ meaning, *expect* seems to have acquired this sense considerably later (in the 17th century) than *suppose*, which possessed it from the beginning (late 14th century), but it seems to have been the case that *suppose* and *expect* covered a shared meaning spectrum for at least two centuries (the 17th and the 18th), from ‘to believe that something will happen’ over ‘to intend to do something’ to ‘to want somebody to do something/obligation’. Active *suppose* lost these meanings, maybe because *expect* took over, but deontic *be supposed to* must have got sufficiently entrenched to survive next to deontic *be expected to*. Given their past semantic commonality, however, there is no reason to separate *be supposed to* from *suppose*, any more than there is reason to divorce *be expected to* from *expect*. If deontic *be expected to* is rooted in the volitive potential of *expect* and if *suppose* shared this potential with *expect*, it should not be denied that deontic *be supposed to* has its source in volitive *suppose*.

6. Conclusion

An approach that situates *be supposed to* in a “constructicon”, i.e. a network of constructions that represents “the totality of our knowledge of [a, DN & JVDA] language”,⁸² clearly identifies the pattern as only one of many instantiations of an evidential NCI construction, on the one hand, and, on the other, as an instantiation of one of two deontic NCI constructions. In addition to the inherent improbability of a change from an evidential to a deontic construction, the first of these two facts makes it unlikely that evidential *be supposed to* developed into deontic *be supposed to*, given that the diachronic evolution of evidential *be supposed to* is completely in line with the evolution of other prominent instantiations of the evidential NCI construction that have *not* turned into deontic constructions. The second fact supports Traugott’s suggestion that deontic *be supposed to* is the endpoint of the path ‘expectation’ > ‘volition/intention’ > ‘obligation’ because the other instantiation of the deontic NCI, deontic *be expected to*, ended up this way as well. In both cases, however, the path is travelled by the verbs *suppose* and *expect*, not by the patterns *be supposed to* and *be expected to* independently.

The last point begs the question of whether *be supposed to* and *be expected to* are true constructions in the construction grammatical sense of the term or simply instantiations of the passive construction (as suggested by Palmer for *be expected to*⁸³), since in construction grammar neither the form nor the function of constructions should be “predictable from its component parts or from other constructions recognized to exist”.⁸⁴ The answer in the case of *be supposed to* is of course that since Present-day active *suppose* can no longer have a volitive/deontic meaning, deontic *be supposed to* can no longer be a passive. Active *expect* can still be both volitive and deontic, but here another side to the existential coin comes in: entrenchment,⁸⁵ as a product of frequency of use.⁸⁶ In usage-based morphology it has been argued that word forms can be stored independently if they occur frequently enough even if

⁸² Goldberg, 219.

⁸³ Palmer, “Modality in English,” 12-13.

⁸⁴ Goldberg, 219.

⁸⁵ Langacker, 59-60.

⁸⁶ Cf. Croft and Cruse, chapter 11.

they are predictable from a more schematic construction.⁸⁷ There is no reason to assume the same does not hold for more complex substantive constructions.

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References

- Aijmer, Karin. *Some Aspects of Psychological Predicates in English*. Stockholm: Almqvist & Wiksell, 1972.
- Aikhenvald, Alexandra Y. *Evidentiality*. Oxford: Oxford University Press, 2004.
- Berkenfield, Catie. "Pragmatic Motivations for the Development of Evidential and Modal Meaning in the Construction 'be supposed to X'." *Journal of Historical Pragmatics* 7 (2006): 39-71.
- Bolinger, Dwight. "Wanna and the Gradience of Auxiliaries." In *Wege zur Universalienforschung*, edited by Gunter Brettschneider and Christian Lehmann. Tübingen: Narr, 1980.
- Bybee, Joan L. *Morphology: A Study of the Relation between Meaning and Form*. Amsterdam: Benjamins, 1985.
- . "Regular Morphology and the Lexicon." *Language and Cognitive Processes* 10 (1995): 425-55.
- , and Suzanne Fleischman. "Modality in Grammar and Discourse: An Introductory Essay." In *Modality in Grammar and Discourse*, edited by Joan L. Bybee and Suzanne Fleischman. Amsterdam: Benjamins, 1995.
- , and William Pagliuca. "Cross-linguistic Comparison and the Development of Grammatical Meaning." In *Historical Semantics – Historical Word-formation*, edited by Jacek Fisiak. Berlin: Mouton, 1985.
- , and ———. "The Evolution of Future Meaning." In *Papers from the Seventh International Conference on Historical Linguistics*, edited by Anna Giacalone Ramat, Onofrio Carruba and Giuliano Bernini. Amsterdam: Benjamins, 1987.
- , Revere Perkins, and William Pagliuca. *The Evolution of Grammar: Tense, Aspect, and Modality in the Languages of the World*. Chicago: The University of Chicago Press, 1994.
- Chafe, Wallace. "Evidentiality in English Conversation and Academic Writing." In *Evidentiality: The Linguistic Coding of Epistemology*, edited by Wallace Chafe and Johanna Nichols. Norwood, NJ: Ablex, 1986.
- Chappell, Hilary. "The Universal Syntax of Semantic Primes in Mandarin Chinese." In *Meaning and Universal Grammar: Theory and Empirical Findings*, vol. 1, edited by Cliff Goddard and Anna Wierzbicka. Amsterdam: Benjamins, 2002.
- Croft, William, and D. Alan Cruse. *Cognitive Linguistics*. Cambridge: Cambridge University Press, 2004.

⁸⁷ Bybee, *Morphology*; Bybee, "Regular Morphology and the Lexicon."

- De Haan, Ferdinand. "Evidentiality and Epistemic Modality: Setting Boundaries." *Southwest Journal of Linguistics* 18 (1999): 83-101.
- Depraetere, Ilse, and Susan Reed. "Mood and Modality in English." In *The Handbook of English Linguistics*, edited by Bas Aarts and April McMahon. Oxford: Blackwell, 2006.
- De Smet, Hendrik. "A Corpus of Late Modern English Texts." *ICAME Journal* 29 (2005): 69-82.
- Elšik, Viktor, and Yaron Matras. "Modality in Romani." In *Modals in the Languages of Europe*, edited by Björn Hansen and Ferdinand de Haan. (Submitted)
- Goldberg, Adele E. "Constructions: A New Theoretical Approach to Language." *Trends in Cognitive Sciences* 7 (2003): 219-224.
- Goossens, Louis. "FG Reflections on 'Tobacco is Said to be Harmful'." *Cahiers de l'Institut de Linguistique de Louvain* 17 (1991): 65-74.
- Harris, Roy. "The history men." *The Times Literary Supplement*, September 3, 1982: 935-936.
- Heine, Bernd, and Tania Kuteva. *World Lexicon of Grammaticalization*. Cambridge: Cambridge University Press, 2002.
- Heine, Bernd, Ulrike Claudi, and Friederike Hünemeyer. *Grammaticalization: A Conceptual Framework*. Chicago: The University of Chicago Press, 1991.
- Hoffmann, Sebastian. "Using the OED Quotations Database as a Corpus: A Linguistic Appraisal." *ICAME Journal* 28 (2004): 17-30.
- Hopper, Paul J., and Elizabeth Closs Traugott. *Grammaticalization*. 2nd ed. Cambridge: Cambridge University Press, 2003 [1993].
- Huddleston, Rodney, and Geoffrey Pullum. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press, 2002.
- Langacker, Ronald W. *Foundations of Cognitive Grammar*, vol. 1: *Theoretical Prerequisites*. Stanford: Stanford University Press, 1987.
- Mair, Christian. "Corpus Linguistics and Grammaticalization Theory." In *Corpus Approaches to Grammaticalization in English*, edited by Hans Lindquist and Christian Mair. Amsterdam: Benjamins, 2004.
- Moore, Colette. "The Spread of Grammaticalized Forms: The Case of *Be+Supposed To*." *Journal of English Linguistics* 35 (2007): 117-131.
- Myhill, John, and Laura A. Smith. "The Discourse and Interactive Functions of Obligation Expressions." In *Modality in Grammar and Discourse*, edited by Joan Bybee and Suzanne Fleischman. Amsterdam: Benjamins, 1995.
- Noël, Dirk. "The *Be Said To* Construction in Late Modern English." In *Configurations of Culture*, edited by Aline Remael and Katja Pelsmaekers. Antwerpen: Garant, 2003.
- . "Diachronic Construction Grammar and Grammaticalization Theory." *Functions of Language* 14 (2007): 177-202.
- . "The Nominative and Infinitive in Late Modern English: A Diachronic Constructionist Approach." *Journal of English Linguistics* 36 (2008). (to appear)
- , and Timothy Coleman. "The Nominative and Infinitive in English and Dutch: An Exercise in Contrastive Diachronic Construction Grammar." *Languages in Contrast* 9 (2009): 314-340.
- Nuyts, Jan. *Epistemic Modality, Language, and Conceptualization: A Cognitive-pragmatic Perspective*. Amsterdam: Benjamins, 2001.
- Palmer, Frank. *Mood and modality*. 2nd ed. Cambridge: Cambridge University Press, 2001.
- Palmer, Frank. "Modality in English: Theoretical, Descriptive and Typological issues." In *Modality in contemporary English*, edited by Roberta Facchinetti, Manfred Krug and Frank Palmer. Berlin: Mouton de Gruyter, 2003.
- Perkins, Michael R. *Modal Expressions in English*. Norwood, NJ: Ablex, 1983.

- Sweetser, Eve. *From Etymology to Pragmatics*. Cambridge: Cambridge University Press, 1990.
- Traugott, Elisabeth Closs. "On the Rise of Epistemic Meanings in English: An Example of Subjectification in Semantic Change." *Language* 65 (1989): 31-55.
- Traugott, Elisabeth Closs, and Richard B. Dasher. *Regularity in Semantic Change*. Cambridge: Cambridge University Press, 2002.
- van der Auwera, Johan. "Negating dynamic and deontic modality in Hindi-Urdu and Bangla." In *Linguistic Structure and Language Dynamics in South Asia: Papers from the Proceedings of SALA XVIII Roundtable*, edited by Anvita Abbi, R.S. Gupta and Ayesha Kidwai. Delhi: Motilal Banarasidass, 2001.
- , and Vladimir Plungian. Modality's semantic map. *Linguistic Typology* 2 (1998): 79-124.
- Verhagen, Arie. *Constructions of Intersubjectivity: Discourse, Syntax, and Cognition*. Oxford: Oxford University Press, 2005.
- Verplaetse, Heidi. "What You and I Want: A Functional Approach to Verb Complementation of Modal WANT TO." In *Modality in Contemporary English*, edited by Roberta Facchinetti, Manfred Krug and Frank Palmer. Berlin: Mouton de Gruyter, 2003.
- Visconti, Jacqueline. "Conditionals and Subjectification: Implications for a Theory of Semantic Change." In *Up and Down the Cline: The Nature of Grammaticalization*, edited by Olga Fischer, Muriel Norde and Harry Perridon. Amsterdam: Benjamins, 2004.
- Westney, Paul. *Modals and periphrastics in English*. Tübingen: Niemeyer, 1995.
- Willinsky, John. *Empire of Words: The Reign of the OED*. Princeton, NJ: Princeton University Press, 1994.
- Ziegeler, Debra. "On the Generic Origins of Modality in English." In *English Modality in Context: Diachronic Perspectives*, edited by David Hart. Bern: Lang, 2003.