

# Three Modal Verbs

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## Abstract

We describe and compare the historical development and the current properties of German *brauchen*, Dutch *hoeven* and English *need*. Etymologically unrelated, these verbs have all developed from content verbs into auxiliary verbs, or have at least acquired the possibility to be used as auxiliaries. In this development, the three verbs acquired a special sensitivity to negative contexts. We argue that there exists a direct relationship between the grammaticalization of the verbs and their becoming negative polarity items.

## 1 Introduction

This paper tries to offer a description of the current properties and the historical development of the English modal auxiliary *need* – as in the examples in (1):

- (1) a. She needn't stay if she doesn't like this subject
- b. Need we say more about modal auxiliaries

as well as a comparison of this verb with Dutch *hoeven* and German *brauchen*, verbs with a comparable meaning and a comparable idiosyncratic distribution. I will not talk about the lexical verb *need*, which can be found in the examples in (2):

- (2) a. Everyone needs someone sometime
- b. I need you to turn to

### 1.1 A note on modals and auxiliaries

Throughout this paper, I will often refer to *need*, *hoeven* and *brauchen* as MODAL AUXILIARIES. A few remarks on the usage of this terminology are in order here. I do not (exactly) know what it is to be an auxiliary. In English, the verbs commonly known as auxiliaries (*can may must shall will ought*) share a cluster of syntactic, semantic and morphological characteristics. These properties cannot be used as defining characteristics of auxiliaries across the world's languages, and not even to find all and only the auxiliaries in related languages such as Dutch and German. Let us, however, assume that we sort of know what we mean if we talk about auxiliaries, and that verbs such as *can*, *may*, *must*, *shall*, *will* are auxiliaries (Heine 1993).<sup>1</sup>

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<sup>1</sup>Heine (1993:17-18) raises the questions whether we are dealing with one or two verbs *need* in the examples below, and which one, if any, is an auxiliary:

Probably, auxiliary-hood is a gradual notion, and even more probably, most auxiliaries start their life as lexical verbs.

- (3) The moment a verb is given an infinitive complement, that verb starts down the road of auxiliariness Bolinger (1980:297)

A definition of ‘modality’ on which everyone agrees may be even more difficult to produce; I assume, however, without any discussion, that expressions such as *can*, *maybe*, *it is possible* all express more or less the same modal meaning, viz. possibility, whereas *must*, *ought*, *need*, *should*, *necessarily* etc. all express (various degrees of) another modality, necessity/obligation.<sup>2</sup>

## 1.2 The structure of the paper

The rest of this paper is organized as follows: first, I will describe the current distribution and other properties of the English semi-modal *need*, German *brauchen* and Dutch *hoeven*. Next, I will describe the historical development of these verbs. At the end, I will try to offer an explanation of what we have found.

## 2 The current situation

### 2.1 English

Modal *need* is restricted to contexts that are negative in a certain way (van der Wouden 1994a) (cf. also Poutsma (1926:411) and Jespersen (1909–1949:IV (1931), 8–13)). Others (Palmer 1979; Quirk *et al.* 1985; Duffley 1994) have characterized the environments in which we find *need* as “non-assertive”. The following list gives an (almost) exhaustive overview of all environments in which one may find uninflected *need* (cf. also van der Wouden (1996)). Note that not all speakers will accept all sentences; e.g., there appears to be a considerable difference between British and American speakers.

- (4) Negation

He needn’t come

- (5) Shifted negation

There is nothing you need trouble about

- (6) With semi-negatives *hardly* and *scarcely*

I need hardly say how glad I am

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i There needs to be more light in this room

ii There need not be more light in this room

For certain authors “the presence versus absence of certain inflections constitutes the primary criterion of classification”. For these “morphologists”, NPI *need* is an auxiliary, whereas *hoeven* is not; note that from this perspective, *be* and *have* do not belong to the class of auxiliaries. Other scholars want to characterize auxiliaries in syntactic terms. And the idea that auxiliaries should be distinguished on semantic or notional grounds has been defended as well; cf. Heine (1993) for discussion of the various positions.

<sup>2</sup>I will remain silent on differences between epistemic and deontic modality.

(7) In *only*-clauses

He need only state his opinion clearly

(8) In the first argument of universal quantifiers

All he need do is state his opinion clearly

(9) In comparative clauses

Standards are lower than they need be

(10) After superlatives

His book covers most that need be said on the subject

(11) In *before*-clauses

I have half an hour to spend before I need go

(12) Questions

Need we say more?<sup>3</sup>

(13) With subjunctive force<sup>4</sup>

It is embarrassing that such a truth need be stated at all

(14) In concessive clauses

However much need be said, let it wait

(15) In the protasis of conditionals<sup>5</sup>

If you need borrow money at all, borrow as little as possible

With Akmajian *et al.* (1979:18), we may explain the distribution of *need* in the following way:

(16) The behavior of auxiliary *need* can be accounted for by saying that it is a modal which is also a negative polarity item.

That is to say that nowadays *need* is comparable, to a certain extent at least, with more well-known NPIs such as the indefinites *any* and *ever*. I assume, in the tradition of Ladusaw (1979), that all environments in which we find NPIs such as *need* and *any* are downward entailing; cf. van der Wouden (1994a) for discussion.

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<sup>3</sup>*Need* is not restricted to yes no questions, as the following example shows (Steven More, *Review of Contemporary Fiction*, quoted on the back cover of William Gaddis, *A Frolic of His Own*, Scribner Paperback Fiction 1994): *It's grand, it's great and it's Gaddis — what more need be said?*

<sup>4</sup>Larry Horn notes that *need* yields the best results with emotive factives, as in the example; a sentence such as *\*I insist that you need go*, with a non-emotive factive, is quite bad.

<sup>5</sup>For many speakers, only one case of *need* in a conditional is acceptable, viz., in the collocation *if need be*.

## 2.2 Dutch

In Dutch, English' neighboring language, we find *hoeven*, a verb that means more or less the same as English *need*. It plays, however, a different role in the system of the language, as it behaves syntactically as a combination of *need* and *need to*, taking all kinds of complements. But in all cases, it is a negative polarity item. And whereas modal *need* is rather rare and stilted, especially to American ears, *hoeven* is the most obvious and most frequent negative polarity item in Dutch. Moreover, it is also the one that is acquired first – and very early indeed (van der Wal & Koster 1994; van der Wal 1996). Around the age of two, when no child learning English is even thinking of using any *any* yet, you can hear Dutch kids say things like (Koster & van der Wal 1995:(13)):

- (17) Dirje hoeve niet handje Sinteklaas  
Dirje need not little-hand Sinteklaas  
'Dirje doesn't want to shake hands with St. Nicholas'

This is the idiomatic, appropriate way to express your immediate dislike of fake old men with fake white beards when you are a two year old Dutch child. From an adult grammar point of view, all kinds of things are wrong with this sentence: the verb has the wrong morphological form, the object lacks a determiner and the relation between *handje* and *Sinteklaas* is left unspecified. But *hoeven* is properly licensed, and you hardly find examples in children's speech where it is not, even if you try to elicit them.

At this stage, the kid's fresh mental lexicon probably contains a lexical item *hoe(ve)nie*, functioning as a general verb of dislike, refusal and rejecting, expressing 'I don't want, I don't need, I don't like' and that kind of meanings.<sup>6</sup> Later, this word gets a more complex analysis of (modal) verb plus negation, and then – but that takes at least two more years – it becomes possible to use *hoeven* in other negative contexts, including, but not restricted to, typical cases such as the following:

- (18) a. Ik hoef geen appelsap  
I need no apple-juice  
'I don't want apple juice'  
b. Morgen hoeven we niet naar school  
Tomorrow need we not to school  
'There is no school tomorrow'  
c. Zonder zijn paspoort te hoeven laten zien mocht hij de douane passeren  
Without his passport to need let show might he the immigration pass  
'He could pass the immigration officer without having to show his passport'

It may take language learners until adulthood before they completely master the distribution of *hoeven* (Ruhland 1991).<sup>7</sup>

As said before, *hoeven* is always a negative polarity item, even if it takes a nominal or adverbial complement:

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<sup>6</sup>Moore *et al.* (1995) describe experiments from which it becomes clear that English children do not distinguish between the notions 'want' and 'need' until the age of four.

<sup>7</sup>E.g., the difference between *at least X* (which is upward entailing and doesn't license *hoeven*) and *at most X* (downward entailing and a good licenser) turns out to be acquired very late: some language learners don't master this until the age of sixteen or so.

- (19) a. \*Ik hoef appelsap (cf. 18a)  
I need apple-juice  
b. \*Morgen hoeven we naar school (cf. 18b)  
Tomorrow need we not to school

The latter construal is impossible with English *need*; the former, however, is equally grammatical with or without negation:

- (20) a. \*I need (not) to school  
b. I need money  
c. I don't need money  
d. I need no money

Morphologically, *hoeven* does not pattern with verbs such as *kunnen* 'can, be able', *willen* 'want', *zullen* 'will', and *mogen* 'may, be allowed', which show special morphology, i.e., no second and third person singular *t*:

- (21) a. Ik kan, jij kan, hij kan  
I can, you can, he can  
b. Ik mag, jij mag, hij mag  
I may, you may, he may  
c. Ik hoef, jij hoeft, hij hoeft  
I need, you need, he need(s)

Syntactically, *hoeven* also behaves less like an auxiliary than its English counterpart: these 'real' modal auxiliaries take a bare infinitival complement, but *hoeven* takes *te* 'to':<sup>8</sup>

- (22) a. Jan kan niet komen  
Jan can not come  
'John can't/cannot come'  
b. Jan hoeft niet te komen  
Jan need not to come  
'John need not come'

In order to properly compare the distribution of *hoeven* and *need*, let us try *hoeven* in the contexts we find *need*.

(23) Negation

Hij hoeft niet te komen  
He needn't come

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<sup>8</sup>Only in the double infinitive construction does *hoeven* come with a bare infinitive:

- i Je had niet hoeven komen  
You had not need come  
'You didn't have to come'

(24) Shifted negation

Er is niets waar je je druk over hoeft te maken  
There is nothing where you you busy about need to make  
'There is nothing you need trouble about'

(25) With semi-negatives *hardly* and *scarcely*

Ik hoef nauwelijks te zeggen hoe blij ik ben  
I need hardly to say how glad I am  
'I hardly need say how glad I am'

(26) In *only* clauses

Hij hoeft alleen maar duidelijk voor zijn mening uit te komen  
He need only but clearly for his opinion out to come  
'He need only state his opinion clearly'

(27) In the first argument of universal quantifiers

Alles wat we hoeven te weten staat in dit boek  
All what we need to know stands in this book  
'All we need know can be found in this book'

(28) In comparative clauses

Hij rijdt harder dan hij hoeft<sup>9</sup>  
He drives faster than he need

(29) After superlatives

Dit is de laatste student die we hoeven te bestraffen<sup>10</sup>  
This is the last student that we need to punish

(30) In *before*-clauses

?Ik heb nog een half uur voordat ik weg hoef<sup>11</sup>  
I have half an hour to spend before I need go

(31) Questions<sup>12</sup>

\*Hoef ik meer te zeggen?  
Need I say more?

(32) With subjunctive force

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<sup>9</sup>Speakers disagree whether or not this sentence is grammatical. For discussion see, among others van Calcar (1971), Klooster (1978), Schermer-Vermeer (1981), Seuren (1979), Rullmann (1994).

<sup>10</sup>van der Wouden (1994a:p.74: (223)). For discussion see Hoeksema (1986).

<sup>11</sup>Most of my informants do not like this sentence; one of my informants, however, uttered it spontaneously and without hesitation, and insisted upon its grammaticality after reflection, and she is not the only one to accept *hoeven* in this context. On the semantics of *before*, see Sánchez Valencia *et al.* (1994) and the references given there.

<sup>12</sup>In a not so far away past, *hoeven* was fine in rhetorical questions. Cf. below.

\*Het is pijnlijk dat zo'n waarheid uitgesproken hoeft te worden<sup>13</sup>  
It is embarrassing that such a truth need be stated at all

(33) In concessive clauses

\*Hoeveel er ook gezegd hoeft te worden, het kan wachten  
However much need be said, let it wait

(34) Conditionals

\*Als je al geld hoeft te lenen, leen zo min mogelijk  
If you need borrow money at all, borrow as little as possible

There are two more environments in which *hoeven* occurs.

(35) Equatives with *too*

De koningin is te belangrijk om haar paspoort te hoeven laten zien  
The queen is too important to her passport to need let see  
'The queen is too important to have to show her passport'

(36) *Without*-clauses

- a. Je kon daar naar binnen gaan zonder dat je hoefde te wachten<sup>14</sup>  
You could there inside go without that you needed to wait  
'You could enter there without having to wait'
- b. Je kon daar naar binnen gaan zonder te hoeven kloppen<sup>15</sup>  
You could there inside go without to need knock  
'You could enter there without having to knock'

We do not find modal *need* here for independent syntactic and morphological reasons (van der Wouden 1996)

## 2.3 German

German has a modal verb *brauchen*, which is restricted to negative contexts (Duden Zweifelsfälle 1972:146-148) next to a lexical verb of the same form, and a related form *gebrauchen* 'use'. Let us take a look at the current distribution of modal *brauchen* in the contexts we used earlier:

(37) Negation

- a. Das hätte sie gar nicht (zu) sagen brauchen<sup>16</sup>  
That had she at-all not (to)say need  
'She didn't have to say that'

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<sup>13</sup>For me, this sentence is equally ungrammatical with *verbazend* 'surprising' and other affective predicates. The result is not too bad, however, with verbs such as *betwijfelen* 'doubt', as in *ik betwijfel of je morgen naar school hoeft* 'I doubt whether you need (go) to school tomorrow.'

<sup>14</sup>Geerts *et al.* (1984:555).

<sup>15</sup>Ibidem.

<sup>16</sup>Østkjær Jensen (1987:ex. 714) (with *zu*), but some of my informants prefer the variant without.

- b. Du brauchst nicht (zu) kommen<sup>17</sup>  
You need not (to) come  
'You needn't come'

(38) Shifted negation

Es gibt niemanden in Dänemark, der zu verhungern brauchte<sup>18</sup>  
There is nobody in Danmark, who to starve needed  
'Nobody in Danmark need starve'

(39) With semi-negatives *hardly* and *scarcely*

Die Kommunikation zwischen körperlich Kooperierenden braucht und vermag folglich kaum von der unmittelbaren Wahrnehmung zu abstrahieren<sup>19</sup>  
The communication between bodily cooperators need and can therefore hardly of the immediate observation to abstract  
'The communication between persons that interact physically need and can therefore hardly abstract from immediate observation'

(40) In *only* clauses

- a. Diese Pflanze braucht erst in 2–5 Jahre geteilt zu werden<sup>20</sup>  
This plant need only in 2-5 years divided to be  
'This plant need only be divided in 2-5 years'
- b. Den Amerikanen brauchen wir nur bekanntzugeben, was die grosse Halle kostet<sup>21</sup>  
The Americans need we only known-to-give what the big hall costs  
'We only need to let the Americans know what the big hall costs'
- c. Ich hätte bloss rüber gehen brauchen<sup>22</sup>  
I had only there go need  
'I only had to go there'

(41) In comparative clauses

Er arbeitet mehr als er (zu) arbeiten braucht  
He works more than he (to) work needs  
'He works more than he need'

(42) After superlatives

Das ist der letzte Student den wir zustrafen brauchen  
That is the last student whom we to punish have  
'That is the last student we have to punish'

(43) In *before*-clauses: No examples found

(44) Questions

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<sup>17</sup>Duden Zweifelsfälle (1972:146-148) gives both variants, with and without *zu*.

<sup>18</sup>Østkjær Jensen (1987:ex. 727).

<sup>19</sup>Østkjær Jensen (1987:ex. 716).

<sup>20</sup>Østkjær Jensen (1987:ex. 723).

<sup>21</sup>Østkjær Jensen (1987:ex. 729).

<sup>22</sup>Østkjær Jensen (1987:ex. 732).



Braucht man noch sprechen?<sup>23</sup>  
Need one still speak  
'Need I say more?'

(45) With subjunctive force

Hans war überrascht daß er zur Schule gehen brauchte  
Hans was surprised that he to school go needed  
'Hans was surprised that he had to go to school'

(46) In concessive clauses: No examples found

(47) Conditionals: No examples found. According to Edmondson (1983), the following is ungrammatical

\*Wenn ich zu kommen brauche ...  
If I need to come ...

Again, we find *brauchen* in *too* equatives and *without* clauses as well:

(48) *too*-clauses

zu selbstverständlich, als dass man sich darüber den Kopf zu zerbrechen brauchte<sup>24</sup>  
too self-evident as that one self thereover the head to break needed  
'too self-evident to be puzzled about it'

(49) *without*-clauses

- a. ihre Tätigkeit ernährte sie, ohne dass sie sich sonderlich dabei abzumühen brauchten<sup>25</sup>  
Their activity fed them, without that they themselves especially thereby to-tire needed  
'without there being any need to tire themselves'
- b. Ohne lange (zu) warten zu brauchen, wurde er ins Direktionszimmer gebeten<sup>26</sup>  
Without long (to) wait to need, was he in-the director's office invited  
'Without having to wait long, he was invited into the director's office'

## 2.4 Conclusions of this section

From the discussion of the distribution of the three modal verbs under discussion, it has become clear that they share the property of being restricted to negative contexts in the broad sense of van der Wouden (1994a). In other respects, however, the verbs are quite different.

For example, modal *need* is usually used without *to* (cf. Poutsma (1926) and Jespersen (1909–1949) for discussion and counterexamples). Dutch *hoeven*, on the other hand, is always accompanied by *te*, except in the double infinitive construction (*dat had je niet hoeven doen*). The use of *zu* with *brauchen* is disappearing, especially from the spoken language; according to Duden Zweifelsfälle (1972:146–148), this development may be seen as assimilation to the other modal verbs (*müssen*,

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<sup>23</sup>Østkjær Jensen (1987:ex. 734). Edmondson considers *brauche ich zu kommen?* ungrammatical. Some of my informants judge sentences like this unacceptable as well; others insist on inserting a modal particle, as in *brauche ich denn zu kommen*.

<sup>24</sup>Østkjær Jensen (1987:ex. 726).

<sup>25</sup>Østkjær Jensen (1987:ex. 720).

<sup>26</sup>Østkjær Jensen (1987:ex. 721).

*dürfen, können, sollen, wollen, mögen*) that all take complements without *zu*. Prescriptive grammar used to object against this development:

- (50) Wer brauchen ohne zu gebraucht, braucht brauchen überhaupt nicht zu gebrauchen

Nowadays, however, *Duden* sees no harm in the use of modal *brauchen* ohne *zu* anymore:

- (51) “In der Alltagssprache – weniger in der geschriebenen als in der gesprochenen – wird das “zu” vor dem Infinitiv oft weggelassen. Diese scheinbare Nachlässigkeit ist in Wirklichkeit das Zeichen einer sprachlichen Entwicklung. Denn “brauchen” schliesst sich damit an die Reihe der Modalverben (müssen, dürfen, können, sollen, wollen, mögen) an, die ebenfalls mit dem reinen Infinitiv verbunden werden (*Du brauchst nicht kommen* = Du mußt nicht kommen). Häufig erscheint “brauchen” in dieser Verwendung geradezu als Verneinung von “müssen”: *Muß es gleich sein? Nein, es braucht nicht gleich sein.* – Die Verwendung von “brauchen” mit dem reinen Infinitiv wird auch heute noch von vielen als umgangssprachlich angesehen und gilt besonders in der Schule als NICHT KORREKT. In der gepflegten Schriftsprache hält man auch außerhalb der Schule weithin an dem “zu” fest. Wer aber die oben angedeuteten Zusammenhänge beachtet [...], wird erkennen, daß hier eine Entwicklung im Gange ist, die auf die Dauer nicht unterbunden werden kann. Es ist daher eine gewisse Toleranz gegenüber dem reinen Infinitiv angebracht, wenigstens für den außerschulischen Bereich.” (Duden Zweifelsfälle 1972:146-148)

Another difference between the three verbs concerns morphology. English modal *need* patterns with the other modal auxiliaries such as *must* and *will* in having (in its modal usage) no third person singular *s*:

- (52) a. she need not come  
b. \*she needs not come

It also lacks distinguishable preterite and perfect forms (cf. again Poutsma (1926) and Jespersen (1909–1949:IV, pp8 ff) for discussion and counterexamples):

- (53) a. Wide open stood the doore, hee need not clime (Marlowe H 2.19)  
b. I was happy . . . all that I need do was to live there (Walpole SC 100)

Dutch *hoeven*, on the other hand, is a normal verb with a regular and complete paradigm. In this respect again, German *brauchen* is following the English example in assimilating to the other modal verbs in dropping the third person singular *t*:

- (54) a. Sie braucht nicht (zu) kommen  
b. ?Sie brauch nicht (zu) kommen

This development, however, is not allowed by *Duden*.

- (55) In nachlässiger Umgangssprache – besonders beim Sprechen – wird zuweilen das -t der 3. Person singular (*er braucht*) weggelassen. Obwohl das modifizierende “brauchen” dadurch ebenfalls den Modalverben angeglichen wird (vgl. die t-losen Formen *er darf, er muß, er soll*), ist diese Form doch nicht zulässig. Es kann nur heißen: *Er brauch das nicht [zu] bezahlen*, NICHT: *er brauch das nicht [zu] bezahlen*. (Duden Zweifelsfälle 1972:146-148)

From the differences in morphological and syntactical properties between the three verbs I conclude that these morphological and syntactical properties are irrelevant for their negative polarity behavior. In other words, it is not the auxiliary character of the lexical elements that causes their restricted distribution, but rather, I would like to suggest, their semantics.

### 3 The historical development

#### 3.1 English

Visser (1969:1423–32) observes that *need* replaced the older verbs *thurfen* and *mister* with the same meaning. The environments in which we find *thurfen* are “preponderantly negative” (Visser 1969:1423), whereas the few examples given for *mister* all involve negation:

(56) ‘Personal’

- a. ic *ðaet* eall gewræc swa begylpan [ne] thearf Grendeles maga (Beowulf 2005)
- b. thaet thu him ondrædan ne tearft (Beowulf 1674)
- c. Forrthi darr man hatenn wel All that tatt æfre iss sinne (c1200: Orm 5066) off the  
rihhte weççe gan (c1200: Orm 5066)
- d. he was the wiltest man at nede that thurte riden on ani stede (Havelok c1300)

Note the universal in (56c) and the superlative in (56d).

(57) ‘Impersonal’

- a. Ne thearf us na tweogean tht he us næle eft thare læna munezian (Bodley Hom.)
- b. thanne ne tharf us nother gramien, ne shamien (O.E.Hom Morris)
- c. Do lepe, for dred thar the haf nan (Curs.M. 13..)
- d. Him thar not nede to turnen ofte (Chaucer c1386) (Morte Arthure c1400)
- e. But als ofte sitis as they wolde praye, Thame thurste but bide, and haue ther bone (York c1440)

In example (57c), a word expressing fear functions as the negative (van der Wouden 1994b), whereas the second *but* in (57e) is comparable to present day *only*.

- (58) a. I shall so ordand at (= that) thou sal nott myster to be a thief no mor (Alphabet of Tales c1440)
- b. That way . . .ye shall nat myster To go to heuen without a glyster (J. Heywood 1540)

Both examples of *mister* given by Visser involve negation again, and that the more frequent *thurf* occurs in a variety of negative contexts in the sense of van der Wouden (1994a).

The *OED* informs us that the stem *mister* is of Romance origin (OF *mestier*, *mester*, mod.F. *métier* (1) service, office, occupation, (2) instrument or made-up article of certain kinds, (3) need, necessity; < popular Lat. \**misterium* for *ministerium*). The oldest example of impersonal *mister* in the *OED*, repeated below, is not negative. This source also offers two occurrences of *mister* in the protasis of conditionals, a negative context not present in the examples listed by Visser, repeated as well, and various in questions.

- (59) a. Ande gif it misteris that secular power be callyt therto in suppowale and helping of halykirk (1424)  
 b. Yf it mystier, we shal guyde & lede you . . . thurgh all the passages (c1500)  
 c. Ten pund Stirveling I have heir, And mair, when misteris, you command (1583)  
 d. What mystris the, in gode or ille, of me to melle the? (c1440)  
 e. What misters me for to express, My present Poverty (1715)
- (60) a. All the stuffeof the stane that misters more for the makyng of the Kirke of Katrik (1412)  
 b. Blase sought all that hym mystered to write with (c1450)

The existence of verbs such as *thurf* and *mister* in older phases of English, with this kind of (almost or complete) negative polarity behavior, shows once again that the special distributional properties of *need* should not be ascribed to some idiosyncrasy of this one lexical element, but must have some deeper, semantic origin.

Visser (1969:1423) suggests the following (partial) explanation for the replacement of these verbs by *need*:

- (61) In Middle English the final *f* was often cast off [of forms of the verb *thurfan*], apparently, according to OED, first in the 2nd pers. sing. present: *thearft/thear-tu/ther-tu*, leaving a stem *thar-*, *ther-*, *thor-*, *thur-*, which was afterwards often confused with the *dar-*, *dor-*, *dur-* of the verb *dare* [. . .]. This confusion of homonyms may have been the cause of the eventual obsolescence of the construction *thurfen* + infinitive, and its replacement by *need* + infinitive, which took place before the end of the 15th century.<sup>27</sup> [. . .] Jamieson's Dictionary [. . .] shows that it survived in Scottish.

Once *need* – which originated as an impersonal verb which developed into a personal one – had taken this place in the modal paradigm, various other development followed, which may be, and have been, described as a form of assimilation to the other auxiliaries.

- (62) The irregular form *need* in the 3rd pers. sing. of the present tense (in place of *needs* or *needeth*) becomes fairly common in the 16th c., and is now usual in [negative contexts] (OED :2, X, 289)

This development may be caused by analogy with the other auxiliaries – where the lack of inflection is due to these verbs' origin as preterite forms (Sweet 1900-1903; Jespersen 1909–1949; Poutsma 1926).

Around the same time, and probably for the same type of reason, the verb *need* started loosing the complementizer (if that is what it is, cf. Gazdar *et al.* (1985:114-15) and Heine (1993:8)) *to* (Sweet 1900-1903; Jespersen 1909–1949; Poutsma 1926).

### 3.2 German

Bech (1951) offers a description of the historical development of the German modals. Negation plays a crucial rôle in this development, and especially the scope of negation with respect to the modal (cf. also Klarén (1913)).

<sup>27</sup>Not implausible. But it doesn't explain why elements meaning 'need' may develop into NPIs.

In a complex sentence with a main clause and a subordinate clause, a negation in the main clause can, in principle, be interpreted in two ways: it either has scope over the matrix clause or over the embedded clause. Bech called the first possibility NEGATIO RECTA and the second one NEGATIO OBLIQUA; the latter is nowadays better known under such names as ‘negative raising’ (cf. Horn (1978) etc.). In the examples in (63) the two possibilities are illustrated:

- (63) a. He doesn’t know that he will come (Negatio recta)  
 b. He doesn’t think that he will come (Negatio obliqua)

The first example, but not the second, has a reading – even the preferred one – in which the negation has narrow scope:

- (64) a. He knows that he will not come ( $\neq$  63a)  
 b. He thinks that he will not come (= 63b)

Bech observes that necessity modals (*must*, *müssen*, *moeten*) are usually interpreted as having scope over the negation:

- (65) Mary mustn’t come

is interpreted as

- (66) It is necessary that Mary doesn’t come ( $\Box\neg$ )

And not as

- (67) It is unnecessary that Mary comes ( $\neg\Box$ )

Thus Bech proposes the following generalization (in our formulation):

- (68) **Bech’s generalization**

Necessity modals prefer negatio obliqua, i.e., wide scope with respect to negation

Bech offers a number of examples (from Danish, English, French, Latin, Russian, Greek, Gothic and German) to illustrate his generalization (cf. Palmer (1995) and de Haan (1994) for discussion of other languages that show the same effect), which appears to be an instance of the more general tendency that universal expressions eschew the scope of negation (Horn 1989:289ff). The English *he MUST not do it* is, however, a counterexample.

But let us get back to the historical developments of the German modals. According to Bech (1951:14), *dürfen* was a negative polarity item:

- (69) Es ist bemerkenswert, dass *darf* von den ältesten zeit bis ins frühneuhochdeutsche fast nur in negativen sätzen verwendet wurde. Ausser in negativen sätze kam es in der ältesten periode nur in fragen sätzen vor.

Old high German (OHG) *ni darf*’s original meaning was *muss nicht*, *brauche nicht*, i.e. *need not*. That is, the verb showed negatio recta, or, in modern terms, the modal preferred to be in the scope of negation. Here is an old example (ca. 870):

- (70) tho druhtin kris giboran ward, thes mera ih sagen nu ni tharf, thas bliði worolt wurti  
 theru saligun giburti (Otfrid I. 17. 5 f.)

In classical middle high German (MHG) these cases become rare, but they can still be found, for instance in Luther and even as late as the nineteenth century.

- (71) a. den îlte man dô toufen und gap im einen namen, Gunther nâch sînem œheim; des dorft er sich niht schamen (Nib. 716. 1. f)
- b. wen es kunst were, mit fewr ketzer vberwindenn, szo weren die hencker die geleretisten doctores auff erdenn, durfften wir auch nit studierenn (Luther, An den Adel, s. 63)
- c. es ist mir lieb, dass ich seinen Jamm nicht mit anhören darf (Freytag)

But *darf* is a necessity verb and therefore has a preference for negatio obliqua, negative raising. A combination *ni darf* with the meaning *must not*, German *darf nicht* or *kann nicht* comes into existence. In the oldest language, this reading is rare, but in MHG it becomes quite normal.

- (72) a. ni tharf es man biginnan, so er sih biginnit belgan, er wergin sih giberge fon sinemo abulge (Otfrid I. 23. 37ff)
- b. des ir dâ habet gedigen, des sult ir abegân. Jane durfet ir sô ringe nimmer Hagenen bestân (Nib. 1767. 3 f.)

Now given the equivalence between the two, *darf* in the latter examples may be interpreted both as an necessity verb with negatio obliqua (*must not*) or as a possibility verb with negatio recta (*may not*). The latter interpretation, *nedürfen* as a possibility verb in the scope of negation, gains ground; thus it becomes possible that *dürfen* comes to replace the older possibility verb *türren*, and that *dürfen* gets the possibility interpretation when it occurs without negation in MHG.

Through this development of *dürfen* in the infinitival construction, the necessity variant (*bedürfen*, *brauchen*) which could be used absolutely or with a genitive or sentential complement, became isolated and thus obsolete; its place was taken over by *bedürfen* (and *brauchen*).

In short (p.16)

- (73) *Dürfen* war also ursprünglich ein *a*-verbum [□], wird darauf durch die wirkung der negatio obliqua ein *A*-verbum [◇], das in der negativen konstruktion gewöhnlich willkürlich entweder als *a*-verbum (mit der negatio obliqua) oder als *A*-verbum (mit der negatio recta) interpretiert werden kann; schliesslich geht die *a*-funktion verloren. Die *a*-funktion der mittleren entwicklungsstufe zeigt sich u. a. auch in der interrogativen verwendung, wo *darf* manchmal ganz neutral ist in bezug auf den gegensatz *a* : *A* [...example omitted ...], wo *tarf* hinsichtlich der opposition *a* : *A* ebenso indifferent ist wie der lateinische konjunktiv, den es übersetzt.

*Müssen*, on the other hand, developed from an ◇ verb ('may') into an □ verb ('must'). In the oldest language, the ◇ meaning is the only one; in MHG, however, it is already rare:

- (74) a. sie warun wartenti, wara man legiti . . . thaz sie nan muasin fuaren, gisuaslichu biruaren joh in alahalbun then liaban man gisalbon (Otfrid IV. 35. 34 ff.)
- b. úbe er îo dôh ûzer dero chéuio ze hólz indrînnen mûoz (Notker: Boeth. 149. 26 f.)

The new □ meaning develops quite early, and is already prominent in MHG:

- (75) a. uuîle du in ámbahte skînen? sô mûost tu fléhôn den gébenten (Notker: Boeth. 175. 1 f.)
- b. er wolde in ûzem hûse mit im tragen dan: er was ein teil ze swære, er muose in ligen lân (Nib. 2300. 1 f.)

During the MHG period, the  $\square$  meaning takes over completely. That is to say, in LOHG and MHG *muoz* is an  $\alpha$  verb, i.e., ambiguous between *may* and *must*, which explains why it is often difficult to decide whether we are dealing with  $\square$  or  $\diamond$ .

Bech thus claims, among other things, that *müssen* developed from a  $\diamond$  verb ('may') into an  $\square$  verb ('must'), and that *dürfen* showed exactly the opposite development (pp. 13 ff). Whereas *dürfen* in the 'must' meaning was exceptional from the perspective of Bech's generalization in occurring happily within the scope of negation, *müssen* in its modern use follows the rule and doesn't like that interpretation. This leaves room for a suppletion form (Palmer 1995) to express  $\neg\square$ , in this case *brauchen*, a verb with the same meaning but as restricted to negative contexts as *dürfen* used to be.

### 3.3 Dutch

As you probably all know, hardly any Old Dutch (< 1000) survives. In Middle Dutch, (Verwijs & Verdam (1947), Ramat (1971), Conradie (1987:176–7)) *moeten* 'must' was the word normally used in the meaning of modern *mogen* 'may', i.e., to express permission or – with the negative – its opposite, cf.

- (76)       Inne [i.e. Ic-ne] *moet* van onsen Here  
               I-not must of our Lord  
               'I am not allowed by our Lord'

From freedom or permission, *moeten* develops to obligation (or from lack of permission to prohibition), just as we saw in the case of German. Conradie (1987) has an alternative explanation in conversational terms for this development, and why it started in negative contexts:

- (77) In positive utterances the redundancy of giving H permission to do what he is already in a position to do, suggests to H that S is pointing out (or setting himself up as) a motivational force. However, the development is perhaps more likely to have taken place in the negative sphere where the step from S's emphatically pointing out H's lack of permission to him, to prohibiting his doing of X, is very small indeed.<sup>28</sup> (Conradie 1987:176–77)

In a not so far away past – until a century ago or so – *hoeven* was fine in rhetorical questions. Here are some examples from the *WNT* dictionary (VI, 832-34):

- (78)   a. Wat hoeft men dan zoo bang . . . te zijn, voor . . . (Hooft (ca. 1640))  
           What need one then so afraid to be  
        b. Waarom hoef ik meer te drinken als een ander? (V. Effen (ca. 1700))  
           Why need I more to drink than an other

---

<sup>28</sup>Conradie claims (171) "Compared to their meanings in modern Dutch or Afrikaans, the root meanings [...] of the Dutch modal auxiliaries *kunnen* 'can', *mogen* 'may', *moeten* 'must', and *zullen* 'shall' (in Afrikaans *kan*, *mag*, *moet*, and *sal*, respectively) have since the Middle Ages undergone a systematic shift in one direction, viz. along a semantic axis stretching through semantic fields such as KNOWLEDGE, ABILITY, PERMISSION, OBLIGATION, PROMISE, and FUTURITY (in this order), to name the salient fields (cf. [Conradie (1980)]). In this they closely parallel changes in English (cf. [Traugott (1972:198–99)]).

He observes (170) that "the changes [in the modals' meanings] seem to be unidirectional along an axis rather than haphazard fusions or swaps of meaning."

Note that if 1. Conradie's description of Dutch and Afrikaans extends to other germanic languages, such as German, 2. *dürfen* counts as a modal, and 3. Bech's description of *dürfen*'s semantic development is basically correct, then we have a counterexample, i.e. a case of development in the opposite direction.

- c. *hoef ik u te zeggen, dat . . .* (Burgerhart (ca. 1790))  
 Need I you to say, that
- d. *Dat zijn zijn zaken. . . Maar wat hoeft ie mijn ongelukkig te maken?* (Beets (ca. 1840))  
 That is his business. But what need he me unhappy to make

Geerts *et al.* (1984:555) give the following two examples of *hoeven* in modern questions:

- (79) a. *Hoeven we daar nou wel op in te gaan, op zo'n aanbod?*  
 Need we there now well on in to go, on such-an offer?  
 'Need we accept such an offer?'
- b. *?Hoef je je daarop te laten voorstaan?*  
 Need you you thereon to let for-stand?  
 'Need you be proud of that?'

The first example contains the modal particle *wel* which is able to license *hoeven* all by itself (Sassen 1985). The second example is ungrammatical for me and most my informants.<sup>29</sup>

### 3.3.1 *Hoeven* and *behoeven*

Next to *hoeven*, there is also a verb *behoeven*, with a prefix *be*, which behaves more or less like the English main verb *need*, although it is chiefly, but not exclusively, found in negative contexts if it has a verbal complement:

- (80) a. *Dat behoeft nader onderzoek*  
 That needs further investigation  
 'Further investigation is called for'
- b. *U behoeft dat formulier niet in te vullen*  
 U need that form not in to fill  
 'You don't need to fill in that form'

According to the large historical dictionary *WNT*, *hoeven* is the spoken language variant of *behoeven*. This may have been correct at the time that this part of the dictionary was written (it was published in 1912), nowadays it is incorrect: sentence (80a) becomes dramatically ungrammatical if the long form *behoeft* is replaced by the short form *hoeft*. The *WNT*'s generalization was probably also incorrect in certain older stages of the language: although the Middle Dutch Dictionary *MNW* only lists *behoeven*, the 17th century poet Vondel uses *hoeven* in both senses in his (1660) biblical drama *David in Ballingschap* (David in exile). Here are a few examples.

- (81) a. 60dab50 *Hy hoeft ons aenschijn, oock by midnacht, niet te schroomen,*  
 60dab51 *Maer spreecke ons aen, gelijk voorheene, vranck en vry.*  
 'he need not fear our face, not even at midnight; he may approach us, just like before, open and freely'

<sup>29</sup>One of these informants, however, spontaneously uttered the following:

- i *Ik vraag me af of dat nou wel zo nodig hoeft*  
 I ask me of if that now PART PART necessary need  
 'I wonder whether that is really necessary'

For me, this sentence is only acceptable if *hoeft* is replaced by *moet* 'must'.



- b. 60dab1471 Men hoeft veel duizenden om zoo een stadt te sluiten.  
 ‘One needs many thousands to close such a city’

Nowadays, *behoeven* belongs to a higher language register than *hoeven*; in her corpus of children’s language from the start until the age of 18, my colleague Sjoukje vd Wal found instances of (properly) used *hoeven* by 2 year olds, but not a single case of *behoeven*. A less ‘bookish’ alternative for *behoeven* is the pair *nodig hebben* (personal) vs. *nodig zijn* (impersonal).

In the 1930’s, vor der Hake (1932–33) analyzed the loss of the *be*-prefix as a form of assimilation to ‘normal’ modal verbs such as *moeten*, *kunnen*, *willen*, *mogen* ‘must, can, want, may’, that are all bisyllabic. This may be true, but it is neither a necessary development nor the cause of the development of *hoeven* into an negative polarity item: the existence of Danish *behøve* ‘need’, again an NPI, as well as comparable forms in Swedish and Norwegian, may serve as proof.

## 4 Conclusion: Towards an explanation

We have seen that in the closely-related Germanic languages English, Dutch and German, lexical verbs meaning “have need of” have developed into negative polarity modals. They all started as impersonal constructions:

- (82) a. Him needeth . . .  
 b. Dazu braucht es keines Beweises  
 c. Dat hem ware slapen goet, ende hem een bedde wel behoevede (Beatr.)

As many other impersonal verbs, they developed into personal verbs and acquired the possibility to take a verbal complement. And once this step was taken, nothing precluded a gradual grammaticalization, a shift from lexical verb towards auxiliary verb (cf. 3). In English and German this shift was accompanied by syntactic and morphological changes, i.e., the loss of the complementizer and the loss of inflectional endings. These changes, however, are absent in the case of Dutch *hoeven*, notwithstanding the fact that the ‘true’ auxiliaries are as irregular as the German and English ones.

Anyhow, these modals came to function as suppletion forms for the necessity modal (*must*, *moeten*, *müssen*) in certain negative contexts. We have evidence that the *need*-like verbs have replaced, in this function, other verbs with the same function: *mister* in English, *müssen* in German, *moeten* in Dutch. And given the logician’s interpretation of *must* as ‘it is necessary that’, it is not too surprising that it was the verbs with the meaning ‘it is necessary, it needs’ that developed into modal verbs and not other verbs like *say* or *work*.

A final question to ask is whether this development is typical for the Germanic languages. As an argument in favor of this position one might point at Frisian *hoege* – the older form is *hoeven*, just as in Dutch – which also behaves in a comparable way<sup>30</sup> – and at Danish *behøve*, whose behavior is comparable to that of German *brauchen* (Østkjær Jensen 1987; Davidsen-Nielsen 1990).

This doesn’t imply that verbs like *need* and its friends are unique, and do not occur in non-Germanic languages. For instance, Finnish has a verb *tarvita* that replaces *pitää* ‘must’ in negative contexts (de Haan 1994; Kangasniemi 1992).

<sup>30</sup>The Frisian verb has a somewhat wider distribution than its Dutch counterpart: it can be found in questions, for instance, a possibility lost by *hoeven* in the last century or so; cf. J.K. Dykstra, *Op ’t Aljemint*. Twadde printing, Ljouwert, Algemiene Fryske Underrjocht Kommisje, p. 132, and Jarich Hoekstra *Wat hoecht dat?* Frysk Dagblad 19/1/91.

- (83) A: *Pitääkö* näistä kuitti?  
 B: *Ei tartte*  
 A: pitää + *sg3* + *q* these + *ela* make receipt  
 B: No + *sg3* tarvita + *neg*  
 A: Must I write a receipt for these?  
 B: N, you needn't.

This verb, however, appears to be a loan from Germanic (Kangasniemi 1992:356) (I assume it is somehow related to German *dürfen*, English *dare* and/or Dutch *durven*), and can hardly count as evidence against claims that *need*-like behavior would be a quirk of the Germanic languages. Its existence, however, does show that a radically different grammatical system such as Finnish at least allows for such a *need*-like verb.

But according to van der Wouden (1996), more cases of *need*-like verbs can be found in non-Germanic languages. Consider, for example, the Greek impersonal verb *chriazete*, which takes a tensed (subjunctive) complement – as all Greek modals appear to do.

- (84) a. Dhen nomizo oti chriazete na ime paron  
 Not I-think that it-need that I-am-SUBJ present  
 ‘I do not think that I need be present’  
 b. \*Nomizo oti chriazete na ime paron  
 I-think that it-need that I-am-SUBJ present

This Greek modal’s distribution is remarkably similar to that of the Germanic verbs we discussed so far (van der Wouden 1996).

And if this is not convincing enough, consider the data concerning Chinese *yòng*. Chao (1968:743) writes “*buyong* ‘need not’, not used in the affirmative except in the interrogative form”. Tiee (1986:226) informs us that “All the modal auxiliaries of possibility, obligation, willingness, or volition, except for necessity or constraint modals [...], can be negated by simply placing the negative adverb *bù* before the modal morphemes.” However (p. 227), “[t]o negate the modal auxiliaries of necessity or constraint *dèi*, *bìdèi*, or *bìxū*, the following two negative forms are commonly used.”<sup>31</sup>

- (85) a. Wǒ míngtiān dēi huí jiā  
 I tomorrow need return home  
 ‘I need to return home tomorrow’  
 b. Wǒ míngtiān búyòng huí jiā  
 I tomorrow Neg [need] return home  
 ‘I need not return home tomorrow’

Again, the distribution of *yòng* is not restricted to negation per se: it is found in other negative contexts of the type we discussed as well (van der Wouden 1996).

From the fact that we found *need*-like elements in non-Germanic and even non-Indo European language we cannot but conclude that the behavior of the auxiliaries we described here is not unique for the Germanic verb. Rather, it is (yet another) argument in favor of the position that this type of modal meaning may make a lexical element prone to development into a negative polarity item. In other words: semantics rules. Polarity sensitivity has all kinds of syntactic properties, but at the very basis it is a semantic phenomenon (cf. also van der Wouden (1994a)).

<sup>31</sup>We follow the transcription of our source, and omit the Chinese character representation.

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## Appendix

Heine (1995:17) claims (with Shepherd, Bybee & Pagliuca, and Traugott) that “agent-oriented meanings”, i.e. deontic interpretations (etc.), are older than epistemic ones. We have seen no evidence for this in the development of *brauchen*, *hoeven* or *need*.

He also claims Heine (1995:46) that with respect to the German modals, the most conservative behavior is encountered if, among other things, the modal is used in the perfect or past tense, if the modal occurs in interrogative rather than in declarative utterances, or if the modal occurs in negative rather than in affirmative utterances. We did not find any evidence for the first claim, and both the development of *müssen* as described by Bech (1951), and our analysis of *brauchen*, *hoeven* and *need* appear to be counterexamples to the other two.