

Pragmatic differentiation of negative markers in the early stages of Jespersen's cycle in North Germanic

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This paper investigates the pragmatic function of new negative markers during incipient cyclic renewal of negation (Jespersen's cycle). It outlines a typology of such markers, suggesting a pathway along which their function develops from emphatic to negation of explicitly stated/forward-inferable existing propositions to negation of discourse-old propositions. This framework is applied to a previously overlooked case of Jespersen's cycle, replacement of early Norwegian *ei(gi)* 'not' by *ekki* (originally 'nothing'). We document a sharp rise in frequency of *ekki* around 1425, suggesting that, until then, *ekki* had been subject to a constraint restricting it to negating discourse-old propositions. Once this constraint was lifted, *ei(gi)* and *ekki* competed directly, the result being rapid replacement of *ei(gi)* by *ekki*. This typologically unusual direct replacement of a negator with no intervening doubling stage can be attributed to the new negator's origin as a negative indefinite and the lack of negative concord in early Norwegian.

1 Introduction

A number of recent studies have suggested that, where a language has two ways to express negation, one of them is associated with additional procedural meaning, often based on the information-structure status of the negated proposition. Furthermore, when applied to historical situations, this suggestion leads to the idea that new markers of negation proceed through a stage when they act as negators of discourse-old propositions, extending their domain over time along a hierarchy of discourse contexts before generalizing as the unmarked negation strategy in the language. In this paper, we take stock of these existing proposals, and extend the resulting framework for understanding the development of innovative negative markers to a new case study, namely the emergence of *ekki*, a new marker of negation that developed in Old Norwegian (1000–1350) and Middle Norwegian (1350–1550) in competition with the existing marker *ei(gi)*, eventually replacing it entirely.

2 Background to Jespersen's cycle

Jespersen's cycle is the name given to a sequence of changes by which the means of marking clausal negation in a language are renewed. This remarkably consistent sequence has been observed in the histories of a large number of languages. While the cycle was first described as early as 1904 by the Egyptologist Alan Gardiner (1904: 134), it came to prominence principally through the work of Otto Jespersen (1917: 6–14), who originally described it on the basis of developments from Latin to French, Old Norse to Danish, and Old to Modern English:

The original negative adverb is first weakened, then found insufficient and therefore strengthened, generally through some additional word, and this in its turn may be felt as the negative proper and may then in course of time be subject to the same development as the original word.

(Jespersen 1917: 4)

Jespersen's work was integrated into a typological framework by Östen Dahl, who first termed this phenomenon 'Jespersen's cycle' (Dahl 1979: 88–89).

Jespersen's description gives the following constructions in the cycle, illustrated using examples from the development of negation in French, the best known example:

construction I: negation is marked with a (canonically preverbal) adverb (*ne V*);

construction II: negation is marked with the preverbal adverb plus an innovative (canonically postverbal) adverb (*ne V pas*);

construction III: negation is marked only with the innovative postverbal adverb (*V pas*).

In the canonical Jespersen's cycle, constructions I and II coexist for a time, before construction II wins out, and constructions II and III coexist for a time, before construction III wins out. A language that consistently uses only construction II can be referred to as a stage II language, and so on for the other constructions, but most languages undergoing the cycle are in fact in transition between two stages, the relative stability of French *ne...pas* being atypical in this respect, perhaps due to the unusually strong prescriptive pressure in this case (cf. Ayres-Bennett 1994: 74–75). It is indeed not unknown for a language to exhibit all three constructions at a single point in its development (van der Auwera 2010: 78, Willis 2012: 115).

The innovative adverb added in construction II typically begins life as an adverbial or nominal generalizer or minimizer. The nominal minimizers known from the most well-studied examples of the cycle generally start out as nouns referring to small objects (e.g. *κλωβί* "twig" and *ψίχαλο* "crumb" in Greek; *pas* "step" and *mie* "crumb" in French) before being reanalysed as adverbial elements and undergoing semantic extension to a wider set of contexts. The pathway of semantic development for such a noun is "minimal piece" > "minimal quantity" > "minimal degree" (Kiparsky & Condoravdi 2006: 173–175).

Minimizers are focused elements, used by speakers to stress the informativity of their message. As a result they become negative polarity items (NPIs), ultimately restricted to direct negative contexts only. By being focused, they evoke alternative propositions ordered on a scale (*I didn't eat a crumb, I didn't eat an apple, I didn't eat a sandwich, I didn't eat a three-course meal* etc.). Being used by speakers to stress informativity, they must express the most surprising point on the scale. The minimal amount is only the most surprising or improbable point on a negative scale: *I didn't eat a crumb* is more surprising or improbable than *I didn't eat an apple*, since it gives rise to a scalar implicature that the predicate fails to hold of all objects greater than "a crumb". However, in an affirmative context, a minimizer is the least informative choice: *I ate a crumb* is not more surprising or improbable than *I ate an apple* (Eckardt 2006, 2012, Israel 2001, 2011; see also discussion of emphasis below). Once conventionalized as the usual way of expressing surprising or improbable negation, the minimizer may be reanalysed as a marker of clausal negation. It is widely assumed that during the transition from stage I to stage II, when the stage II negation option is available but not mandatory, it has the function of expressing distinctively 'emphatic' negation (Kiparsky & Condoravdi 2006: 173–175).

Similar logic can be applied to another common source of Jespersen's cycle, namely indefinites (e.g. *nāwiht* "nothing" > *not* in Old and Middle English; *niowiht* "nothing" > *nicht*

in Old and Middle High German; *dim* “anything” in Welsh etc.). These may sometimes function directly as minimizers, but in other cases, they are generalizing items, developing negative uses from their association with free-choice items: the proposition is said to be false for an arbitrarily chosen member of the set of possible objects (cf. Horn’s 2000 view of English *any*) or for the value assigned to the object in all possible worlds, cf. Giannakidou’s (2001) account of free choice. Thus it is said to be true of even the most surprising or improbable member of that set.

Finally, negative indefinite temporal adverbs (Colloquial English *never*, Cape Verdean Portuguese Creole *ka* “not” < Portuguese *nunca* “never”) become negators as a consequence of being extended metaphorically from quantifying over possible times to quantifying over possible worlds (situations). They thereby come to mean that the proposition is false even under the most favourable conceivable conditions for it to be true.

3 Explanations for Jespersen’s cycle: emphatic negation and information structure

Awareness of the form of the constructions present at each stage of the cycle was present in large part in Jespersen’s original work on the subject and remains relatively uncontroversial. In other respects, our understanding of the cycle has developed. Jespersen originally understood the cycle as a pull chain driven by phonetic weakening through sound change of the plain negative creating the need for a more salient element (Breitbarth 2009: 85–96, Hansen 2009: 230, Horn 1989: 456–457, van der Auwera 2010: 80–81, Willis 2010: 113–114). This now seems dubious, at least for some cases. Kiparsky & Condoravdi (2006: 175) argue that, in the attested cases of Jespersen’s cycle — they disregard the reduction of Latin *non* to French *ne* — there is no evidence that the original negator underwent phonological reduction, but abundant evidence that the new negator did so, a development expected from our understanding of the way phonological erosion operates in grammaticalization more generally (cf. the irregular phonological reduction of Old English *nāwiht* to Middle English *noht* and Present-day English *not*). Hansen (2009: 230) argues that the reduction of Latin *non* to French *ne* cannot be responsible for the onset of Jespersen’s cycle in French. She suggests that such an approach fails to account either for the gap of many centuries between the reduction of *non* to *ne* and for the emergence of reinforcement or for the presence of the cycle in other Romance varieties (northern Italo-Romance and Catalan) where reduction did not go this far. Van der Auwera (2010: 76, 80–81) regards this view as now outdated for the paradigm examples of Jespersen’s cycle (French *pas* and Dutch *niet*), but leaves open the question of whether it could be correct in other cases.

Instead, building on the idea of a spiral of weakening proposed by Meillet (1912: 394), various linguists have suggested that semantic–pragmatic forces weakening the force of the ‘emphatic’ negative are the trigger and driver of the cycle: increased expressive use of the new form leads to its losing its emphatic force, and a pressure to eliminate the resulting redundancy (as both old and new negators now compete for the same function) leads to the replacement of the old by the new (Breitbarth 2009: 86–87, Kiparsky & Condoravdi 2006: 176, Schwegler 1983: 320–32, 1988: 36, 48, Willis 2010: 114). Detges (2003: 226–227) suggests that, since the emphatic negator indicates that the proposition expressed is

unexpected or surprising, speakers are incentivized to overuse it in order to capture the hearer's attention according to the Gricean maxim of relation (relevance). Israel (2011: 110–11) views this as a positive politeness strategy to intensify the hearer's interest. As speakers overuse the emphatic negator, however, the emphatic effect is gradually lost by an invisible-hand process, as hearers increasingly discount the contribution of the second negator. Hearers understand speakers' use of the expression as overstating the proposition, and conventionalize their understanding accordingly, weakening the semantic contribution of the expression (Detges & Waltreit 2002: 176–181).

Other recent work has suggested a hybrid approach, namely, that, in at least some cases, Jespersen's cycle may be both a pull and push chain. Research into the rise of the modern Welsh negative *ddim* via Jespersen's cycle demonstrates that the change was a push chain in its early stages, driven by a loss of the emphatic character of the innovative form, but later became a pull chain, as sound change rendered the older negative *ni(d)* phonetically weak (Willis 2010: 148–149). Work on Jespersen's cycle in West Germanic suggests that one trigger for the cycle may have been semantic–syntactic weakening of the preverbal negative *ne/ni*, which came in some contexts to be interpreted as a negative polarity item rather than an expression of sentential negation, but that it was also triggered by the reanalysis of postverbal negative items as expressions of sentential negation; thus here too the cycle can be seen as simultaneously a pull and push chain (Breitbarth 2009: 104–107).

4 Emphasis and activation

Before turning to our case study, we need to clarify another aspect of Jespersen's cycle, namely the pragmatic status of the new negator and the terminology used to describe this status. While new negators at the early stages of Jespersen's cycle are often described as 'emphatic', this term is often treated in an intuitive, undefined way, and, even when linguists do define emphasis, they do not always agree on what it means.

Some linguists define emphatic negation in an essentially syntactic way as the use of more than one negative item. Van der Wouden (1997: 243) thus defines it as "the usage of multiple negation to strengthen the force of the negation". Similarly, for Zeijlstra (2004: 58), emphatic negation occurs when "one negative element enforces [*sic*] another negative element", the result being "stronger than would be the case with just the second negative element". However, this kind of definition does not help us to distinguish between, say, *ne...pas* in Old French (normally thought of as in some way 'emphatic'), and *ne...pas* in Modern French (normally thought of as expressing ordinary negation). It is also not particularly useful when dealing with historical data, since it is not the form of the negation that is at issue, but its semantics at a given state of the history of a language.

More relevant to the present discussion is Israel's (1996, 2001, 2011) treatment of emphasis as a property of one type of negative polarity item, namely, minimizers such as (*sleep*) *a wink*, and of one type of positive polarity item, such as *awfully*. On this view, emphatic items are inherently scalar and have a high informational value (i-value). Emphasis involves a speaker expressing the attitude that the informative strength of their proposition is high. Emphatic items license inferences to all informationally weaker options on their scale, and thereby commit the speaker to a maximally informative interpretation of what has been

said. Thus, in (1), the emphatic element *the least bit* evokes a scale of nervousness, and commits the speaker to the inference that all degrees of nervousness greater than or equal to “the least bit” would cause the sky-diving to be cancelled.

(1) If you’re the least bit nervous, we can skip the sky-diving. (Israel 2001: 298)

Continuing in this tradition, Larrivée (2014: 121) interprets emphasis as concerning “unmitigated assertions ... which cannot ... be subsequently hedged or toned down”. Thus, example (2), with the emphatic negator *rien du tout* “not (nothing) at all”, is pragmatically infelicitous because the hedge in the second sentence is incompatible with the claim of maximal informativity made in the first sentence. Conversely, example 0, with ordinary negation, makes no such claim and is felicitous.

(2) #J’ ai dormi rien du tout. Peut-être un petit peu, mais pas beaucoup.
I have slept nothing at all perhaps a little little but NEG much
‘I slept not at all. Maybe a little, but not much.’ (Larrivée 2014: 121)

(3) J’ ai pas dormi. Peut-être un petit peu, mais pas beaucoup.
I have NEG slept perhaps a little little but NEG much
‘I didn’t sleep. Maybe a little, but not much.’ (Larrivée 2014: 121)

Piñón (1991), building on work by Fillmore, Kay & O’Connor (1988), argues that emphatic negation in Hungarian serves to deny the truth of a context proposition, “a previously posed proposition which is part of either the spoken or unspoken, pragmatically given and shared context and a proposition which the speaker can either explicitly accept or reject in the course of the discourse” (Piñón 1991: 250). Wallage (in press: section 6.3.2) also retains the term ‘emphatic negation’ but defines it as “denial of an antecedent proposition and cancellation of an inference”.

Other linguists distinguish this or related special pragmatic functions for certain negators in some languages, but do not equate that function with ‘emphasis’. Espinal (1999) argues that, in central dialects of Catalan, bipartite negation with *no...pas* enriches the pragmatic interpretation of negation either (i) to deny a contextually available proposition or inference; or (ii) to confirm a negative proposition that can be contextually inferred. The former situation is illustrated in **Error! Reference source not found.**, where B denies speakers A’s assumption that A will be able to tell B something tomorrow. The latter is found in (5), where the inference of the first sentence that you have not changed is confirmed by the second.

(4) a. Demà t’ho diré.
tomorrow you-it tell.FUT.1SG
‘I’ll tell you tomorrow.’ (Espinal 1999: 354)
b. Oh! no ens veurem pas demà.
oh NEG we see.FUT.1PL PAS tomorrow
‘Oh! I will not see you tomorrow.’ (Espinal 1999: 355)

- (5) Al col·legi ja eres irònic i sorneguer. Veig que
 in.the.school already.be.IMPF.2SG ironic and mocking see.PRS.1SG that
 no has pas canviat.
 NEG have.PRS.2SG PAS changed
 ‘At school you were already ironic and mocking. I see that you have not changed.’
 (Espinal 1999: 355)

This differs from Piñón’s (1991) interpretation of the Hungarian case discussed above in allowing the negation to confirm an existing negative proposition, and in not using the term ‘emphasis’ to describe what is going on.

Schwenter (2006) argues that Catalan, Italian and Brazilian Portuguese can offer us living insights into stage II of Jespersen’s cycle and proposes a more detailed analysis of the distribution of negative forms in those languages. Schwenter accepts Israel’s (2001) definition of the term ‘emphatic’ as describing “the high informativity of a proposition relative to a scalar norm” (Schwenter 2006: 221, cf. above). Given this definition, it is clear that, in all of these cases, the postverbal negative element is not in fact emphatic but is instead regulated by information structure (2006: 329). Using Dryer’s (1996) notion of ‘activation’, Schwenter unites Espinal’s two contexts for the licensing of Catalan postverbal *pas* by suggesting that it is licensed by some prior element in the discourse (or physical context) referring to the same proposition: the proposition being negated must be discourse old (and also salient), although the relationship between the prior element in the discourse and the proposition may be one of inference. *Pas* is thus sensitive to the discourse status of the proposition being negated and not its hearer status. An important practical distinction between this ‘activation hypothesis’ and the cancellation-of-presupposition hypothesis is that *pas* can be used to agree with a prior negative statement in the discourse as well as to disagree with a positive one (Schwenter 2006: 333–334).

Finally, some linguists retain the terms ‘emphasis’ and ‘emphatic negation’ but apply them in a different way. Some simply have a wider definition of emphasis and allow it to take many forms. Thus, Kiparsky & Condoravdi (2006: 179–180), discussing multiple complete instances of Jespersen’s cycle in Greek, write that emphatic negatives can have three functions: contradiction of a previous (possibly implicit) assertion; denial of an existing presupposition or expectation; and lifting contextual restrictions on the negative assertion, in particular, disambiguating telic and atelic readings of predicates by forcing a telic interpretation (e.g. an interpretation of *I haven’t eaten the porridge* as “I haven’t eaten any of the porridge”). Detges & Waltereit (2002) also seem to operate with a wider understanding of emphasis that includes both maximization of informativity and denial of presupposition among the possible forms that it might take.

In this paper, we take ‘emphasis’ and ‘activation’ to be distinct hypotheses about the pragmatic function of a given negator (cf. Larrivée 2016). We will limit ‘emphasis’ to refer to highly informative negation in the sense of Israel (2001, 2011) and Eckardt (2006, 2012), while we understand ‘activation’ to refer to sensitivity to information structure in the sense of Dryer (1996) and Schwenter (2006).

5 More on activation

As Larrivé (2010: 2242) notes, it is difficult, without access to native-speaker intuitions, to test whether a given use of a negator is emphatic in the sense defined here. He suggests that, when faced with a corpus of historical data, a linguist will be better placed to test whether an item is sensitive to activation than whether it is emphatic. In this section, we look further at the concepts involved in activation, before applying them to Middle Norwegian data in the coming sections.

Activation has been used to analyse the distribution of various negative items, and a variety of patterns has emerged. Schwenter (2006) extends the activation analysis to those varieties of Italian which use *non...mica* in a construction II negation, noting that it is licensed (but not obligatory) when the proposition is part of the common ground and discourse old (and salient) (Schwenter 2006: 334–336; see also Cinque 1976 and Zanuttini 1997: 61, who make the same observation).

Brazilian Portuguese presents a somewhat more complex case, as here variation is found between all three stages of Jespersen’s cycle: stage I with only a preverbal negative; stage II with both pre- and postverbal negatives; and stage III with only a postverbal negative. Here Schwenter demonstrates that, just as in Catalan and Italian, construction II is licensed by the proposition being discourse-old and salient. The conditions for construction III are the same except that the proposition must be explicitly activated within the discourse, not merely inferred (Schwenter 2005: 1450, 2006: 336–340). In (6), speaker F denies a proposition (“You cook”) that has been explicitly activated by speaker E in the preceding context:

(6) E: Mas você cozinha. E você deve ter algum prato que os seus fregueses gostam mais.

Qual é?

‘But you cook. And you must have some dish that your clients like most. What is it?’

F: Ah, eu cozinho não, a minha tia é que cozinha!

‘Ah, I don’t cook; my aunt is the one that cooks!’ (Schwenter 2005: 1450)

In the historical domain, Hansen (2009) and Hansen & Visconti (2009) investigate the transition from stage I to stage II of Jespersen’s cycle in Old French, aiming to determine whether the variation found there was conditioned by the same information-structure factors as in the modern Romance languages. They find similar, but not identical conditioning factors, and propose a more detailed typology of information statuses on the basis of Birner (2006) to account for these. Specifically, they distinguish two types of inference: forward or elaborating inference, where a proposition can be immediately inferred by the hearer from a trigger, and backward or bridging inference, where a proposition can only be inferred from or linked to an earlier trigger in retrospect.

These types are exemplified by (7) and (8). In (7), the existence of the wedding can be forward-inferred from the statement “she got married”: it is immediately possible for the hearer to make this inference and so the existence of the wedding is both discourse-old and hearer-old when it is mentioned in the next clause (the fact that it is discourse-old is confirmed by the word order as only discourse-old constituents can be preposed; Birner 2006: 16). In (8), a classic example of a bridging inference reproduced in several publications, the

existence of the beer cannot be automatically inferred from the mention of the picnic as not all picnics involve beer; however, the inferential relationship between the two is clear once the beer is mentioned explicitly. Accordingly, at this point the existence of the beer can be considered discourse-old but hearer-new.

- (7) She got married recently, and at the wedding was the mother, the step-mother and Debbie.
(Birner 2006: 22)
- (8) We checked the picnic supplies. The beer was warm. (Haviland & Clark 1974: 515)

Whereas the stage II negative in Catalan and Italian is licensed only when the proposition has been explicitly stated, is part of the perceptual context, or can be forward inferred from earlier discourse, in Old French the stage II negative was also licensed when it was backward-inferable from earlier discourse. Furthermore, in Old French the stage II negative was sensitive not only to the discourse status of the negated proposition, but also the hearer status: it was also licensed in contexts where the proposition was discourse new but hearer old, such as where the proposition represented part of general common knowledge or where it was pragmatically presupposed by an element in earlier interaction (Hansen 2009: 235–236).

In addition, Hansen and Visconti noted that where the stage I negative in Old French was used to negate a proposition which was discourse and/or hearer old, there tended to be certain ‘special semantic features’ which downplayed the discourse salience of that information status: it tended to occur in irrealis and non-referential contexts such as the antecedent or consequent of conditionals, in maxim-like statements, with modal verbs and in non-declarative clauses (Hansen 2009: 244–245). This further strengthens the case for a relationship between the choice between the stage I and II negative in Old French and information structure.

Table 1 summarizes the resulting typology of information structure contexts. Applying this typology to those cases of stage II negatives (plus stage III Brazilian Portuguese *não*) yields the pattern in Table 2. This can be compared to the situation for stage I negatives summarized in Table 3. We immediately see that, while stage I negators are felicitous in all information-structure contexts, stage II negators are restricted to a continuous sequence at the discourse-old end of an information-structure hierarchy. Whether this set of contexts truly represents an implicational scale or whether other combinations are possible remains to be seen. Certain other distinctions examined by Hansen (2009), such as whether the proposition in question has been previously asserted or denied (or whether assertion or denial of it can be inferred), whether the proposition is part of the perceptual common ground or has been explicitly stated, and whether the proposition is part of general common knowledge or is a pragmatic presupposition in preceding discourse, have not been found to be relevant to the distribution of any of the negatives so far examined.

Table 1. Typology of information structure contexts.

	Discourse (explicit)	old	Discourse (inferred)	old	Discourse new
Hearer-old	explicitly mentioned		forward-inferable		common knowledge/pragmatically presupposed
Hearer-new			backward-inferable		completely new

Table 2. Typology of stage II and III negatives.

Form	explicitly mentioned	forward- inferable	backward- inferable	common knowledge	completely new
Old French <i>ne ...</i> pas/mie	felicitous	felicitous	felicitous	felicitous	infelicitous
Catalan <i>no ... pas</i>	felicitous	felicitous	infelicitous	infelicitous	infelicitous
Italian <i>non ... mica</i>	felicitous	felicitous	infelicitous	infelicitous	infelicitous
Brazilian Portuguese <i>não ... não</i>	felicitous	felicitous	infelicitous	infelicitous	infelicitous
Brazilian Portuguese <i>Ø ... não</i>	felicitous	infelicitous	infelicitous	infelicitous	infelicitous

Table 3. Typology of stage I negatives.

Form	explicitly mentioned	forward- inferable	backward- inferable	common knowledge	completely new
Old French <i>ne ... Ø</i>	felicitous	felicitous	felicitous	felicitous	felicitous
Catalan <i>no ... Ø</i>	felicitous	felicitous	felicitous	felicitous	felicitous
Italian <i>non ... Ø</i>	felicitous	felicitous	felicitous	felicitous	felicitous
Brazilian Portuguese <i>não ... Ø</i>	felicitous	felicitous	felicitous	felicitous	felicitous

One further case study of variation during Jespersen's cycle has been undertaken which has not been discussed thus far: that of stage I/II/III variation in Middle English. Wallage (2013: 10–15) finds that none of the forms of negation are categorically restricted according to the information status of the negated proposition, but that stage I negation (*ne ...*) is statistically specialized for discourse new propositions and stage II negation (*ne ... not*) is statistically specialized for discourse old propositions (while the occurrence of stage III negation, *... not*, appears to be unrelated to information structure). However, Wallage

explicitly opts not to take into account text-external factors that might have some bearing on the discourse and hearer status of the negated proposition: “As texts cannot be read in the social and cultural contexts in which they were written, the socio-cultural common ground between writer and reader that informs interpretation of the discourse is missing. Therefore we can only examine the relationships between propositions within the texts themselves.” (Wallage 2013: 10). Furthermore, he does not make the distinction between forward and backward inference. Thus it is difficult to fit Middle English neatly into the typology drawn above. From the evidence, it is hard to determine whether Middle English stage II negation was preferred or dispreferred in discourse-old but hearer-new contexts (backward-inferable) and in discourse new but hearer old contexts (common knowledge, pragmatic presupposition). Given this information it might conceivably emerge that Middle English stage II negation represented an exact parallel case to Old French stage II negation (felicitous for all propositions except those which were both hearer-new and discourse-new) or that it was parallel to the Old French stage II or modern Romance stage II cases but subject to a statistical as opposed to categorical restriction.

6 Negation in Northwest Germanic

A number of changes in the expression of negation have taken place in the history of North Germanic. The inherited preverbal negative adverb *ne* (cf. Old High German *ni*, Old English *ne*, Gothic *ni*) was replaced by the suffixed negative *-a(t)* via Jespersen’s cycle; this was then replaced by other adverbs, primarily *eigi* (< *ei* “ever” + indefinite particle *-gi*) and later its contracted form *ei*. These changes, which had largely taken place before the earliest extant alphabetic Old Norse texts, are relatively well understood (Eythórsson 2002). However, *ei(gi)* was then replaced by a new adverb, *ekki*, originally the neuter nominative/accusative singular of the negative adjective/pronoun *engi* “no, none, no one, nothing” (*ekki* < **eitt-ki* < **eitt-gi*, cf. Magnússon 1989: 149), in all of the North Germanic languages. This results in the modern forms Norwegian Bokmål/Danish *ikke*, Nynorsk *ikkje* (and dialectal Norwegian *isje*, *itte*), Faroese *ikki* and Icelandic *ekki*. In the history of Swedish (and some eastern dialects of Norwegian), the cycle repeated once more and *ekki* was replaced by *enkti*, the regularized neuter nominative/accusative singular of the negative pronoun/adjective. This results in Modern Swedish/dialect Norwegian *inte*. While the status of *ikke* in the modern languages has received some attention (e.g. K. K. Christensen’s 1985 treatment of *ikke* as a clitic; see also K. R. Christensen 2005 and Munch 2013), the change from *ei(gi)* to *ekki* in the medieval period has gone largely unstudied. Existing analyses of the development of negation in Old and Middle Norwegian, such as K. R. Christensen (2003) and van Gelderen (2008: 205–211), treat the shift from *ne* or *-a(t)* to modern *ikke* as a direct one. They thus assume *ikke* to be a phonological variant of *eigi*, overlooking an additional cycle of change.

Unlike a number of the stage II negatives mentioned above, *ekki* does not have its etymology in a noun for a small object functioning as a minimizer in negative clauses, but in an adjective/pronoun meaning “no(thing)”. This, in connection with the observation mentioned above that it also occurs frequently as a negative adverb with comparative adjectives, offers a clue as to its pathway to become a clausal negative and the reason that this particular instantiation of Jespersen’s cycle advanced directly from stage I to stage III.

Breitbarth, Lucas & Willis (2013) suggest that there is a fairly small set of possible bridging contexts for the emergence of incipient Jespersen’s cycle where a direct object can be reanalysed as a negative adverb. They divide them broadly into two types: (i) optionally transitive verbs such as *eat*, *drink*, *read*, *write*; and (ii) predicates taking an optional degree argument. Willis (2016) applies this to the incipient uses of Old English *nāwiht* “nothing”. He shows, on the one hand, that *nāwiht* occurs commonly as the degree argument of verbs of succeeding, harming and caring. However, even more common are cases where it is used as a degree modifier of an adjective or adverb, either with narrow focus on the adverb under sentential negation, or else with constituent negation.

Old Norwegian offers parallel opportunities. In (9), *ekki* can be found negating the comparative adjective *meira*.

- (9) kom ekki meira þa fram fyrir oss at þui sinn-i.
 came EKKI more then forward before us.DAT at that.M.DAT.SG time-DAT.SG
 ‘No more [evidence] then came before us at that time.’ (DN II.146, 1322)

Examples such as this could have been acquisitionally ambiguous between an analysis in which *ekki* forms a noun-phrase constituent with *meira* (“no more [evidence] came before us”) and one in which it is taken as a negative adverb (“more [evidence] did not come before us”). Thus they provide a possible bridging context for the reanalysis that first enabled *ekki* to function as a negative adverb. Furthermore, the older sentential negator, *ei(gi)*, could also occur in these constructions, offering an analogical parallel for the reanalysis of *ekki* and a model for extension from this to contexts without the presence of a comparative adjective.

In (10), where the object of the verb is a neuter noun in the accusative singular, the function of *ekki* is ambiguous between a negative adverb (“Arnfinnr and Sigurðr did not have evidence thereof”) and a negative adjective (“Arnfinnr and Sigurðr had no evidence thereof”).

- (10) þeir Arnfinn -er ok Sigurd-er optnemnd-er
 they.M.NOM.PL Arnfinnr -NOM.SG and Sigurð-NOM.SG oft-mentioned-NOM.PL
 haf-d-u ecki prof þer
 have-PST-3PLEKKI evidence there
 ‘the oft-mentioned Arnfinnr and Sigurðr had no evidence thereof’ (DN III.163, 1332)

Other instances exemplify contexts in which *ekki* was acquisitionally ambiguous between a negative indefinite acting as a degree argument and a negative adverb. In (11), the function of *ekki* is ambiguous between a negative adverb (“[he] didn’t do [anything] to him”) and a negative pronoun object of the verb (“[he] did nothing to him”).

- (11) æn Þorgæir uar i gong-u-nne medr þæim ok
 but Þorgeirr was in walk-DAT.SG-DEF.M.DAT.SG with them.DAT.PL and
 vann ækki a honum
 achieved ekki on him.DAT.SG
 ‘but Þorgeirr was walking with them and didn’t harm him’ (DN II.156, 1280)

These contexts where there was acquisitional ambiguity in alphabetic Old Norwegian between *ekki* as a negative adverb and *ekki* in one of its historically prior functions all have one thing in common: they contain only the new negative, not both the old and new negatives. There was no context containing *ei(gi) ... ekki* where the reanalysis could have taken place and thus no stage II construction in *ei(gi) ... ekki* ever arose. Furthermore, given certain properties of the grammar of Old Norwegian, no such context could ever have been available. The canonical cases of Jespersen’s cycle exemplifying stage II are either in languages with negative concord, where constructions with multiple negatives would be possible or even required and would express only a single logical negation, and/or concern an innovative form based on an earlier negative polarity item. Old Norwegian did not allow negative concord and pronominal/adjectival *ekki* was not a negative polarity item but a true negative indefinite. Thus any construction containing both *ei(gi)* and *ekki* would have resulted in a double logical negation, and could not have been the basis of a new form of clausal negation. Whether or not synchronic variation between the stages of Jespersen’s cycle is always conditioned by information-structure factors like those which structure stage I/II variation in Old French, modern Italian and Catalan and stage I/II/III variation in Brazilian Portuguese is a topic of ongoing investigation (Willis, Breitbarth & Lucas 2013: 10–11). The change from *ei(gi)* to *ekki*, with its unusual progression directly from ‘stage I’ to ‘stage III’, thus represents a particularly interesting test case for this topic.

The primary source of Old Norwegian and the only source of Middle Norwegian is a large corpus of legal letters (charters) known as the *Diplomatarium Norvegicum* (DN). Examples can already be found in thirteenth-century texts of *ekki* functioning as a negative adverb. This early period thus represents the period of variation between stage I and stage III. Relative frequencies of the three negatives by year in the DN are shown in Figure 1 (with raw data in Table 4). Note that these counts cover all instances of *ekki*, including those where it appears in its historically prior adjectival/(pro)nominal function.

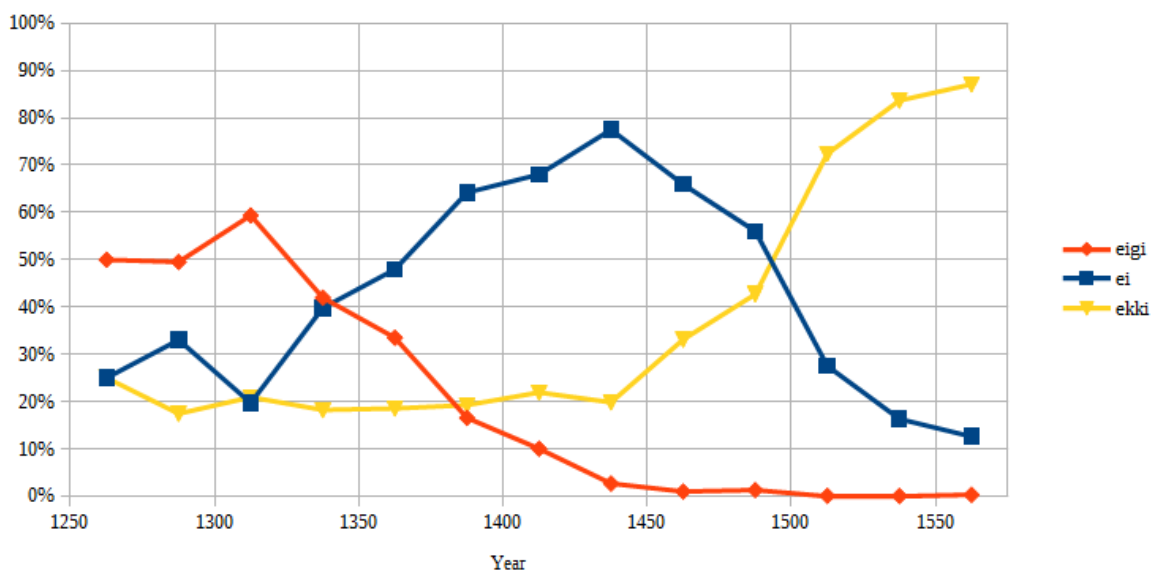


Figure 1. Relative frequencies of *ei*, *eigi* and *ekki* in the *Diplomatarium Norvegicum* by 25-year period, 1250–1575.

Table 4. Relative frequencies of *ei*, *eigi* and *ekki* in the *Diplomatarium Norvegicum* by 25-year period, 1250–1575.

period	ei	eigi	ekki	% ei	% eigi	% ekki
1250 – 1275	1	2	1	25%	50%	25%
1275 – 1300	36	54	19	33%	50%	17%
1300 – 1325	81	244	86	20%	59%	21%
1325 – 1350	203	214	93	40%	42%	18%
1350 – 1375	106	74	41	48%	33%	19%
1375 – 1400	190	49	57	64%	17%	19%
1400 – 1425	183	27	59	68%	10%	22%
1425 – 1450	406	14	104	77%	3%	20%
1450 – 1475	203	3	102	66%	1%	33%
1475 – 1500	260	6	198	56%	1%	43%
1500 – 1525	359	1	945	28%	0%	72%
1525 – 1550	785	2	4022	16%	0%	84%
1550 – 1575	84	2	580	13%	0%	87%

Figure 1 shows clearly the replacement of the original full form *eigi* with the reduced form *ei*, with the crossover point reached around 1375. This pattern confirms our assumption that the change from *eigi* to *ei* was purely phonological, and thus not an instantiation of Jespersen's cycle. If so, then *eigi* and *ei* can be treated as a single variant. Collapsing these two categories, the relative frequencies of *ei(gi)* (stage I negation) and *ekki* (stage III negation) are thus as shown in Figure 2.

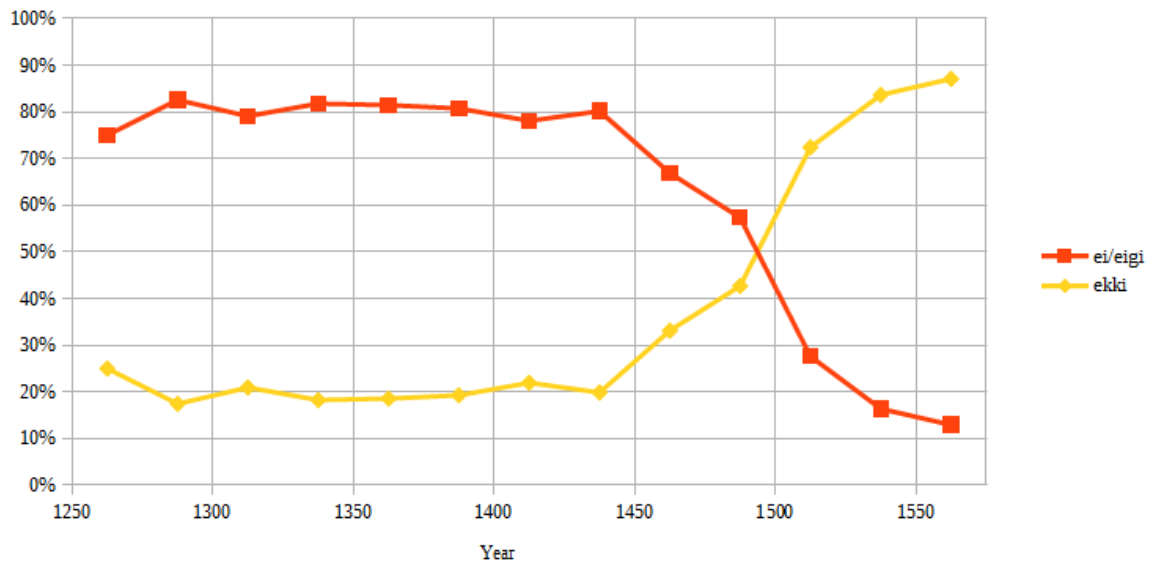


Figure 2. Relative frequencies of *ei(gi)* and *ekki* in the *Diplomatarium Norvegicum* by 25-year period, 1250–1575.

As can be seen from these figures, the relative frequencies of the stage I and III negatives were relatively stable at 80% and 20% respectively until around 1425, at which point the relative frequency of *ekki* rose sharply. On the basis of this, we hypothesize that, in the period before 1425, there were restrictions on the occurrence of *ekki*, and that these were then lost, allowing it to compete directly with *ei(gi)*. Given the broader context of research on new markers of negation, we hypothesize that these restrictions were initially grounded in information structure.

7 Method

It is this hypothesis which we will now test on the basis of detailed textual examination of instances of negation in the charters before 1425. All instances of *ekki* in the *Diplomatarium Norvegicum* were identified and those occurring in the period 1150–1425 were examined in detail. The following categories of document were excluded from consideration as providing unreliable evidence or as providing insufficient evidence for analysis in terms of information structure:

- (i) those known or suspected to be forgeries;
- (ii) those known to be copies of older documents (and therefore whose date attribution is questionable);
- (iii) those which do not take charter form (such as list-form records of goods or sales).

The function of *ekki* in each case was identified and those in which it functioned as an adjective, as in (12), or a pronoun, as in (13), were excluded.

- (12) leggi-um ver ecki skaplag ne skyllid-u
 lay-1PL we EKKI tax.N.ACC.SG nor due-ACC.SG
 a nockor-n lærð-an mann
 on any-M.ACC.SG learned-M.ACC.SG man.ACC.SG
 ‘we impose no tax nor due on any learned man’ (*DN I.59*, 1263–1265)

- (13) Saker þærs at ekki er mann-e-nom vis-are en
 because EKKI is man-DAT.SG-DEF.M.DAT.SG certain-COMP than
 dauð-inn
 death-def.m.nom.sg
 ‘Because nothing is more certain to man than death’ (*DN I.70*, 1280–1286)

The remaining instances were those in which *ekki* had adverbial function. Among these, two frequent patterns emerged. Firstly, *ekki* was very commonly found modifying a comparative adjective:

- (14) skil-d-u þau ok s[er all-a] þeira lifdag -a en
 decide-PST-3PL they also REFL all-M.ACC.PL their life.days -ACC.PL but
 ekki leng-r
 ekki long-COMP
 ‘they also made an agreement for themselves for all the days of their lives but no longer...’ (DN II.72, 1304)

This may provide a hint at the pathway of change via which adverbial *ekki* was first innovated, as noted above.

The remaining examples were those in which *ekki* functioned as a clausal negator. Among these, a striking number appeared specifically in the context of stating that individuals who had been summoned to appear in court failed to appear. A variety of different exact wordings were found, illustrated in (15) and (16), so these did not appear to represent a legal formula. Rather, this seemed to point towards exactly the hypothesis being tested, namely, that *ekki* was used here to cancel the inference from “they were summoned to appear” to “they appeared”.

- (15) En Þólfu-ar a Æikin-i kom ækki ok ængh-in
 but Þólfr-NOM.SG of Eikinn-DAT.SG came EKKI and none-M.NOM.SG
 hans vmbodsmáð -r j aðrnæmfð -an laghudagh
 his representative -NOM.SG in aforementioned -M.ACC.SG lawday.ACC.SG
 ‘Þólfr of Eikinn did not come on the aforementioned day for legal cases, nor did any representative of him.’ (DN I.269, 1341)
- (16) En af þui at Halzstæin var ækki aa stæmfu-u fyrst-æ
 but because Hallsteinn.NOM.SG was EKKI at meeting-DAT.SG first-M.ACC.PL
 tua dagh-a
 two.m.acc day-acc.pl
 ‘But because Hallsteinn was not at the meeting for the first two days...’
 (DN II.432, 1374)

All of these instances in which *ekki* functioned as a clausal negative were examined in detail. Any earlier statements related to the negated proposition were identified and the relationship between the two was categorized according to the scheme give in Table 5.

Table 5. Categorization scheme for Old and Middle Norwegian negatives.

Relation of preceding discourse to negated proposition	Information status
explicit assertion of proposition	explicitly mentioned
explicit denial of proposition	explicitly mentioned
explicit mention of proposition without assertion or denial	explicitly mentioned
forward-inferable assertion of proposition	forward-inferred
forward-inferable denial of proposition	forward-inferred
forward-inferable activation of proposition without assertion or denial	forward-inferred
backward-inferable assertion of proposition	backward-inferred
backward-inferable denial of proposition	backward-inferred
backward-inferable activation of proposition without assertion or denial	backward-inferred

The proposition was then categorized for other factors which could affect its information status, as listed in Table 6.

Table 6. Other information-structure factors considered.

Factor	Information status
part of perceptual common ground	explicitly mentioned
part of general common knowledge	common knowledge
pragmatically presupposed by preceding discourse	common knowledge

All instances of *ei(gi)* occurring in the same charter as an instance of *ekki* functioning as a clausal adverb were then examined. This subset of the instances of *ei(gi)* in the period under consideration was chosen to ensure that all of the instances of *ei(gi)* examined would come from texts whose grammar contained this variation between *ei(gi)* and *ekki*. Thus if some of the variation represented by Figures 1 and 2 reflected not contextually conditioned intraspeaker variation between *ei(gi)* and *ekki* but interspeaker variation in the grammaticality of *ekki* as a clausal adverb, this would not confound results of the comparison.

As with the instances of *ekki*, all these instances of *ei(gi)* were then categorized according to their relationship with any earlier statements in the discourse and for other factors affecting their information status. Both authors categorized the examples blind, that is, without access to knowledge of whether the negative word in a given sentence was *ei(gi)* or *ekki*, and cases of disagreement in the independent categorization were then discussed to produce a consensus attribution of each example to a single category.

8 Results

The results of these categorizations are given in Tables 7, 8 and 9. First, consider the rates at which the negated proposition was denied or asserted in the preceding discourse, given in Table 7. As can be seen, there is not a large difference in the rate at which the negated proposition has earlier been denied or asserted between *ekki* and *ei(gi)*. The difference is not significant according to a χ^2 test ($\chi^2=0.038$, $df=1$, $p=0.8454$). This suggests that the difference in function of *ekki* and *ei(gi)* cannot have been that *ekki* was used to deny the truth of a previously asserted proposition.

Table 7. Relationship of negated propositions to denials or assertions in the preceding discourse.

The negated proposition has earlier been...	All	%	ekki	%	eigi	%
denied	17	11.18%	11	13.10%	6	8.82%
asserted	82	53.95%	51	60.71%	31	45.59%
neither	53	34.87%	22	26.19%	31	45.59%

Table 8. Information status of the negated proposition.

Information status	All	%	ekki	%	eigi	%
explicitly mentioned	36	23.68%	22	26.19%	14	20.59%
forward-inferable, common ground	0	0.00%	0	0.00%	0	0.00%
forward-inferable, presupposed	7	4.61%	5	5.95%	2	2.94%
forward-inferable, common knowledge	2	1.32%	0	0.00%	2	2.94%
forward-inferable	50	32.89%	31	36.90%	19	27.94%
backward-inferable, common ground	0	0.00%	0	0.00%	0	0.00%
backward-inferable, presupposed	4	2.63%	2	2.38%	2	2.94%
backward-inferable, common knowledge	1	0.66%	1	1.19%	0	0.00%
backward-inferable	16	10.53%	12	14.29%	4	5.88%
common ground	3	1.97%	1	1.19%	2	2.94%
presupposed	8	5.26%	4	4.76%	4	5.88%
common knowledge	4	2.63%	3	3.57%	1	1.47%
new	21	13.82%	3	3.57%	18	26.47%

Secondly, consider the breakdown into more complex categories of the information status of the negated proposition, given in Table 8. No evidence can be seen here for any of the distinctions not found to be relevant in previous studies (such as the difference between

explicitly mentioned and common ground, or the difference between presupposition and common knowledge). Thus the categories were collapsed into only those found to be relevant in earlier studies on variation during Jespersen's cycle. For this simplified categorization, in cases where the proposition was both backward-inferable (and thus discourse old) and presupposed or common knowledge (and thus hearer old), it was counted in the forward-inferable category on the basis that it was discourse old and hearer old but not explicitly mentioned. The results of this procedure are shown in Table 9.

Table 9. Simplified categorization for discourse status of the negated proposition.

Information status	All	%	ekki	%	eigi	%
explicitly mentioned	39	25.66%	23	27.38%	16	23.53%
forward-inferable	64	42.11%	39	46.43%	25	36.76%
backward-inferable	16	10.53%	12	14.29%	4	5.88%
common knowledge	12	7.89%	7	8.33%	5	7.35%
completely new	21	13.82%	3	3.57%	18	26.47%

As can be seen, a large discrepancy is seen in the distribution of *ei(gi)* and *ekki* for two categories: forward-inferable and completely new. The difference in distribution into the different information-status categories for *ekki* and *ei(gi)* is significant according to a χ^2 test ($\chi^2=17.88$, $df=4$, $p=0.0013$). If the distinctions are collapsed into just completely new vs. discourse- and/or hearer-old, the distribution is still significant ($\chi^2=16.891$, $df=1$, $p<0.0001$). This is in line with the broad hypothesis that during the period of variation, the stage I and stage III negative would be pragmatically differentiated, just as has been found for stage I/II and stage I/II/III variation for other languages. Specifically, this seems most in line with the conclusion that *ekki* in Old Norwegian was subject to the same restriction as that on the stage II negatives in Old French: it could not occur where the negated proposition was both discourse and hearer new.

The three instances where *ekki* was found negating a completely new proposition are worthy of more detailed examination, both because they represent the small subset of the data which was not in line with the hypothesis and because they exemplify certain issues that arose in the tagging of the data.

First, consider the following example:

- (17) *fyrnæmdær Þorkiæl skal liokæ siræ Lodenæ þretighi mærkær peningæ firi þæt at han giorde ekki þæn auærkkæ vppa hans jord swm Vallær hæitir æftir þui swm þettæ bref sæghir swm þettæ er vidærfæst*

'The aforementioned Þórkell shall pay síra Loðinn thirty marks of money because he didn't do the tenancy work on his land which is called Vallir in accordance with what this charter to which this is attached says.' (*DN III.502*, 1392)

This clearly raises the issue of exactly what should be considered part of the prior discourse. There is no earlier mention of the tenancy work or the thirty-mark fine in the preceding text (as indeed this example occurs very near the beginning of the text), so there is nothing in the text itself from which it can be inferred that Þórkell undertook the work or did not undertake the work. However, in the attached document (which was evidently DN IV.559, dated three years earlier and concerning the same individuals), the work is enumerated and assigned to Þórkell:

- (18) Þorkiæl skwldi gera allæn þæn awærk iord siræ Lodens swm
 Þórkell should do.INF all.M.ACC.SG the work land síra Loðinn REL
 Wallær heitir
 Vallir be.called.PRS.3SG
 ‘Þórkell should do all the tenancy work in síra Loðinn’s land which is called Vallir’
 (DN IV.559, 1389)

Charters were often read out (*sýnda* “exhibited”) at legal meetings. It seems reasonable to assume that the earlier charter, verifying that the work had been assigned and what it entailed, would have been read at the meeting before the fine was determined and the new charter made to record it. Thus it seems reasonable to take the earlier charter as part of the preceding discourse for the later one, making the information status of the proposition “Þórkell undertook the tenancy work on síra Loðinn’s land” forward-inferable rather than completely new. Nevertheless, this highlights the problem that the exact constitution of the preceding discourse in such texts is often unclear. In many instances it might not be as obviously signposted as in this one that a given text follows on from some other text (or indeed some unrecorded spoken discourse).

Secondly, consider the following example:

- (19) fyrsagd hustrw Marghreta j Brandzgarde sagde swa firi honom fírom aarom fyr en hon
 dødhe. firi gudz skuld dæil ekki vm Brandzgard æftir mina liifdagha firi þy at Mari
 kirkia j Oslo aa han æftir mina dagha.
 ‘The aforementioned Mrs. Margreta of Brandsgarðr said thus before him four years
 before she died: “As due to god, do not divide up Brandsgarðr after the days of my life
 because Mariakirkja in Oslo should [possess] it after my days.”’ (DN IV.583, 1390)

Again, the notion of dividing up Mrs. Margreta Brynjulfsdóttir’s land is neither raised in the preceding charter text nor can it be inferred from it. Here, however, two issues are raised. The first is an instance of the problem discussed above: the content of the preceding discourse is unknown. In this example, the negative occurs in reported speech; no other speech in the conversation is reported and the context of the conversation is not given in any detail. This statement might, for all we can tell, be the final word in a long conversation between Mrs. Margreta Brynjulfsdóttir and the other interlocutor (Barðr Gunnarssonr) about what to do with the land, but could equally be a statement made out of the blue about a topic they had never previously discussed. With so little information, it is hard to have much confidence in the judgment of information status.

The second issue is that of common knowledge. The charter states that Barðr Gunnarssonr is the son of Margreta Brynjulfsdóttir's heir and it is clear from her name (in full *hustru Marghreto Bryniulfs dottor j Brandzgarde* "Mrs. Margreta Brynjulfsdóttir of Brandsgarðr") that she was the owner of the land. Would it have been common knowledge, and thus assumed as hearer old, that her heir(s) would have divided up the land after her death?

Finally, consider the following example:

- (20) þat er bod vart oc sanner vili at þit taker ekki læiðangren a Varnnu þui at ver vilium at Mariekirkia capella vor j Oslo oc hennar korsbrøðr oc prester hafue frealslega þæn sama læiðanger eftir þui sëm hon oc þeir hafua fyr haft han.

'It is our order and true will that you do not take the levy at Varna because we wish Mariakirkja, our chapel in Oslo, and her choristers and priests to freely have that same levy as she and they have had it before.' (DNI.173, 1323)

As before, there is no preceding statement in the charter which explicitly mentions that the addressees (Hákon of Hvalr and Þróndr Krakasonr) might take the levy nor from which such a proposition could be inferred. Indeed, with the exception of the opening and closing formulae, the extract above constitutes the entire text of this exceptionally short charter. No other charter survives dated earlier than 1323 which mentions the levy at Varna. Thus on the basis of the textual evidence alone, the proposition must be judged as completely new.

It is very tempting with this example to argue that the sender (King Magnús VII Eiríkssonr) would not have sent this instruction were there not some reason to believe that Hákon of Hvalr and Þróndr Krakasonr would otherwise have taken the levy: either an earlier contrary instruction that was to be rescinded, an earlier piece of interaction creating a pragmatic presupposition, or general common knowledge. However, the danger of this line of argument is that it seems to be an instantiation of the more sweeping argument "why would a speaker deny a proposition unless there was some reason to consider it asserted otherwise?" (cf. Dahl's 1979: 80 observation that negated sentences are often used to deny a previous assertion). This line of argument would seem to apply equally to any negative statement the full context for which is not known (inevitably true of almost any example in a historical text). Furthermore, although it might seem commonsensical that denying previous assertions is the canonical and primary function of negation, examination of the use of negation in real usage suggests that this is not the case (Schwenter 2006: 341–342). Thus, on the basis of the available evidence, our best judgment for this example can only be that the proposition is completely new and thus that the example represents an exception to the distributional pattern of *ekki*.

Table 10. Final typology of stage II and III negatives.

Form	explicitly mentioned	forward- inferable	backward- inferable	common knowledge	completely new
Old Norwegian <i>ekki</i>	felicitous	felicitous	felicitous	felicitous	infelicitous
Old French <i>ne ... pas/mie</i>	felicitous	felicitous	felicitous	felicitous	infelicitous
Catalan <i>no ... pas</i>	felicitous	felicitous	infelicitous	infelicitous	infelicitous
Italian <i>non ... mica</i>	felicitous	felicitous	infelicitous	infelicitous	infelicitous
Brazilian Portuguese <i>não ... não</i>	felicitous	felicitous	infelicitous	infelicitous	infelicitous
Brazilian Portuguese <i>Ø ... não</i>	felicitous	infelicitous	infelicitous	infelicitous	infelicitous

Nevertheless, this leaves only one or two instances of *ekki* functioning as a clausal negative for completely new propositions, compared to 16 for *ei(gi)*, a significantly greater proportion. Thus we can conclude that, as with other new negators, *ekki* initially negates discourse-old propositions (of any kind) and is strongly disfavoured for negation of completely new propositions. This is consistent with our initial hypothesis that *ekki* was subject to some kind of constraint which limited its frequency up to 1425, and that it was the relaxing of this constraint in the period after 1425 that led to a rapid increase in its frequency and its ultimate adoption as the sole marker of sentential negation in Norwegian.

We thus place *ekki* and *ei(gi)* in the typology of Jespersen's cycle variants as a parallel to the stage I/II variation found in Old French, expanding our earlier typology of stage II/III markers to include *ekki* in Table 10, and our earlier typology of stage I markers to include *ei(gi)* in Table 11.

Table 11. Final typology of stage I negatives.

Form	explicitly mentioned	forward- inferable	backward- inferable	common knowledge	completely new
Old Norwegian <i>ei(gi)</i>	felicitous	felicitous	felicitous	felicitous	felicitous
Old French <i>ne ... Ø</i>	felicitous	felicitous	felicitous	felicitous	felicitous
Catalan <i>no ... Ø</i>	felicitous	felicitous	felicitous	felicitous	felicitous
Italian <i>non ... Ø</i>	felicitous	felicitous	felicitous	felicitous	felicitous
Brazilian Portuguese <i>não ... Ø</i>	felicitous	felicitous	felicitous	felicitous	felicitous

9 Conclusion

Our examination of the distribution of Old and Middle Norwegian *ekki* has led us to conclude that this item was probably restricted to negating discourse-old propositions, including propositions that were contextually inferable or common knowledge. We have argued that it was this distinction that allowed two sentential negators, *ei(gi)* and *ekki*, to co-exist in the language up to around 1425, after which time they competed directly with one another. We have briefly considered the reasons for the reanalysis of *ekki* from a negative indefinite to a negative adverb, suggesting possible bridging contexts.

The ultimate shift of *ekki* to become the unmarked negator seems to be mainly an inflationary bleaching process (a push chain): the loss of a specialized function for *ekki*, allowing it to appear in all contexts, was the main trigger for change. It should be noted, however, that two factors speak instead in favour of an explanation of it as a pull chain triggered by weakening of the older negator *ei(gi)*. First, the rise in the frequency of *ekki* coincides exactly with the final disappearance of the full form *eigi*. Secondly, the syncopated form *ei* was a homophone for *ei* “yet, still; always” and in many contexts the two must have been ambiguous. Positive *ei* does not survive into Modern Norwegian, suggesting that it was this meaning that was pushed out rather than the negative. Nevertheless, this singularly awkward ambiguity may have played a role in the dwindling use of negative *ei*, resulting in a hybrid push/pull chain as argued for in other cases by Breitbarth (2009) and Willis (2010).

Finally, we have noted that Norwegian provides an example of a crosslinguistically surprising direct shift from a stage I negator to a stage III negator without an intervening doubling stage. We have attributed this to the fact that the new negator *ekki* derives from an indefinite rather than a negative polarity item minimizer and to the absence of negative concord in Old Norwegian.

In crosslinguistic perspective, the development of *ekki* is part of a wider pattern for which we have suggested a hierarchy of discourse contexts, with new negators typically spreading from discourse-old to discourse-new contexts. Our finding in a non-canonical case of Jespersen’s cycle strengthens the suggestion that such pragmatic differentiation of negatives is a universal feature of the development of negative markers, not one dependent on the distinctive form associated with stage II of the cycle. A plausible pathway behind this common finding is as follows. A minimizer functions by explicitly stating that a proposition applies at the most surprising point on a conceptual scale and so by implication must also apply at all other points (Eckardt 2006, 2012, Israel 2001, 2011), that is, it is emphatic in the sense adopted in section 4 above. Thus, when such a minimizer develops into a negative, it is already specialized for surprising contexts. Development from such emphatic negation to negation specialized for negating propositions which have previously been asserted, whose assertion can be inferred or is generally known (cf. Wallage, in press) would represent a systematization of a type familiar from grammaticalization studies: such a development might be expected immediately or shortly after the minimizer developed into a negative adverb or negator. The development to a negator specialized for all discourse-old propositions (that is, expansion to include propositions which have previously been denied or whose denial can be inferred from preceding discourse) and the further development to a negator specialized for all hearer-old propositions (that is, expansion to include propositions which are known to speaker

and hearer but are new to the discourse) would each represent a bleaching or generalization, again typical of grammaticalization. It is important to note, however, that although this pathway seems plausible, only the latter two stages are actually attested: no case of a negator specialized for surprising or emphatic contexts has been reported in the literature.

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