



---

1-28-2013

## Re(de)fining Jespersen's Cycle

Katerina Chatzopoulou  
*University of Chicago*

Follow this and additional works at: <https://repository.upenn.edu/pwpl>

---

### Recommended Citation

Chatzopoulou, Katerina (2013) "Re(de)fining Jespersen's Cycle," *University of Pennsylvania Working Papers in Linguistics*: Vol. 19 : Iss. 1 , Article 5.

Available at: <https://repository.upenn.edu/pwpl/vol19/iss1/5>

This paper is posted at ScholarlyCommons. <https://repository.upenn.edu/pwpl/vol19/iss1/5>  
For more information, please contact [repository@pobox.upenn.edu](mailto:repository@pobox.upenn.edu).

---

## Re(de)fining Jespersen's Cycle

### Abstract

This paper discusses the historical development of the Greek negator system, from Homeric Greek to Standard Modern Greek, in connection to the Jespersen's Cycle phenomenon (Jespersen 1917, since Dahl 1979) and proposes a broader approach for Jespersen's Cycle: an approach that is inclusive both to traditional Jespersen's Cycle languages (Van der Auwera 2009), as well as atypical Jespersen's Cycle languages. Greek is among the latter, along with languages that deviate in one way or another from what the current understanding of Jespersen's Cycle predicts. The proposed approach views Jespersen's Cycle as a phenomenon that targets intensified predicate negation and with time elevates it to propositional. This view agrees with current theories of grammaticalization and syntactic change (Roberts and Roussou 2003, Van Gelderen 2004), while the schematic representation of Jespersen's Cycle is given as an instance of upward lexical micromovement (Chatzopoulou 2012).

# Re(de)fining Jespersen’s Cycle

Katerina Chatzopoulou

## 1 Introduction

This paper examines the historical development of the Greek negator system, from Homeric Greek to Standard Modern Greek, in connection to the Jespersen’s cycle phenomenon (Jespersen 1917, since Dahl 1979). Greek maintains a contrast between two negators, NEG1 and NEG2, in complementary distribution throughout its history, as part of its inheritance from Proto-Indo-European (Fowler 1896, Moorhouse 1959, Joseph 2002, Fortson 2010). The Greek NEG2 is a polarity item in each consecutive linguistic stage, an element licensed exclusively in nonveridical environments in the sense of Giannakidou (1998), such as imperatives, interrogatives, conditionals, optatives etc. (Chatzopoulou and Giannakidou 2011, Chatzopoulou 2011, 2012), a fact which is quite common from a crosslinguistic perspective (see Van der Auwera and Lejeune 2005, Van der Auwera 2006).<sup>1</sup>

	NEG1		NEG2
Proto-Indo-European	<i>*ne</i>	vs.	<i>*me<sub>H1</sub></i>
Homeric Greek	<i>u:(k<sup>h</sup>)</i>	vs.	<i>me:</i>
Classical Greek	<i>u:(k<sup>h</sup>)</i>	vs.	<i>me:</i>
<i>Koine</i>	<i>u(k)</i>	vs.	<i>mi</i>
Late Medieval	<i>u(k)</i> (and <i>udhén</i> )	vs.	<i>mi</i> (and <i>midhén</i> )
Modern Greek	<i>dhe(n)</i>	vs.	<i>mi(n)</i>

Table 1: The two negator contrast from Proto-Indo-European to Standard Modern Greek.

The diachrony of Greek negation, regarding NEG1 as well as NEG2, deviates from the traditional understanding of Jespersen’s cycle in that at no point in its attested history did sentential negation in Greek manifest a doubling stage: the addition of a second element, which was after a point required for the expression of negation (see also Willmott, forthcoming). In this sense Greek contrasts with French (Bréal 1897, Clarke 1904, Godard 2004), English (Horn 1989, Mazzone 2004, Wallage 2005), Dutch/Flemish (Hoeksema 1997, Zeijlstra 2004, Van der Auwera 2006, Breitbarth and Haegeman 2008), Old Norse (Van Gelderen 2008), Arabic and Berber (Lucas 2007), Yiddish (Van der Auwera and Gybels 2010), among numerous other languages. It is, however, obvious that the history of the Greek language indeed provides evidence of *negator renewal*.<sup>2</sup> In this paper I propose a broader description of the Jespersen’s cycle phenomenon, inclusive both to typical and atypical Jespersen’s cycle manifestations, with Greek placed among the latter. The proposed approach abstracts away from the morphosyntactic and phonological particulars of the phenomenon and explicitly places its regularities in the semantics. This is an intuition that is found in the Jespersen’s cycle literature (Horn 1989, Van Kemenade 2000, Roberts and Roussou 2003, Kiparsky and Condoravdi 2006, de Cuypere 2008, Van der Auwera 2008, 2010).

## 2 Jespersen’s Cycle Traditionally

The term Jespersen’s cycle (after Jespersen 1917) was first used by Östen Dahl in 1979 to refer to the process by which the expression of negation in a language tends to increase and decrease in

<sup>1</sup>According to Van der Auwera and Lejeune’s (2005) study, 327 languages out of 495 languages worldwide maintain a negator particular to prohibition, while the same negator in these languages can appear in other nonveridical environments as well, see also Honda (1996).

<sup>2</sup>The term ‘negator renewal’ in connection to Jespersen’s cycle was introduced in Van der Auwera (2010).

complexity over time in regular way. French is the prototypical example of a language that exhibits such a development and is typically mentioned in all studies throughout the Jespersen's cycle literature, being among the three languages of Jespersen's original corpus (the other two being English and Danish).

- (1) Il ne peut venir ce soir. STAGE I Old French  
 Il **ne** peut **pas** venir ce soir. STAGE II Middle French  
 Il peut **pas** venir ce soir. STAGE III Modern colloquial  
 he **NEG** can **NEG** come this evening  
 'He can't come tonight.'

(2)		ENGLISH	DUTCH		
	STAGE I	<i>ne ...</i>	<i>en ...</i>	ETYMOLOGY OF THE 2 <sup>ND</sup> WORD	
	STAGE II	<i>ne ... na:ht</i>	<i>en ... niet</i>		<i>na:ht na wiht</i> 'no creature, thing'
	STAGE III	<i>... noht</i>	<i>... niet</i>		<i>niet ne iet</i> 'no thing, nothing'

Jespersen's observation regarding the tendency for regular renewal of the expression of negation in a language has been preceded not only by Antoine Meillet (1912:393–394), but earlier by Alan H. Gardiner (1904), who discusses the origin of negators in Egyptian and Coptic in relation to the French negator transformations (see Gardiner 1904:134, cited in Van der Auwera 2009:42). Jespersen's exact phrasing, regarding the *weakening* and the *strengthening* of the negator is open to interpretation, whether what he had in mind was phonological or semantic (see Kiparsky and Condoravdi 2006). However, the negator renewal path in the languages he studied was morphosyntactic; all three languages (English, French and Danish) manifested a doubling stage, the addition of a second element (indefinite or minimizer), which eventually assumed the function of sentential negation itself. This had a permanent effect in the understanding of Jespersen's cycle. As a result, Jespersen's cycle is described in the literature as a diachronic multistage process that involves three main stages, as recently as de Swart (2010:114). Her description of each stage, in (3), is given relatively to the position of the verb.

- (3) **Preverbal** expression of sentential negation. STAGE I  
**Discontinuous** expression of sentential negation. STAGE II  
**Postverbal** expression of sentential negation. STAGE III

A similar three-stage description for Jespersen's cycle is given in Burridge (1983), Bernini and Ramat (1996), Haspelmath (1997), Zanuttini (1997), Horn (1989), Hoeksema (1997), Roberts and Roussou (2003), Van der Auwera and Neuckermans (2004), Mazzon (2004), and Lucas (2007), among others (see for more Van der Auwera 2009:38). Several intermediate stages have also been postulated, the number of which can vary depending on the level of detail and/or the language(s) under consideration. Intermediate stages are generally the stages of ambiguity or competing forms, in which either one of the two exponents of propositional negation can be optional (see Schwegler 1990, Honda 1996, Donhauser 1996, Van Kemenade 2000, Zeijlstra 2004, Larrivée 2004, Schwenter 2006, among others). Greek shows evidence for intermediate stages, stages in which the former exponent of propositional negation is in free variation with the new one (see the Late Medieval stage in table 1). But this is where the similarities of Greek with morphosyntactic accounts of Jespersen's cycle stop. Greek did not manifest a Jespersen's cycle in the traditional sense, neither for NEG1, nor for NEG2.

### 3 The Atypicality of Greek: No Doubling Stage

According to the traditional descriptions for Jespersen's cycle we have seen, Greek is problematic in that it does not have a Stage II, as observed also in Willmott (forthcoming), which is the stage of discontinuous negation or more generally the stage of doubling. The Attic Greek NEG1 *u:(k<sup>hl</sup>)* was gradually replaced in Late Medieval by NEG1 *οὐδέν* /udhén/ (Horrocks 1997/2010, Rijksbaron 2012), see (4) and (5), and the same happened to NEG2, although to a lesser extent,

see (6) and (7), as NEG2 *μηδέν* /midhén/ did not eventually replace the NEG2 *μη* /mi/ in any of its uses.

- (4) τοῖς φίλοις αὐτῶν οὐ θεωροῦσιν ATTIC GREEK  
 tois philois auto:n u: t<sup>h</sup>eo:ru:sin  
 the.DAT friends.DAT their.GEN **NEG1** look.PRES.IND.3PL  
 ‘they do not observe (the misfortunes) of their friends.’ (Isocrates, *Epist* 6 12.9–10)
- (5) οἰμέν ἀδελφίν μας καλόν, οὐδέν σε θεωρούμεν LATE MED.  
 oimén adhélfín mas kalón, udhén se theorómen  
 alas sibling.VOC our.GEN good.ACC **NEG1** you.ACC see.PRES.IND.1PL  
 ‘Alas our dear sibling, we do not see you.’ (*Digenis Akritis* 111)
- (6) μὴ ψεύσον [...] τῆς ἐπιούσης ἐλπίδος. ATTIC GREEK  
 me: pseuson te:s epíu:se:s elpidos  
**NEG2** falsify.AOR.IMP the.GEN sum.PRPCPL.FEM.GEN hope.GEN  
 ‘Do not prove wrong the hope that comes from this.’ (Aristophanes, *Thesm.* 870)
- (7) το ἀδελφίν μας το ἀρπάζεις, μηδέν μας το στερέψεις. LATE MED.  
 to adhélfín mas to árpakses, midhén mas to sterépsis  
 the sibling our.GEN which abduct.PP.2SG **NEG2** us it deprive.PNP.2SG  
 ‘Do not deprive us from our sibling that you took away.’ (*Digenis Akritis* 130)

An explanation for the lack of a Stage II comes from the fact that Greek, being a non-strict negative concord language, at least until the end of Koine (3<sup>rd</sup> c. AD), employed two syntactic strategies of negative reinforcement, (8). On a par with negative concord structures in Italian and Spanish (cf. Zanuttini 1991, Laka 1990, Herburger 2001), the Greek negators of Classical and Koine Greek were generally required, in case the n-word was postverbal, (9), (11), and dropped, if the n-word was preverbal, (10), (12).

- (8) NEGATIVE REINFORCEMENT STRATEGY 1: NEG verb N-WORD  
 NEGATIVE REINFORCEMENT STRATEGY 2: N-WORD verb.
- (9) οὐ πέπονθεν οὐδέν ATTIC GREEK: strategy 1  
 u: pepont<sup>h</sup>en u:den  
**NEG1** suffer.pres-PERF.3SG **NEG1-thing**  
 ‘Nothing happened to him.’
- (10) οὐδέν πέπονθεν ATTIC GREEK: strategy 2  
 u:den pepont<sup>h</sup>en  
**NEG1-thing** suffer.PRES-PERF.3SG  
 ‘Nothing happened to him.’
- (11) μὴ νῦν ἔτι εἴπησ μηδέν. ATTIC GREEK: strategy 1  
 me: ny:n eti e:pe:is me:den  
**NEG2** now more say.AOR.SUBJ.2SG **NEG2-thing**  
 ‘Do not say anything more.’
- (12) μηδέν λέγε [...] ATTIC GREEK: strategy 2  
 me:den lege  
**NEG2-thing** say.PRES.IMP.2SG  
 ‘Do not say anything [...].’

After the significant decline of negative concord structures during the Hellenistic Greek period and the preference of NEG1 and NEG2 indefinites for preverbal position (Chatzopoulou 2012), strategy 2 was further stabilized as the dominant strategy for negative reinforcement. As a result, it was strategy 2 that gave rise to the negators NEG1 *οὐδέν* /udhén/ and NEG2 *μηδέν* /midhén/ of Late Medieval Greek and a discontinuous stage of sentential negation did not occur.

(13)	ATTIC GREEK	➡	KOINE GREEK	➡	MEDIEVAL GREEK	➡	STANDARD MODERN
NEG1	<i>u:(k<sup>h</sup>) ...</i>		<i>u(k) ...</i>		<i>u(k) ...</i> <i>udhén ...</i> <i>dhen ...</i>		<i>dhe(n)...</i>
NEG2	<i>mɛ:...</i>		<i>mi ...</i>		<i>mi ...</i> <i>midhén ...</i>		<i>mi(n)...</i>

This development is reminiscent of the Latin *non*, which deviates from prototypical Jespersen's cycle patterns in a similar way: Latin did not exemplify a doubling stage either. Latin *non* resulted from the merging of the weak negator *ně* (see Van der Auwera 2010:13) and *ænum* 'one'.<sup>3</sup> The fact that neither Greek nor Latin manifested a Stage II of the traditional Jespersen's cycle may not be circumstantial. Both Greek and Latin at Stage I were primarily SOV languages (Joseph 1978/1990, Taylor 1994, Deligianni 2011). The correlation of Jespersen's cycle with word order is a hypothesis entertained since Vennemann (1974) and Harris (1976). More recently de Cuypere (2008:230) concludes that in OV languages with preverbal negators discontinuous negation does not eventually occur. Multiple parameters may be involved in a particular negator renewal path, but word order and word order shifts appear to be among them.

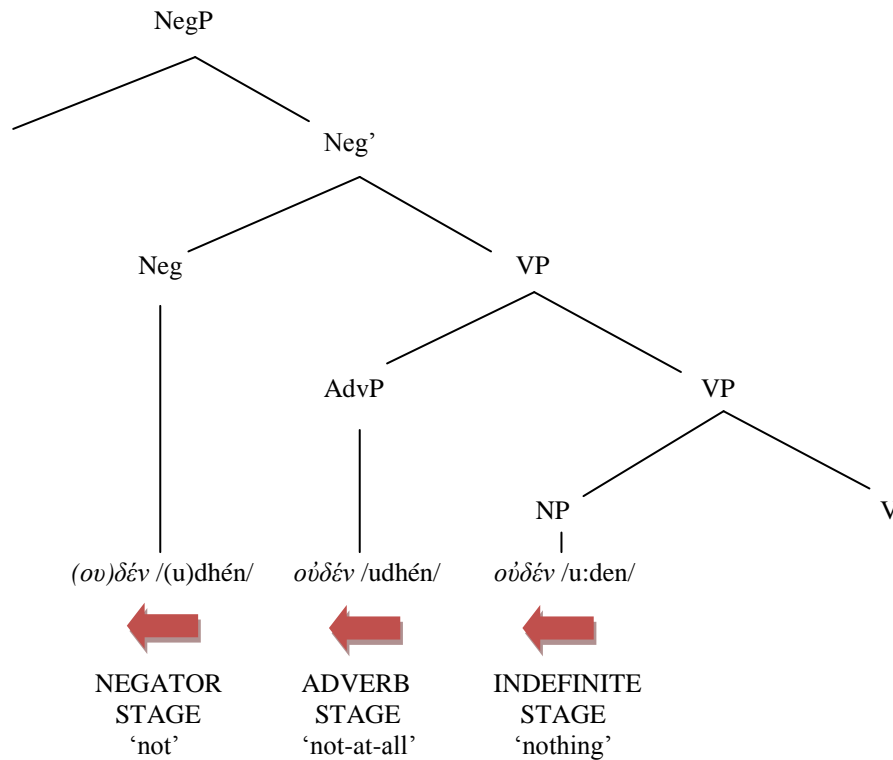


Figure 1: The structural microelevation of the Greek NEG1 indefinite.

Figure 1 offers a visualization of the grammaticalization path of the Greek NEG1 indefinite as *upward lexical micromovement* (see Chatzopoulou 2012). This agrees with Roberts and Roussou's (2003), Robert's (2010) general approach for grammaticalization as *up-the-tree movement*, as well as Van Gelderen's (2004) Late Merge principle of diachronic syntax: merge as late as possible.

<sup>3</sup>*ne* + *ænum* > *non*. The case of Latin is actually discussed already in Jespersen (1917:14–15).

## 4 Other Negator Renewal Pathways

Negator renewal paths that deviate from the traditional understanding of Jespersen's cycle have been identified crosslinguistically. Two are of particular relevance, as the approach for Jespersen's cycle I am proposing is inclusive to these as well: (i) the case in which propositional negation has its origin in former verbs, (ii) tripling stage negators.

### 4.1 Negator Renewal through Former Verbs: No Doubling Stage

It has been known since Givón (1978) and Payne (1985) and more recently discussed and enriched with data from more languages in Croft (1991), Heine and Kuteva (2002), Miestamo (2003), Van der Auwera (2006) and Van Gelderen (2008, 2011), that one second major strategy for negator renewal is the one where sentential negation originates from former verbs, generally verbs with some inherent negative property, e.g., 'to lack', 'to fail'. This is a path attested outside the Indo-European language family. Chinese is one prototypical such language. Sentential negation *mei* in Modern Chinese, used with predicates of inherent perfectivity, comes from the Old Chinese verb *mo* 'to die' with a predictable change in the vowel (Djamouri 1991, 1996 and Pulleyblank 1995, cited in Van Gelderen 2011:320), while the canonical negator of Modern Chinese *bu* most probably comes from the archaic Chinese form *wu*, which meant 'to lack' (Heine and Kuteva 2002:188). Examples from the diachrony of *mei* are given below.

- (14) Yao Shun ji **mo** [...] OLD CHINESE  
 Yao Shun since **died**  
 'Since Yao and Shun died [...]' (Mengzi, Tengwengong B, from Lin 2002)
- (15) Yu de wang ren **mei** kunan EARLY MANDARIN  
 wish PRT died person **not.be** suffering  
 'If you wish that the deceased one has no suffering [...]' (from Lin 2002:5–6)
- (16) Wo mei you shu. MODERN CHINESE  
 I **NEG** exist book  
 'I don't have a book.' (from Van Gelderen 2008:199)

Numerous such languages have been identified. Among them are seven Athabaskan languages (Van Gelderen 2008:222–223), Australian aborigines languages, e.g., Nunggubuyu (Croft 1991:11) and some varieties of Berber (Mettouchi 1996, Chaker 1996). In most of these cases, there is a correlation of the negator with perfectivity or telicity in general, in that at some point in its history (before becoming a negator) it carried perfective aspect marking, as is the situation in Early Mandarin, see (15), and in several Athabaskan languages (see Rice 1989, Givón 2000, Van Gelderen 2008), or it placed restrictions on the predicates it could co-occur with, again in terms of perfectivity (lexical or grammatical).

### 4.2 Recycling without any Erosion: A Tripling Stage

Another way the emergence of plain sentential negation can deviate from the traditional morphosyntactic description of Jespersen's cycle is the case where a language that already has syntactically discontinuous negation enters the cycle for the second time and has a third element added, without any loss of phonological material from the previous stage. Such a development results in a compound morphosyntactic structure that allows three elements for the expression of plain propositional negation. Multiple such examples have been attested, e.g., in Bantu (Kanincin, Devos and Van der Auwera, forthcoming, Devos et al. 2010), Austronesian languages, e.g., in Lewo, a Vanuatu language (Early 1994, Van der Auwera 2006, Crowley 2006), and it is even found in European languages, e.g., in dialects of Dutch/Flemish (Van der Auwera and Neuckermans 2004), as well as in Dego Italian (Manzini and Savoia 2005). Below is an example of a prohibitive structure attested in Lewo. The original negative pattern required the embracing structure *ve...re*. However, the prohibitive *toko* (of verbal origin, 'to desist') can be further added, resulting to a *ve...re toko* negator without traces of emphasis.

- (17) **Ve** a-kan **re** **toko!** LEWO (AUSTRONESIAN)  
**NEG1** 2sg.eat **NEG2** **NEG3**  
 ‘Do not eat it!’

Similarly in Dego Italian, this time in a declarative negation, a tripling stage is attested. The example below is from Manzini and Savoia (2005 III:298).

- (18) a **η** m **εη** soη **nanta** lavo DEGO ITALIAN  
 I **NEG1** me **NEG2** am **NEG3** wash.INF  
 ‘I have not washed.’ (from Manzini and Savoia 2005 III:298)

The tripling stage negator is a situation that would have occurred, e.g., in French, if the *ne...pas* construction was reinforced through another element prior to the loss of *ne* in actual language. This of course was not the case for French, nor was it for any of the typical Jespersen’s cycle languages. But clearly, it is a typological possibility that, similarly to the developments of Greek, is not predicted by the text-book account for Jespersen’s cycle. The goal of the following section is to amend this situation by proposing a broader definition for this phenomenon.

## 5 Jespersen’s Unite: A Broader Approach for Jespersen’s Cycle

In this section a novel description of Jespersen’s cycle is spelled out, which is inclusive to both typical and atypical Jespersen’s cycle instantiations. Overall I support a treatment of Jespersen’s cycle as a phenomenon that exhibits typological variation, an assumption that already underlies in much of the Jespersen literature and a position explicitly taken in Van der Auwera (2009), where a distinction is drawn between Jespersen’s cycle, understood as involving doubling, and the Negative cycle in general. I maintain the term Jespersen’s cycle for all negative cycles, with or without a doubling stage, given that in his 1917 phrasing Otto Jespersen said that negation is strengthened ‘*generally* through some additional word.’ He did not say *always*.

In spite of the differences in the details, the point where all negative cycles meet is the bleaching of predicate negation to plain propositional and based on this observation, I propose the definition in (19).

- (19) Jespersen’s **Cycle Definition:**

*Formalization I (broad):* Negator renewal through the semantic bleaching and structural elevation of intensified predicate negation to plain propositional, further re-intensified by morphological, syntactic, prosodic or other means.

*Formalization II (includes traditional Jespersen’s cycle, Greek, Latin and tripling stage languages):* If X is a negative expression, either syntactically continuous or discontinuous, and  $\alpha$  a variable of quantities (as of individuals, amounts or times), Jespersen’s cycle goes through the following stages:

- STAGE I  $[[X]] = \lambda P_{\langle d, \langle \alpha, t \rangle \rangle} . \lambda \alpha. [\forall d > 0. \neg P(d)(\alpha)]$  (intensified predicate negation)  
 STAGE II  $[[X]] = \lambda p. \neg p$  (plain propositional negation)

This definition reflects a view that labels what has so far been described as *emphatic negation*, as *intensified negation* (also Mustajoki and Heino 1991, Hammond 2005): plain negation with the addition of an intensifier (morphological or syntactic) with an understanding for intensification in the sense of C. Romero (2007): intensity is a qualitative or quantitative gap between *two states* relative to a phenomenon. Intensification involves quantification of degrees. The correlation of negation with intensity agrees with Bolinger’s (1972) observation that gradeability can have crosscategorical relevance and is not just a property of adjectives. The proposed definition focuses on the emphatic/intensified form of negation that eventually bleaches to plain sentential negation and identifies two stages: one in which the element is emphatic and



one in which it is not (see also Furtado da Cunha 2001 for a two-stage analysis of Jespersen's cycle from a cognitive-functional perspective, also de Cuypere 2008:231).

Predicate negation in Formalization I of the definition refers to a negative element either (i) from within the verb phrase (VP), which can be either the complement of the verb (as in French, Dutch, German, English, Greek, Latin) or the verb itself (as in Chinese, Athabaskan, Semitic and Austronesian and languages in general in which the negator is of verbal origin) or (ii) immediately above the VP, as in the case of a negative adverb (e.g., *never* in African American Vernacular, cf. Van Gelderen 2008, and possibly Homeric and Attic Greek NEG1 *οὐ(κ)* /u:(k)/, cf. Cowgill 1960).<sup>4</sup> In Formalization II of the definition, X is used as a structurally and compositionally opaque element, which can stand either for the French *ne...pas*, or the Greek *udhén* or the three co-occurring negators attested e.g. *η...ην νεντα* in the Italian dialect in (18). The two forms of definition Part II are truth-conditionally equivalent, something which may facilitate the eventual generalization of intensified negation as plain propositional. Yet in the case of emphatic/intensified negation, the X element explicitly negates a whole set of entities or quantities or times that are introduced through a scale denoting lexical property. Thus the process of bleaching in the transition from Stage I to Stage II involves the loss of scalar reference: at Stage II a scale is no longer evoked and only the standard of comparison or scalar endpoint gets interpreted (see also Ch. Lee 2011, Deligianni forthcoming). The exact denotations for the emphatic form of negation (Stage I) can vary in the details, especially in languages like Chinese, where the negator is of verbal origin. This kind of negator renewal path is covered by Part I of the new definition for Jespersen's cycle, namely the elevation of predicate negation to propositional negation. Similarly, Part II is broad enough to be inclusive to traditional Jespersen's cycle languages, Greek, Latin and many tripling stage languages, but the precise denotations of intensified negation in each of these languages are expected to vary.


## 6 Conclusion

The history of the Greek negator system along with other atypical negator renewal manifestations provides motivation for a refinement of the traditional understanding of Jespersen's cycle in a fashion that abstracts away from previous morphosyntactic and phonological descriptions and explicitly places the regularities of the phenomenon in the semantics. As noted in Kiparsky and Condoravdi (2006), motivation for the cycle is to maintain the contrast between emphatic negation and plain (intensified and non-intensified in our terminology). The eventual bleaching of emphatic negation to plain, as a universal tendency, was linked to the diachronic instability of scalar notions, whose reasons remain to be examined. Under the view that grammaticalization is a semantic process (Lightfoot 1999, Heine and Kuteva 2002), it is only natural to argue for a semantic description of Jespersen's cycle, one prototypical instance of grammaticalization. It is only in this sense that its characterization as a cycle is meaningful: as a geometric notion that reflects the fluctuation between two identical semantically defined stages: intensified and non-intensified negation.

## References

- Bernini, Giuliano, and Paolo Ramat. 1996. *Negative Sentences in the Languages of Europe: A Typological Approach*. Berlin: Mouton de Gruyter.
- Bolinger, Dwight. 1972. *Degree Words*. The Hague: Mouton.
- Bréal, Michel. 1897. *Essai de Sémantique*. Paris: Hachette.
- Breitbarth, Anne, and Liliane Haegeman. 2008. Not continuity, but change: stable stage II in Jespersen's cycle. Ms., University of Cambridge and Université de Lille III.
- Burridge, Kate. 1983. On the development of Dutch negation. In *Linguistics in the Netherlands 1983*, ed. H. Bennis and W.U.S. van Lessen Kloeke, 31–40. Dordrecht: Foris.

<sup>4</sup>According to Cowgill (1960) etymology the Homeric *u:(k)* comes from a form that used to mean 'never': Proto-Greek \**ne oiū kwid* ('not ever in my life') > Homeric Greek *u:(k)* NEG1.

- Chatzopoulou, Katerina. 2011. Negation beyond fate. Paper presented at ICGL 10, Democritus University of Komotini.
- Chatzopoulou, Katerina. 2012. Negation and Nonveridicality in the History of Greek. Doctoral dissertation, University of Chicago.
- Chatzopoulou, Katerina, and Anastasia Giannakidou. 2011. Negator selection in Attic Greek is a polarity phenomenon. Poster presentation at DiGS XIII, UPenn, Philadelphia, June 2–5.
- Chaker, Salem. 1996. Quelques remarques préliminaires sur la négation en berbère. In *La négation en berbère et en Arabe Maghrébin*, ed. S. Chaker and D. Caubet, 9–22. Paris: Harmattan.
- Clarke, Charles C. 1904. The actual force of the French *ne*. *Modern Philology* 2:279–287.
- Cowgill, Warren. 1960. Greek *ou* and Armenian *oč*. *Language* 36(3):347–50.
- Croft, William. 1991. The evolution of negation. *Journal of Linguistics* 27:1–27.
- Crowley, Terry. 2006. *Nese: A Diminishing Speech Variety of Northwest Malakula (Vanuatu)*. Canberra: Australian National University.
- Dahl, Östen. 1979. Typology of sentence negation. *Linguistics* 17:79–106.
- De Cuypere, Ludovic. 2008. *Limiting the Iconic: From the Metatheoretical Foundations to the Creative Possibilities of Iconicity in Language*. Amsterdam-Philadelphia: John Benjamins.
- De Swart, Henrietta. 2010. *Expression and Interpretation of Negation*. Studies in Natural Language and Linguistic Theory, volume 77. Dordrecht: Springer.
- Deligianni, Efrosini. 2011. Pragmatic factors that determine main constituent order in Greek: a diachronic consideration. In *Selected Papers from the 19th International Symposium on Theoretical and Applied Linguistics*, ed. E. Kitis, N. Lavidas, N. Topintzi, and T. Tsangalidis, 163–173, Aristotle University. Thessaloniki: Monochromia.
- Deligianni, Efrosini. Forthcoming. The interaction between Jespersen's Cycle and scalarity in Greek. In *Diachrony of Negation*, ed. M.-B. Mosegaard Hansen and J. Visconti. Amsterdam: John Benjamins.
- Devos, Maud, Michael Kasombo Tshibanda and Johan Van der Auwera. 2010. Jespersen cycles in Kanincin: double, triple and maybe even quadruple negation. *Africana Linguistica* 16:155–182.
- Devos, Maud, and Johan Van der Auwera. Forthcoming. Jespersen cycles in Bantu: double and triple negation. Submitted to *Journal of African Languages and Linguistics*.
- Djamouri, Redouane. 1991. Particule de negation dans les inscriptions sur bronze de la dynastie des Zhou. *Cahiers de Linguistique – Asie Orientale* 20(1):5–76.
- Djamouri, Redouane. 1996. Comptes rendus-Pulleyblank. *Cahiers de Linguistique – Asie Orientale* 25(2):289–298.
- Donhauser, Karin. 1996. Negationssyntax in der deutschen Sprachgeschichte. In *Deutsch – typologisch*, ed. E. Lang and G. Zifonun, 201–217. Berlin: Mouton de Gruyter.
- Early, Robert. 1994. A Grammar of Lewo, Vanuatu. Doctoral dissertation, Australian National University.
- Fortson, Benjamin W. 2010 (1st edition 2004). *Indo-European Language and Culture: An Introduction*. Blackwell Textbooks in Linguistics. Malden, MA: Blackwell.
- Fowler, Frank Hamilton. 1896. *The Negatives of the Indo-European Languages*. Chicago: The University of Chicago Press.
- Furtado da Cunha, Maria Angélica. 2001. O modelo das motivações competidoras no domínio funcional da negação. *D.E.L.T.A.* 17:1–30.
- Gardiner, Alan H. 1904. The word . *Zeitschrift für Ägyptische Sprache und Altertumskunde* 41:130–135.
- Giannakidou, Anastasia. 1998. *Polarity Sensitivity as (Non)Veridical Dependency*. Amsterdam: John Benjamins.
- Givón, Talmy. 1978. Negation in language: Pragmatics, function, ontology. *Syntax and Semantics 9: Pragmatics*, ed. P. Cole, 69–112. New York: Academic Press.
- Givón, Talmy. 2000. Internal reconstruction: As method, as theory. In *Reconstructing Grammar*, ed. S. Gildea, 107–159. Amsterdam: John Benjamins.
- Godard, Danièle. 2004. French negative dependency. In *Handbook of French Semantics*, ed. F. Corblin and H. de Swart, 351–390. Stanford, CA: CSLI Publications.
- Hammond, Lila. 2005. *Serbian: An Essential Grammar*. London-New York: Routledge.
- Harris, Martin. 1976. A typological approach to word order change in French. In *Romance Syntax: Synchronic and Diachronic Perspectives*, ed. M. Harris, 33–53. Salford: University of Salford.
- Haspelmath, Martin. 1997. *Indefinite Pronouns*. Oxford: Oxford University Press.
- Heine, Bernd, and Tania Kuteva. 2002. *World Lexicon of Grammaticalization*. Cambridge: Cambridge University Press.
- Herburger, Elena. 2001. The Negative Concord Puzzle Revisited. *Natural Language Semantics* 9:289–333.
- Hoeksema, Jack. 1997. Negation and negative concord in middle Dutch. In *Negation and Polarity: Syntax and Semantics*, ed. D. Forget, P. Hirschbühler, F. Martineau and M.-L. Rivero, 139–158. Amsterdam: John Benjamins.

- Honda, Isao. 1996. *Negation: A Cross-Linguistic Study*. Doctoral dissertation, State University of New York at Buffalo.
- Horn, Larry R. 1989. *A Natural History of Negation*. Stanford: CSLI Publications.
- Horrocks, Geoffrey. 1997/2010. *Greek: A History of the Language and its Speakers*. 1997. Addison: Wesley Publishing Company. 2010. Oxford: Wiley-Blackwell.
- Jespersen, Otto. 1917. *Negation in English and Other Languages*. Copenhagen: A. F. Høst.
- Joseph, Brian D. 1978/1990. *Morphology and Universals in Syntactic Change: Evidence from Medieval and Modern Greek*. Doctoral dissertation, Harvard University.
- Joseph, Brian D. 2002. Balkan insights into the syntax of \*mē in Indo-European. In *Indo-European Perspectives* (Journal of Indo-European Studies Monograph Series 43), ed. M. Southern, 103–120. Washington, DC: Institute for the Study of Man.
- Kiparsky, Paul, and Cleo Condoravdi. 2006. Tracking Jespersen's cycle. In *Proceedings of the 2nd International Conference of Modern Greek Dialects and Linguistic Theory*, ed. M. Janse, B.D. Joseph, and A. Ralli. Mytilene: Doukas.
- Laka, Itziar. 1990. *Negation in Syntax: On the Nature of Functional Categories and Projections*. Doctoral dissertation. MIT.
- Larivière, Pierre. 2004. L'association négative. Depuis la syntaxe jusqu'à l'interprétation. Genève: Droz.
- Lee, Chungmin. 2011. Middle English negative concord: how it competed with Negative Polarity. Paper presented at MESS 10, Poznań, Poland.
- Lightfoot, David W. 1999. *The Development of Language: Acquisition, Change, and Evolution*. Oxford: Blackwell.
- Lin, Nina Yuhsun. 2002. A Corpus-Based Study on the Development of Mandarin Negative Marker mei. Paper presented at 35th International Conference on Sino-Tibetan Languages and Linguistics, Arizona State University, Tempe.
- Lucas, Christopher. 2007. Jespersen's cycle in Arabic and Berber. *Transactions of the Philological Society* 105(3):398–431.
- Manzini, Maria Ritta, and Leonardo M. Savoia. 2005. *I dialetti italiani e romanci. Morfosintassi generativa*, 3 vols. Alexandria: Orso.
- Mazzon, Gabriella. 2004. *A History of English Negation*. Harlow: Longman.
- Meillet, Antoine. 1912. L'évolution des formes grammaticales. *Scientia (Rivista di Scienza)* 12.26.6.
- Mettouchi, Amina. 1996. La négation dans les langues du Maghreb: Synthèse. In *La négation en berbère et en Arabe Maghrébin*, ed. S. Chaker and D. Caubet, 177–195. Paris: Harmattan.
- Miestamo, Matti. 2003. *Clausal Negation: A Typological Study*. Doctoral dissertation, University of Helsinki.
- Moorhouse, Alfred C. 1959. *Studies in the Greek Negatives*. Cardiff: University of Wales Press.
- Mustajoki, Arto, and Hannes Heino. 1991. *Case Selection for the Direct Object in Russian Negative Clauses*. Part II: Report on a Statistical Analysis. (Slavica Helsingiensia 9). Helsinki: University of Helsinki.
- Payne, John R. 1985. Negation. *Language Typology and Syntactic Description*, volume I, Clause structure, ed. T. Shopen, 197–242. Cambridge: Cambridge University Press.
- Pulleyblank, Edwin. 1995. *Outline of Classical Chinese Grammar*. Vancouver: University of British Columbia Press.
- Rice, Keren. 1989. *A Grammar of Slave*. Berlin: Mouton de Gruyter.
- Rijksbaron, Albert. 2012. Does Ancient Greek have a word for 'No'? *Journal of Greek Linguistics* 12(1):140–160.
- Roberts, Ian, and Anna Roussou. 2003. *Syntactic Change. A Minimalist Approach to Grammaticalization*. Cambridge: Cambridge University Press.
- Roberts, Ian. 2010. Grammaticalization, the clausal hierarchy and semantic bleaching. In *Gradience, Gradualness and Grammaticalization*, ed. E.C. Traugott and G. Trousdale, 45–73. Cambridge: Cambridge University Press.
- Romero, Clara. 2007. Pour une définition générale de l'intensité dans le langage. *Travaux de linguistique*, 54:57–68.
- Schwegler, Arnim. 1990. *Analyticity and Syntheticity: A Diachronic Perspective with Special Reference to Romance Languages*. Berlin: Mouton de Gruyter.
- Schwenter, Scott A. 2006. Fine-tuning Jespersen's cycle. In *Drawing the Boundaries of Meaning: Neo-Gricean Studies in Pragmatics and Semantics in Honor of Laurence R. Horn*, ed. B.J. Birner and G. Ward, 327–344. Amsterdam: John Benjamins.
- Taylor, Ann. 1994. The Change from SOV to SVO in Ancient Greek. *Language Variation and Change* 6:1–37.
- Van der Auwera, Johan. 2006. Why languages prefer prohibitives. In *外国语 [Wai guo yu – Journal of Foreign Languages]* 161:2–25.
- Van der Auwera, Johan. 2008. Gardiner's cycle. Ms., Universiteit Antwerpen.

- Van der Auwera, Johan. 2009. The Jespersen Cycles. In *Cyclical Change*, ed. E. van Gelderen, 35–71. Amsterdam: John Benjamins.
- Van der Auwera, Johan. 2010. On the diachrony of negation. In *The Expression of Negation*, ed. L.R. Horn, 73–109. Berlin–New York: Mouton de Gruyter.
- Van der Auwera, Johan, and Paul Gybels. 2010. On negation, indefinites and negative indefinites in Yiddish. *Yiddish Language Structures*, ed. B. Hansen and M. Aptroot, 193–249. Berlin: Mouton de Gruyter.
- Van der Auwera, Johan, and Ludo Lejeune. 2005. The prohibitive. *World Atlas of Language Structures*, ed. M. Haspelmath, M. Dryer, D. Gil and B. Comrie, 290–3. Oxford: Oxford University Press.
- Van der Auwera, Johan, and Annemie Neuckermans. 2004. Een Oost-Vlaamse driedubbele negatie [An East Flemish triple negation]. In *Dialectsyntax in bloei* [Dialectsyntax in bloom], ed. S. Barbiers, M. Devos and G. de Schutter, 143–157. [Theme issue *Taal en Tongval* 15–16.] Gent: Koninklijke Academie voor Nederlandse Taal-en Letterkunde.
- Van Gelderen, Elly. 2004. *Grammaticalization as Economy*. Amsterdam-Philadelphia: John Benjamins.
- Van Gelderen, Elly. 2008. Negative cycles. *Linguistic Typology* 12(2):195–243.
- Van Gelderen, Elly. 2011. *The Linguistic Cycle: Language Change and the Language Faculty*. Oxford: Oxford University Press.
- Van Kemenade, Ans. 2000. Jespersen's cycle revisited: Formal properties of grammaticalization. In *Diachronic Syntax: Models and Mechanisms*, ed. S. Pintzuk, G. Tsoulas and A. Warner, 51–75. Oxford: Oxford University Press.
- Vennemann, Theo. 1974. Topics, subjects, and word order. From SXV to SVX via TVX. In *Historical Linguistics*, ed. J.M. Anderson and C. Jones, 339–376. Amsterdam: North-Holland.
- Wallage, Phillip. 2005. Negation in Early English: Parametrization and Grammatical Competition. Doctoral dissertation, University of York.
- Willmott, Jo. Forthcoming. Greek: A tale of two negators. Submitted for *The Development of Negation: The Languages of Europe and the Mediterranean*, ed. A. Breitbarth, C. Lucas and, D. Willis, vols 1–2. Oxford: Oxford University Press.
- Zanuttini, Raffaella. 1991. Syntactic Properties of Sentential Negation: A Comparative Study of Romance Languages. Doctoral dissertation, University of Pennsylvania.
- Zanuttini, Raffaella. 1997. Negation and verb movement. In *The New Comparative Syntax*, ed. L. Haegeman, 214–245. Harlow: Longman.
- Zeijlstra, Hedde H. 2004. Sentential Negation and Negative Concord. Doctoral dissertation, Universiteit van Amsterdam.

Department of Linguistics  
 University of Chicago  
 Chicago, 60637  
 cchatzop@uchicago.edu