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## Semantic Change in the Domain of Modality: English *must* and Polish *musieć*

**Abstract:** The research on grammaticalisation has shown that morphosyntactic change is not necessarily unidirectional as originally postulated. Semantic change, however, tends to be unidirectional: the meaning undergoes subjectification, shifting from the speaker-external to the speaker-internal perspective, never the other way round. The analysis presented in this paper focuses on two modal verbs, English *must* and Polish *musieć*, and it shows that, semantically, both verbs developed in the same direction. To account for the changes, the author uses the Invited Inferencing Theory, as put forward in Traugott and Dasher (2005). The data presented clearly support the thesis that unidirectionality does hold at the semantic level.

**Keywords:** epistemic meaning, deontic meaning, grammaticalisation, subjectification, semantic change

### I. Introduction

The work on grammaticalisation has shown that morphosyntactic change is, firstly, regular, secondly, tends to be unidirectional (Hopper and Traugott 1993; Haspelmath 2004, among others). Predictable paths have also been observed for semantic change. Traugott and Dasher (2005) claim that there are regular shifts from one linguistically coded meaning to another, for instance, from deontic obligation to epistemic conclusion. It is suggested that these regularities are replicated cross-linguistically. The recurring patterns of the semantic change in question are the tendency for meaning to undergo subjectification, and the tendency for meanings expressing proposition-internal concepts to gain scope over the whole proposition.

The purpose of this paper is to investigate the similarities of semantic change in the domain of modality in English and in Polish. The analysis, focusing on two modal verbs: *must* and *musieć*, is carried out in order to verify that the same meaning changes have occurred in the two languages. As we shall see, the history of English *must* and its Polish equivalent is an argument in favour of the

unidirectionality principle of semantic change, and it validates the claim, postulated by Traugott and Dasher (2005), that the observed regularities are prototypical types of change replicated across times and languages.

## II. Deontic and epistemic *must*

The different interpretations of *must* in (1a) and (1b) show the contrast between two major categories of modality: deontic (1a) and epistemic (1b).<sup>1</sup>

- 1 a. John must be home by ten; Mother won't let him stay out any later.  
b. John must be home already; I see his coat. (Sweetser 1990: 49)

Deontic modality involves obligation, prohibition or permission, whereas epistemic modality is concerned with knowledge and belief, and denotes probability, possibility or necessity in reasoning. English modal verbs typically carry both meanings. Historically, epistemic modal meaning developed out of deontic meaning. Although rare instances of the opposite development have been documented (Livnat 2002; Narrog 2005), this is a common path, observed not only in English, but also cross-linguistically (Bybee et al. 1994; Traugott 1989, 1997; Traugott and Dasher 2005). Traugott and Dasher (2005: 108–120) point out several differences between deontics and epistemics. In general, with deontics the semantic subject is an animate, usually human, agent. The agent is able to control the activity that is to be performed, as shown in (2).

2. “You must play this ten times over,” Miss Jarrova would say, pointing with relentless fingers to a jumble of crotchets and quavers. (Coates 1983: 34)

However, the subjects of deontics do not need to be agents, or even human, as in (3a) and (3b), respectively (Coates 1983: 34–35<sup>2</sup>). Modern English deontic and epistemic verbs do not impose any selectional restrictions on their subjects, which may be both animate and inanimate.

- 3 a. You must have respect for other people's property.  
b. Clay pots must have some protection from severe weather.

As Traugott and Dasher (2005) note, in deontic modality the source of obligation and permission is human, as in (2), it often results from and exerts the will of persons, as in (3a), or, as (3b) illustrates, it is covert and does not involve any will at all. While the source of deontic modality may be external or internal, the source of epistemic

<sup>1</sup> Traditionally, linguists working on modality use bipartite classifications. One type of modality is called ‘epistemic’; the other is usually called ‘deontic’ (Palmer 1986), ‘root’ (Coates 1983), or ‘agent-oriented’ (Bybee and Pagliuca 1985), and it covers different non-epistemic notions.

<sup>2</sup> Coates (1983) does not use the label ‘deontic’ to refer to non-epistemic modality. She uses the ‘root/epistemic’ distinction, where ‘root’ covers deontic and dynamic modality.

modality is generally internal: it is the speaker who makes judgements about whether something (possibility, probability or belief) is or is not the case (cf. 1b).

Traugott and Dasher (2005: 113) also show that deontics may have either a narrow scope (over a subpart of the proposition only), which means that the modal predicates a condition on the subject, as in (2); or a wide scope, where the modal verb modifies the whole proposition. The latter is illustrated in (4): a non-agentive inanimate subject, which belongs to the proposition, takes over the function of the subject. Since the subject has no agentive properties, the modal has scope over the whole proposition.

4. The simple truth is that if you're going to boil eggs communally they must be hard.

Epistemic modals, on the other hand, are claimed to have a wide semantic scope: they apply to the whole proposition (Westney 1995; Traugott and Dasher 2005).

### III. The development of English *must*

In modern English *must* is a core modal verb, in which deontic modality is polysemous with epistemic modality. This, however, has not always been the case. The epistemic meaning is rarely attested in Old English. *Must* shows regular epistemic uses from the 15th century on (Traugott 1972: 198; Warner 1993: 180). In Old English *mot* (later *must*) was originally a main verb, which expressed ability and permission (Warner 1993; Traugott and Dasher 2005). In later Old English and in Early Middle English *mot* developed a new obligation (deontic) meaning, illustrated in (5a), which, as Traugott and Dasher (2005) hypothesise, probably developed in the context of participant-external uses, shown in (5b).

- 5 a. Ac ðanne hit is Þin wille ðat ic ðe loc ofrin mote.  
 'But then it is Thy will that I must offer Thee a sacrifice.' (c. 1200 Vices and Virtues 85.5 [Warner 1993: 175])
- b. swa Þa lærendum Þam preostum se papa geþafode Þæt Equitus moste [MS vr. sceolde] beon gelæded to Romebyrig.  
 'so then the pope granted to those priestly advisors that Equitius should be brought to Rome.' (c. 1000 GD 35.19 [Warner 1993: 161])

Further developments, as noted by Traugott and Dasher (2005: 127), included the extension of participant-external necessity to participant-internal necessity, as in (6a), the extension of participant-external necessity to nonanimate subjects, as in (6b), and further subjectification.

- 6 a. I moste han of the preys that I se, Or moot dye.  
 'I must have some of the pears that I see, or I will die.' (1395 Chaucer, CT, Merchant [Traugott and Dasher 2005: 125])

b. nota Pæt euery centre mot ben also small as a needle & in euery equant mot be a silk thred.

‘Note that every centre must be as small as a needle and there must be a silk thread in every equant.’ (c. 1392 *Equatorie of the Planets*, p. 26 [Traugott and Dasher 2005: 126])

By the middle of the Middle English period *must* developed the epistemic meaning, which initially was rather objective, as in (7a). However, it increased in subjectivity over Early Modern English, which resulted in uses such as that in (7b).

7 a. For yf that schrewednesse makith wrecches, than mot he nedes ben moost wrecchide that longest is a schrewe.

‘For if depravity makes men wretched, then he must necessarily be most wretched that is wicked longest.’ (c. 1380 Chaucer, *Boece*, p. 447, l.47 [Traugott and Dasher 2005: 129])

b. *Lady Touchwood*: Don’t ask me my reasons, my lord, for they are not fit to be told you.

*Lord Touchwood*: (Aside) I’m amazed; there must be something more than ordinary in this. (Aloud) Not fit to be told me, madam?

(1693 Congreve, *Double Dealer*, III, p.154 [Traugott and Dasher 2005: 130])

In Present Day English *must* is mainly used deontically (deontic necessity/obligation), yet its epistemic uses are far from uncommon. According to Collins (2009), whose research is based on three corpora of contemporary English,<sup>3</sup> deontic *must* comprises 57.3% of all uses, whereas epistemic *must* 32.8%.<sup>4</sup> Deontic *must* is both objective and subjective. In (8a), *must* is objective as the source of obligation is speaker-external. In (8b), *must* is subjective: it is used performatively by the speaker, who is giving an order (Collins 2009: 35).

8 a. At the United Nations the world agreed that Iraq must withdraw or be driven out of Kuwait. (ICE-GB S2B-03 019, Collins 2009: 35)

b. Then she said oh you must stop doing that. (ICE-GB S1A-062 150, Collins 2009: 35)

Epistemic *must*, as Collins (2009: 38) notes, can also be used objectively and subjectively. Objective *must*, illustrated in (9a), expresses logical certainty/necessity based on what is known. It is far less common than subjective *must*, which expresses the speaker’s confident deduction, as in (9b). As Collins (2009: 39) reports, 91% of epistemic *musts* are subjective in his research sample.

<sup>3</sup> Collins (2009) reports the findings of a corpus-based analysis of the meanings of English modal auxiliaries in three corpora: the British component of the *International Corpus of English*, the Australian component of the *International Corpus of English*, and a specially assembled corpus of American English.

<sup>4</sup> The third (minor) meaning is dynamic necessity (Collins 2009: 34).

- 9 a. People tend to think that because many of the problems are global, the answer must be global. (ICE-GB W2B-013 46, Collins 2009: 39)  
 b. With all the bits of work you've done over years, your CV must be pretty full? (ICE-GB W1B-001 180, Collins 2009: 39)

#### IV. The development of Polish *musieć*

The Polish modal verb *musić* (later *musieć* 'must') originates in the 14th century (Bańkowski 2000; Boryś 2005). In Old Polish<sup>5</sup> it basically expresses deontic obligation (Decyk-Zięba and Dubisz 2008; Urbańczyk 1963–65), which is confirmed by the corpus data. As shown in Table 1, the Corpus of Old Polish gives 173 instances of *musieć*, 170 of which are deontic, and only three are epistemic. Deontic *musieć* is used predominantly with animate subjects, it expresses external obligation and has a narrow semantic scope. An illustration is given in (10). Inanimate subjects are used with deontic *musieć*, but they represent only 7% of all subjects. They give rise to a wide scope reading of *musieć*, as shown in (11). The source of obligation is, nevertheless, external. Examples of deontic *musieć* expressing internal obligation, as that in (12), are rarely found.

Table 1. Deontic and epistemic *musieć* in the Corpus of Old Polish

Deontic <i>musieć</i> (out of 170)			Epistemic <i>musieć</i> (out of 3)	
SUBJECT	animate	158 (92.94%)	animate	2
	inanimate	12 (7.05%)	inanimate	1
OBLIGATION	external	168 (98.82%)	external	0
	internal	2 (1.17%)	internal	3
SCOPE	narrow	158 (92.94%)	narrow	0
	wide	12 (7.05%)	wide	3

- 10 a. Ten ma z prawem wyżej sieść, / Ma nań każdy włożyć cześć. / Nie może być Panic taki, / Musi ji w tem poczcic wszaki; / Bo czego wie doma chowany, / To mu powie jeżdżały.  
 'Everyone must respect his right to sit nearer the head of the table.'<sup>6</sup>  
 (early 15th c. Przechwał Słota "O zachowaniu się przy stole" [Corpus of Old Polish])

<sup>5</sup> The Old Polish period starts in 1136, together with the history of Polish recorded in writing, and it ends at the turn of the 16th century (Klemensiewicz 1985).

<sup>6</sup> The translation of Old Polish examples is free and it conveys the general meaning of the original.

- b. Wie-li o tem dłużde opiekalnik, a będzie-li upomnian, musi ten dług płacić.  
 ‘If the guardian does not know about the debt but will be cautioned, he must pay the debt.’ (15th c. *Ortyle magdeburskie* [Corpus of Old Polish])
- c. Chcem li tszczyce zabyć, / a pokoja nabyć, / musimy się modlić / Bogu, a miecz naostrzyć, / antykrysty pobić.  
 ‘If we want to overcome despair and obtain calm and peace, we must pray to God, sharpen the sword, destroy the infidels.’ (about 1449, “Pieśń o Wicklefie” [Corpus of Old Polish])
- 11 a. A ty, panie Janiczku / Nie daj się zabici. / Podź z nami na Konstancy / Będziemy cie baczący / Świnickiego piwka / Damy dosyć pici, / Ale pancerze i paski / Musi nasze byci.  
 ‘Honourable Janiczek, do not let them kill you. Come with us to fight and we will take care of you, but the arms must be ours.’ (“Słyszeliśmy nowinę o węgierskim kroli... (Pieśń husycka o królu Zygmuncie Luksemburczyku)” [Corpus of Old Polish])
- b. Jakkolwiek stary / obyczaj dawnego prawa będzie odmienion / w lepszy obyczaj, tako wždy musi ostać, co sądzono starym obyczajem.  
 ‘If the old law is replaced by the new one, the old judgement must remain unchanged.’ (15th c. *Ortyle Magdeburskie* [Corpus of Old Polish])
12. ... tegodla, miła matko, wszelika / kość moja ma przelać swoją / krew i to muszę wszystko cierpieć, / bo chcę mieć człowieka zasie.  
 ‘Therefore, my dear mother, my blood is to be shed and I must suffer all this because I am a man.’ (mid 15th c. *Rozmyślanie przemyskie* [Corpus of Old Polish])

Epistemic *musieć* is extremely uncommon in Old Polish. The examples found are those presented in (13). In (13a) the subject is inanimate, which gives rise to a wide-scope reading of the modal,<sup>7</sup> and the source of obligation is internal. In (13b) and (13c) the source of obligation is also internal, but the subject is animate. However, in both examples the scope of the modal seems to be wide,

<sup>7</sup> Fisher (2007: 261–274), who follows the generative interpretation of scope in terms of c-command, argues that the change from deontic to epistemic did not involve scope increase, since the scope possibilities of the modal verbs were formally the same before and after the change took place. Fisher (2007: 266) claims that epistemicity arose in Old English “in combination with personal, agentive verbs via an earlier biclausal structure consisting of an impersonal modal (+ impersonal infinitive) + *þæt*-clause.” The epistemic modal, which was at first in a higher clause than the actual proposition contained in the *þæt*-clause, had scope over the entire *þæt*-clause anyway. As far as Polish is concerned, all the early instances of epistemic *musieć* found in the research sample are monoclausal. This suggests, contra Fisher (2007), that the modal does not become epistemic only via a more elaborate construction type.

since the modal does not predicate a condition on the subject, but modifies the whole proposition.

13 a. Tedy miły Jesus na znamię / swej świętej miłości i na / znamię świętości miłości posadził Judasza między sobą a swą / matką. Bacz, tu się przemienia / nauka filozofowa, iże obapolne / rzeczy są podlejsza a / ośrodek czel[ey]s]mniejszy. Omszeją tu / musi być przeciwno, bo tu [jedno] / Krystus jest studnia wszwej prawdy z jedne / krainy, z drugiej krainy jest matka / Jesukrystusowa studnia wszwej miłości, / <pośrodku jest Judasz, studnia wszwej / okrutności, zdrady i niemiłości>.

‘Then dear Jesus, as a sign of his sacred love and the sacredness of love, seated Judas between himself and his mother. And here changes what the teaching says — that either end is despicable and the middle is admirable. It must be the opposite here as the truthful Jesus is on one end and his loving mother is on the other one, and the cruel and deceitful Judas is in the middle.’ (mid 15th c. *Rozmyślanie przemyskie* [Corpus of Old Polish])

b. Bo myślił Piłat, iże weźrawszy / Żydowie tego złego i przekłętego / człowieka i Jesukrysta, pełnego / wszytkiej dobroci, będą sie sromać / prosić tego złego człowieka / Barabasza I iże prawym przypędzeniem / muszą prosić Jesukrysta.

‘Pilatus thought that seeing the wicked Barabas and the good Jesus Christ, the Jews must ask him to free Jesus.’ (mid 15th c. *Rozmyślanie przemyskie* [Corpus of Old Polish])

c. Maryja: “By mi był nie powiedział o zmartewmwstaniu, wielką boleścią musiłabych umrzeć, / słyszac twoję mękę, a wszakoż moje serce nigdy wesoło nie może być, kiedy wim, iż tobie taka męka ma być.”

‘Mary: Had he not told me about the resurrection, I would have to die of sorrow knowing about your suffering, as my hart cannot ever be happy when I know how much you are to suffer.’ (mid 15th c. *Rozmyślanie przemyskie* [Corpus of Old Polish])

Both deontic and epistemic uses are attested in the 16th century (Mayenowa 1984. As (14a) illustrates, *musieć* is used to express deontic obligation. It is also used to express epistemic probability or certainty, both with animate (14b, c) and inanimate subjects (14d, e).

14 a. Żołnierze krolewscy [...] od wielkości Niemcow y Anglikow przemożeni / mufieli nāzad ku Wilnowi uftępować.

‘Royal soldiers defeated by the German and English troops had to retreat to Vilnius.’ (1582 Maciej Strykowski *Kronika Polska, Litewska, Zmodzka y wŹyftikiej Rufe Kijowskiej* [...] [Mayenowa 1984])

- b. Bā brācie psie gładką maż sierść / musifz ty mieć doftātek ieść.  
 ‘Brother dog your fur is sleek, you must have enough to eat.’ (1578 Biernat z Lublina *Zywot Ezopā Fryga Mędrca obyczāynego y z Przypowieściāmi* [Mayenowa 1984])
- c. Rātuymy tego młodziencā nie wiem kto ielt mufi to być maż ofobliwy.  
 ‘Let’s rescue this young man, I don’t know who he is, he must be an uncommon man.’ (1564 Marcin Bielski *Kronika* [Mayenowa 1984])
- d. Tu iuż ten [czeski] ięzyk dobrze obfitfzy / niż nāfz byc muśi / ā tho ftd iż dawniey w nim pifmo niż w nāfym.  
 ‘Here this [Czech] language must be much richer than ours, as it started to be recorded in writing earlier than ours.’ (1566 Łukasz Górnicki *Dworzanin* [Mayenowa 1984])
- e. Powiedział mu poborcā: Woycie wielka tām wieś / musi tām być więcej łanow.  
 ‘The tax-collector said to him: that village is large, there must be more corn-field there.’ (1568 Mikołaj Rej *Zwyerciądło albo [...]* [Mayenowa 1984])

The deontic-epistemic polysemy has been attested up to the present (Markowski 2002; Dubisz 2003; Grzegorzczkova 2010). This is shown in (15), where (15a) illustrates a deontic use, while (15b) an epistemic one (Dubisz 2003).

- 15 a. Musi jechać do domu.  
 ‘He has to go home.’
- b. Musiał być z niego piękny chłopiec.  
 ‘He must have been a beautiful boy.’

Nevertheless, deontic uses substantially outnumber epistemic ones. In the research sample drawn from the National Corpus of Polish (NKJP),<sup>8</sup> deontic *musieć* comprises 82% of the uses, while epistemic *musieć* only 18%. In Present Day Polish both deontic and epistemic *musieć*, like their English equivalents, do not impose any selectional restrictions on their subjects: the subject can be animate or inanimate. This is illustrated in (16), where (16a) shows a deontic *musieć* with a human agent, and (16b) a deontic *musieć* with an inanimate subject, which is not an agent; (16c) shows an epistemic *musieć* with a human subject, whereas (16d) an epistemic *musieć* with an inanimate subject. It must be pointed out, however, that while epistemic *musieć* employs animate and inanimate subjects in equal proportions (52%:48% in the research sample), deontic *musieć* mostly uses animate subjects (87% in the research sample).

<sup>8</sup> The research sample comprised 6028 uses of *musieć*.

- 16 a. Nie proszę nie znieczulać, wytrzymam. Wszyscy tak mówią, a potem muszę im znieczulać w trakcie.  
 ‘Do not anaesthetize, I will stand the pain. Everybody says so and later I must anaesthetize during the surgery.’ (2001, *Przekrój* 37 [PWN Corpus of Polish])
- b. Z przepisów wynika, że informacja musi dotrzeć do zainteresowanego przed wszczęciem kontroli.  
 ‘The regulations say that the information must reach the person concerned before the inspection starts.’ (2001, *Rzeczpospolita* 01.27 [PWN Corpus of Polish])
- c. — Och, Borysie — dodał po pauzie niewyraźnym szeptem — jaki ty się musisz czuć samotny, niepotrzebny, bezdomny, jak pies sparszywiający i bezpański ...  
 ‘Oh, Boris — he whispered faintly after a while — you must feel so lonely, useless, homeless, like a mangy and stray dog ...’ (1974, Bruno Jasiński *Pałę Paryż* [NKJP])
- d. Przypuszczam, że to czego mi nie powiedziałeś musi być niesłychanie interesujące.  
 ‘I suppose that what you have not told me must be terribly interesting.’ (1999, Beata Ostrowicka *Kraina kolorów — księga intryg* [PWN Corpus of Polish])

As far as the source of modality is concerned, it may be external (objective *musieć*) or internal (subjective *musieć*) when *musieć* is deontic. This is illustrated in (17a) and (17b), respectively. When expressing the speaker’s deduction, epistemic *musieć* is generally subjective, as in (17c). Objective uses of epistemic *musieć*, as that in (17d), which express logical certainty or necessity based on what is known, are less frequently found (16% in the research sample).

- 17 a. Podczas remontu głównego obiektu dewastacji ulega także park czy ogród, do remontowanej rezydencji muszą bowiem dojechać samochody czy też maszyny budowlane.  
 ‘Also the park or the garden is devastated during the main building’s repair since cars or builders’ machines must get to the building under repair.’ (2001, Maria Irena Kwiatkowska, Marek Kwiatkowski, Krzysztof Wesołowski *Znane i nieznanne: rezydencje, ludzie, wydarzenia* [NKJP])
- b. Muszę wstać o siódmej, bo mam ważny interes do załatwienia.  
 ‘I must get up at seven as I have an important business to deal with.’ (1936, Henryk Worcell *Zakłète Rewiry* [NKJP])
- c. Odrowąż spojrział na słońce i rzekł: — Brnęliśmy półtorej godziny. Musi być ze dwie wiorsty. Tęga przeprawa.

‘Odrowąż looked up at the sun and said: we have been floundering for an hour and a half. It must have been about two versts. A hard crossing.’ (1920, Maria Rodziewiczówna *Lato leśnych ludzi* [NKJP])

- d. Mamy być szczęśliwi, pozbawieni myśli o niej [śmierci]. W mieście nawet martwe ptaki widuje się rzadko, a przecież gdzieś muszą umierać. ‘Devoid of the thought of death, we are supposed to be happy. In the city, even dead birds are rarely seen, and they must die somewhere.’ (2010, Krystyna Kofta *Fausta* [NKJP])

Finally, deontic *musieć* generally has a narrow semantic scope (over the VP), which can be seen in (16a) above. Epistemic *musieć*, on the other hand, is characterized by scope over the whole proposition (cf. 16d), as it never predicates a condition on the subject it takes.

## V. Invited Inferencing Theory of semantic change (Traugott and Dasher 2005)

The semantic changes presented in this paper can be accounted for by the Invited Inferencing Theory (Traugott and Dasher 2005). Traugott and Dasher (2005) propose that semantic change is usage-based: it occurs as a result of situated language usage, it is mediated by context and language use. Inferences (pragmatic meaning) that emerge in specific contexts are reanalyzed as part of conventional meaning associated with a particular construction. The inferences are suggested by the context, in this way they are “invited.” A change takes place when invited inferences become generalized. Generalized inferences are ultimately conventionalized as new, coded (inherent) meanings associated with a given construction.

Traugott and Dasher (2005) point out that semantic changes are characterized by increasing subjectification, a shift from a construction that encodes a speaker-external event (objective meaning) to a construction that encodes the speaker’s perspective (subjective meaning). The latter kind of construction encodes information grounded in the speaker’s perspective, which becomes part of the coded meaning associated with the construction. Since in these changes one concept stands for another closely related one, they are considered to be metonymic rather than metaphoric.

As for the semantic changes observed in the evolution of modal verbs, the Invited Inferencing Theory accurately predicts the increasing subjectification at each stage of the development. As shown in Section II, Old English *must* was a content verb expressing ability and permission. In Early Middle English it developed into a deontic modal verb expressing obligation. The development from permission to obligation correlates with increased subjectivity. Traugott and Dasher (2005) point out that the earliest uses of the obligation sense of *must* seem to have been participant-external. When the deontic meaning was fixed, more subjective

participant-internal uses started to occur. Finally, *must* developed even more subjective epistemic uses, fully grounded in the speaker's perspective. At each stage of evolution a new pragmatic (contextual) meaning is reanalyzed as inherent meaning. A similar process took place in Polish. *Musieć* originated as a verb expressing speaker-external deontic modality. With time it developed participant-internal epistemic uses, characterized by an increased subjectivity. That was a new meaning, which was generalized and, finally, conventionalized as an inherent meaning associated with the verb *musieć*.

## VI. Concluding remarks

The data discussed in this paper confirm Traugott and Dasher's (2005) prediction that meanings, regularly and universally, change from concrete to abstract (external-based to internal-based) and tend to become increasingly based in the speaker's perspective. Subjectification occurring in the development of epistemic meaning is an instance of grammaticalisation, a process in which a linguistic item acquires a new, usually more abstract, grammatical function. A number of works on grammaticalisation have put forward unidirectionality as a defining characteristic of the phenomenon (Heine et al. 1991; Traugott and Heine 1991; Bybee et al. 1994). This hypothesis has been seriously challenged in more recent literature (Newmeyer 1998, 2001; Campbell 2001 and others in the volume), which has generated a lot of discussion on the role of unidirectionality in grammaticalisation and the types of phenomena that do and do not qualify as instances of counterdirectionality. In the discussion the issue of semantic unidirectionality has been raised (Ziegeler 2004; Yap et al. 2004; Visconti 2004). The evidence presented suggests quite strongly that unidirectionality may be discussed at the semantic level, not at the morpho-syntactic level. Subjectification is intrinsically unidirectional. It is a shift towards a higher degree of encoding of the speaker's point of view. A reverse trend has not been attested. Since no counter examples have been reported, the semantic level can be postulated as the one at which grammaticalisation can proceed without violating the hypothesis of unidirectionality. This is what has been observed in the literature on semantic change, and what the present paper lends support to.

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