

The morphological and semantic classification of ‘evidentials’ and modal verbs in West Germanic: the perfect(ive) catalyst

Werner Abraham
abraham@let.rug.nl

*Es wird eine Generation Deutscher sein, die sieht, daß ihnen Nationen wie Holland
jahrzehntlang den Vorwurf des angeborenen Rassismus gemacht haben,
um ihre eigenen Verfehlungen gegenüber den Juden zu kaschieren*
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Abstract: This paper draws a parallel between the typological notion of evidentiality and epistemic readings of modal verbs in (West) German(ic). This comparison leads one to two apparent questions: (1) What is behind the cross-linguistic fact that evidentiality is so often triggered by the perfect or perfectiveness? And (2) What is behind the fact that the evidential, or epistemic, reading of modal verbs in West Germanic disallows perfect(ive) contexts? The attempt at answering these two questions will be provided against a general typological background.

1. Introduction: terminological and methodological range

Evidentiality and related categories and terms have been the subject of extensive research in the past two decades (see, for example, Chafe&Nichols 1986, Conrad&Lukas 1995, Guentchéva 1996, Sumbatova 1999). According to DeLancey (1997: 33), “[...] the grammatical marking of evidentiality [has] long been regarded as an exotic phenomenon found only in a few obscure languages [but] has in recent years come to be recognized as a widespread and significant typological parameter.”

The present paper makes the attempt to relate such evidentials both of form and specific content to the epistemic reading of modal verbs in West Germanic. It is to be held in mind that the class of modal verbs in Germanic is formally well-defined and thus highly constrained both on the basis of paradigmatic and syntagmatic identification as well as denotation. No attempt will, and need, be made to include other modality-denoting predicates (as is customary, for lack of a formally well-definable class of predicates, in the Romance and Slavic languages). We shall address this issue in more detail below. Since, first, evidentials across languages are typically triggered by perfects and its specific discourse-related semantics in a wide range of unrelated languages, and since, second, modal verbs in Germanic are preterite presents by origin still betraying this perfect(ive) root by virtue of their morphological form, the attempt will be made to accommodate this diachronic origin of West Germanic modal verbs in the general typological setting of the perfect root of evidentials and trace its process of grammaticization to, or the reinterpretation as, epistemic readings of the West Germanic modal verbs.

There is a wide range of terms to approximately cover the same phenomenon. The Slavic,

Turcologist and Uralist grammarians' traditions speaks about the *auditive*, the *narrative*, or the *absentive* (Honti 1997: 162) or else also *Nichtaugenzeugenschaftsmodus* (Jaszo 1976: 355, Honti 1997: 174). In the English typological literature, *evidential* is used next to *inferential* or *indirectal* (Comrie 1991). For all I know, the Indo-European grammatical tradition does not use *evidential* at all, but, rather, *epistemic* or *subjective* (versus *objective*, see also Lyons 1977), compare the equivocal Russian *vremija neočevidnogo dčystvija*. The term (*ad*)*mirative* recently reintroduced by DeLancey's (1997) appears to be a subtype of the more general *evidential* representing a particular meaning among the more general term.

The overlap between evidentials and epistemics is more than apparent and indisputable, be that alone on the basis of non-veridicality. There is awareness of the recent content-based attempts at defining evidentiality as opposed to epistemics (Van der Auwera & Poupyrin 1998). However, it is part of the present self-imposed methodological constraint to formal (behavioral) distinctions that have led me not to lean too heavily on such definitory attempts.

2. The perfect(ivity) trigger of evidentiality

Despite the wide extension of the term *evidential*, there are subtypes other than that of *mirativity*. Thus, in Lithuanian there are two separate participial forms, the nominative active participle (NAP) denoting the 'report' or 'hear-say' type of evidential, and the neuter passive participle (NPP) denoting 'inference on the basis of observable results' evidential. Both have different, paradigmatically fully productive, forms (Gronemeyer 1998: 1).

- (1)a Šiānakt lij-ę
 last-night rain-NAP PAST NT
 'I hear it rained last night'
 b Šiānakt ly-ta
 last-night rain-NPP PAST
 'Evidently, it rained last night'

In the Western section of the Fenno-Ugric languages, and its subpart of the Baltic-Sea Fennic languages - i.e. in Finnish, Laps, Mordwinian, Cheremis, Votyak and Syryanian, the so-called Permic group - as well as in historical Hungarian, two types of fully productive paradigmatic pasts are distinguished: a paradigm for 'witnessing' and another for 'non-witnessing' (Berezki 1992: 72, according to Honti 1997: 165f). See (2) below.

- | | WITNESSING PARADIGM | NON-WITNESSING PARADIGM | |
|-------------|---------------------|-------------------------|------------|
| (2)a Votyak | <i>m̄niz</i> | <i>m̄nem</i> | 'has gone' |
| Cheremis | <i>m̄jəš</i> | <i>m̄jen</i> | |
| Hungarian | <i>mene</i> | <i>ment</i> | |

b	Votyak	<i>m̄ne val</i>	<i>m̄ne v̄lem</i>	'went'
	Cheremis	<i>mija əl'e</i>	<i>mija ulmaš</i>	
	Hungarian	<i>megy vala</i>	<i>megy volt</i>	
c	Votyak	<i>m̄nem val</i>	<i>m̄nem v̄lem</i>	'had gone'
	Cheremis	<i>mijen əl'e</i>	<i>mijen ulmaš</i>	
	Hungarian	<i>ment vala</i>	<i>ment volt</i>	

Notice that synthetic and analytic forms interchange according to tense or aspect, not with respect to the directness of witnessing. However, according to Bereczki (1992: 517, Honti 1997: 168f) the Hungarian periphrastic forms were *auditive* functions originally, which bleached due to the weakening Turkish linguistic contact in Modern Hungarian. The same holds for the periphrastic perfect and pluperfect in the dialects of Finnish (Itkonen 1966: 282, Honti 1997: 169). It is perhaps not superfluous to point out that the non-finite component in the periphrastic temporal complexes is not always a preterite participle, but occasionally also a gerund, as in Cheremis (Honti 1997: 172), or more generally, a deverbal nominal as in Laps (Honti 1997: 170). All of these render a statal property of the event referred to.

Bulgarian as well as Macedonian interlink the analytic perfect with the *auditive* (Horalek 1967: 206, Honti 1997: 175), which is due to Turkic influence through centuries of close political and linguistic contact.

Whether one tries to avoid mutual areal influences or not, it is striking that one often speaks of the 'Old World *evidential* belt' covering Turkish, Kartvelian, Bulgarian-Macedonian and Albanian. This belt extends to include Georgian and the adjoining, only partly genetically related, Kartvelian languages ((East) Armenian, Laz, Mingrelian, Svan) as well as Turkish and Persian (Boeder 1998) or Estonian (Comrie 1976: 86) and Lithuanian (Gronemeyer 1998) where the PERFECT has triggered a general evidential reading. See the following Georgian example, where the example in (3a) renders the evidential triggered by the perfect tense, whereas (3b) is the (narrative) AORIST form (Boeder 1998: 10, ex. (27)-(28)).

MODERN GEORGIAN

(3)a *tovti mosula*

snow has come

"snow must have fallen"

b *tovti movida*

snow came

(as in a narrative irrespective whether or not the reporter has seen the snow falling)

In Svan, the most archaic of the Kartvelian languages of the split ergative type, the perfect series is employed to express the evidential meaning of the verb (Sumbatova 1998: 1). Within this series, there are both imperfective and perfective paradigms. See (4)-(5) for illustration of either evidential paradigm. The imperfective evidentials come in the form of a special participle and the copula in the present, past or subjunctive.

(4)a (story about avalanches that had fallen down in the winter of 1986-1987 told by a young

man from the village of Mulaxi)

amčikka mi mam xwardas šwans, mare kamumbwex maj xola dwrew ləmar

once I not was Svania DAT but tell AOR 3PL say bad time be IEVID 3SG

mulaxs i mtlijand šwans

Mulaxi DAT and whole Svania DAT

“I was not in Svania at that time, but they said it was a bad time for Mulaxi and the whole of Svania”

Notice the difference of aspect or tense on the Svan equivalents for *tell* (in the aorist) and, on the other hand, for the copula *to be* (in the perfect tense). The evidential meaning of the corresponding perfective paradigm demonstrates that the Svan perfect is essentially an evidential. In other words, in addition to the perfect meaning (if present in the first place), the meaning is that of indirect evidence, or mirativity, for the event reported. More generally and in the most neutral case the meaning of the perfect is that of a completive action that was not observed by the speaker in the real world (Sumbatova 1998: 5). See (5) below.

(5)a active verbs perfects are formed synthetically

miga

1SG O-OV build PERF

(O= ‘object’, OV= ‘object version’)

‘I have apparently built’

b passive verbs perfects are formed periphrastically (passive participle + confix *lə__e*)

algēli

(from the reconstruction **ad-ləŋg-əl-le*)

PV 3SG IO-OV build be PRES 3SG

(PV= ‘preverb’, IO= ‘indirect object’)

‘(it) has apparently been built’

It follows beyond doubt from the small number of languages totally unrelated to Germanic and unrelated even to Indo-European discussed above, that it is the perfect, and, in a number of cases the periphrastic form of the perfect, that triggers the development of evidentials.

3. The semantic evidentiality trigger behind the perfect (participle)

It has often been stated on the basis of extended empirical data sampling across languages that typical historical sources of evidentials are perfects and, more generally, resultative constructions (Willett 1988, Bybee&Dahl 1989). Comrie (1976: 110) sees the relation between perfects and evidentials (or ‘inferentials’) “in the fact that both categories present not an event in itself, but via its results []”. Irrespective of whether the perfect is expressed synthetically (which often stems from a younger morphological fusion of an older participle morpheme into the copula) or periphrastic, the preterite participle is a perfect semantic and syntactic representative of a state category, and often resultative state, and, consequently, has adjectival properties (which, among

other, restrict its subject to a NON-AGENT) Boeder (1998: 31, echoing Johanson 1996) coins the terms 'postterminal' and 'indirective', which are to be compared to get closer to an explanation, and he points out that results always imply a causal relation. The gist of this relation is the distinction of an INTERNAL and an EXTERNAL type of CAUSALITY (IC vs EC). This is mirrored in the following examples (gleaned from Rutherford 1970, cf Boeder 1998: 31)

- | | | |
|------|--|--------------------------------------|
| (6)a | he's not coming to class because he's sick | (EC <i>X is the case because Y</i>) |
| b | he's not coming to class, because he just called from SD | (IC <i>I say X because Y</i>) |
| c | Mary isn't here because she has to work in her office | EC |
| d | Mary isn't here because I don't see her | IC |

While *EXTERNAL causality* can be rendered by the resultative perfect since both share the factual report that a present, unspecified state X is due to a past event Y, as in (7a) below, *INTERNAL causality* provides the reason for one's saying something. Witness (7) below

- | | | |
|------|---|----|
| (7)a | X because Y | EC |
| b | I say X because there is evidence Y for X | IC |

Note that the latter type of causality, IC, is not justified by the simple (7a) above. Much rather, all sorts of justifications may apply (quite generally so, cf Willett 1988: 57). Compare the present (6b) above, which classifies types of IC according to the underlying intentions or capacities that may be involved on the part of the people reporting or involved as protagonists in the reported event. There may be sources like inference, hearsay, guessing, probability, surprise ('(ad)mirativity') etc., all of which the perfect as such and alone leaves unspecified, whereas they become specified in the case of the sub-specifying EMVs in German rooted in the original, diachronically deontic predecessors as well as paradigmatically concomitant and diachronically co-existing DMVs. It is not more than trivial, and yet quite enlightening, to say that there is a constant oscillating movement between the two types of MV - a change which is due to the ever ambiguous participating semantic and syntactic characteristics of the clausal *actants* and *circumstants*. In a way, thus, the formulaic (6b) and (7b) above are the key to an understanding of evidentials and their relation to the (implicative) resultative perfect - where, beyond doubt, (20) below provides a clue to the types of 'evidence' to be supplied for the relation of causality on levels beyond that of the event syntax and semantics.

There is an important inference to be drawn from (7b), however - namely the valid conclusion that the performative definition in (7b) accounts for the fact that evidentials are normally restricted to main assertions (cf Boeder (1998, section 5.7) on Georgian as well as for the present time meaning of the perfect). Recall, in this context, that MVs in all Germanic are PRETERITE PRESENTS, whose present meanings are derived from a perfective perfect with resultative purport (in the sense of the Latin inchoative verbal paradigm, as with *novi* "I know", perfect of the present tense *nosco* "I learn (= "I acquire/get to know")")

4 The historical origin of evidentials as tied to specific forms

Boeder (1998: 31ff) speculates that the evidential meaning of the perfect in Modern Georgian is a reflex of the principally ambiguous usages of the resultative perfect all along from Old Georgian onwards (see also Natadze 1955 and Machavarani 1988 for identical conclusions, authors not mentioned by Boeder 1998). A similar conclusion is drawn by Sumbatova (1998: 14). The perfect is fundamentally ambivalent. On the one hand, it refers to a completed (hence, past) event. On the other hand, the perfect implies some state resulting from the completion of this event. Emphasizing a connection between an existing result and a completed past action leads to evidentials whose meaning is triggered by inference from the state secondary to the primary event.

It is interesting to see that in languages providing more than one perfect paradigm, the grammaticization may run through several steps of relaxing the aspectual resultative denotation of the preterite participle in the predicative evidential composite (8) is gleaned from Sumbatova's investigation of the Kartvelian language of Svan (Sumbatova 1998: 16).

- (8) LESS GRAMMATICIZED
- ↓ resultative constructions
 - ↓ experiential (non-preverbal) perfect
 - ↓ perfective evidentials - retaining a resultative meaning
 - ↓ - 'pure' evidentials (narratives)
 - ↓ imperfective evidentials
- MORE GRAMMATICIZED

We shall make use of this grammaticizing cline when explaining the puzzle of the modal verbs in West Germanic. Notice that, if the perfect(ive) trigger assumption as well as this explanation of the occurrence and distribution of evidentiality in terms of a grammaticizing cline are correct, there remains little reason to pursue the areal link explanation for the geographical extension of this phenomenon. Much rather, the areal extension will have a very natural explanation in terms of typologically general, language-internal properties (see also Honti 1998 for such an assumption).

5. Morphological expression of evidentiality in German?

It is a completely open question, at first sight, why exactly modal verbs (MVs) in Continental West Germanic in general and in German, in particular, should trigger meanings such that evidentials would emerge. While, often, such questions are pointless since their answers are unfathomable with respect to their true diachronic origins and pragmatic, or idiosyncratic lexical, preconditions, the diachronic cause in the present case can be provided. See the following distributional restrictions exhibited for German. Bear in mind that Dutch, West Frisian, and Yiddish show the same distributional behavior. [DMV = deontic (root) modal reading, EMV = epistemic read-

ing, term = 'terminative', 'perf(ective)']

5.1. The perfectivity trigger

Epistemic readings are ruled out in perfective (terminative) contexts

- | | | |
|------|--|-----------|
| (9)a | Er will/muß/kann/soll/mag zuhause sein[-term]
he will must can shall may at home work | DMV, EMV |
| b | Er durfte zuhause arbeiten[-term]
he may- <i>PRET</i> at home work | DMV, *EMV |
| c | Er durfte zuhause arbeiten
he might at home work | *DMV, EMV |

Abstracting from *konnen* "can", which is alethic and, consequently, can hardly be distinguished from an epistemic reading, what we see is that any MV other than *konnen* is stuck with the root reading as soon as the dependent main verb is terminative (inchoative) See (10)

- | | | |
|-------|---|--|
| (10)a | Sie will/muß/soll/kann/mag einschlafen/Arztin werden
she will in-sleep/a doctor become | [+perfective]
DMV, *EMV |
| b | Sie will/muß/soll/kann/mag schlafen/Arztin sein
she will sleep/ a doctor be | [-perfective]
^o DMV, EMV |

Note the equivalent distribution in English below ((a,c) are terminative, (b,d) are non-terminative)

- | | | |
|-------|--------------------------------|-----------|
| (11)a | He <i>must</i> die[+term] | DMV, *EMV |
| b | He <i>must</i> be dying[-term] | *DMV, EMV |

As expected, another disambiguating factor would be adverbials excluding the inferential (epistemic) reading, such as *sicher(-lich)*, *gewiß* "certain(ly)", *offensichtlich* "obvious(ly)" Furthermore, EMV is restricted to the present tense or preterite predication. Posteriority (future tense) is excluded See (12)

- | | | |
|-------|---|--|
| (12)a | Sie will/muß/mag einen Diamanten kriegen/Arztin werden
she will a diamond get/ a doctor become | [+perfective]
DMV, *EMV |
| b | Sie will/muß/mag/soll einen Diamanten haben/Arztin sein
she will a diamond have/ a doctor be | [-perfective]
^o DMV, EMV |

Other than, for example, the equivalent in Danish - cf (16c) below (according to Hansen 1972 and Vikner 1988) - , German (12b) does not fill up the epistemic paradigmatic gap created by the unacceptable (3a). The conclusion is again that reference to the future does under no circumstances yield an epistemic reading. Rather, future reference fuses the range of readings into the modal

root reading. We shall have to see later whether there is any further extension of tense reference possible and whether or not this observation fits into some further generalization.

The chart in (13) schematizes the distribution between EMV/DMV and terminativity: [+term] on the embedded main verb disambiguates the MV-homonymy by excluding the epistemic reading. Notice that we have no explanation for this generalization.

(13)

	[-terminative] cf. (10b), (12b)	[+terminative] see (10a), (12a)
EMV	+	-
EMV	+	+

This legitimates the conclusion that in German the root meaning is the unmarked one, whereas the epistemic reading is the derived, marked one because of the observed restriction. Note that this does by no means render an *explanation* for the systematic distribution in (10) und (3).

Let us now look at another distributional fact which relates to temporal periphrastics.

5.2. Epistemic readings are ruled out in periphrastic perfect contexts

Modal verbs in Germanic have emerged diachronically from praeterita tantum. This is simply illustrated on account of their providing preterite ablaut stems in the singular and the distinct plural. thus, the modal Dutch *kunnen* 'can' follows the ablaut paradigm of the third strong verbal class in Germanic (present *i* - preterite Sg. *a* - preterite Pl. *u* - preterite participle *u*). As regards the status of preterite presents, consider the perfect tense of the 'inchoative' paradigm represented by Latin *cognovi* denoting "know" (= "having gotten to know") versus the present of the perfective verb *cognosco* "get to know".

(14)	Modern Dutch	Gothic
	1,3 Sg. <i>kan</i>	<i>kam</i> "I know"(!)
	2 Sg. <i>kunt</i>	<i>kan(n)t</i>
	Pl. <i>kunn-</i>	<i>kunnum</i>
	Pret. Part. <i>gekunt</i>	<i>kunþs</i>

Other unambiguous morphological features are supplied by traditional grammars of any historical Germanic language. For distinct syntactic properties of West Germanic modals vs. English ones cf. Abraham (1995 chapter 5; 1998).

The examples below permit the conclusion that it is the specific auxiliary in the periphrases that restricts the temporal forms to the root meanings excluding thereby the epistemic, subjective, and inferential interpretations. The examples illustrate only the perfect and pluperfect temporal complexes, see (12) above for the future periphrasis (*werden* "become" occurring also as an inchoative (main) verb) aligning completely with this observation.

- (15) a Er hat(te) Geld verdienen wollen/müssen/sollen .. DMV, *EMV
 he has/d money earn will
 b Er wollte/mußte/sollte viel Geld verdienen DMV, EMV
 he will-/must-/shall-*PRET* much money earn

Notice that the auxiliary in these "modal periphrases" is selected by the modal verbs, not, however, by the main verb. This is shown by the fact that *sein*-selecting main verbs are embedded under *haben* "have" all the same. (15a) presents ergative/inchoative verbs which always select *sein*.

- (16) a Er *ist*/**hat* angekommen/gestorben
 he is has arrived died
 b Er **ist*/*hat* ankommen *wollen/müssen/sollen* DMV, *EMV

Note the difference between (15b) and (16b). (16b) corresponds to (15a). (16a,b) unmistakably show that tense and modality are projected via *haben* onto the MV, not, however, onto the main verb. This may appear somewhat truistic given the linear order of the verbal cluster in German. Note, however, that this linear order is not mirrored by any other Germanic language, except Frisian. See (17) for an inverted order of AUX/V in Dutch (SOV) as well as in Danish (SVO), although with a linear domain resembling the German *middle field*, i.e. the domain between V in clause-second position and V in clause last position in dependent sentences, see Abraham 1988a, the Danish example is due to Vikner 1988: 6).

- (17) a DUTCH *Hij *is/heeft willen/moeten aankomen* MV-V/'V-MV
 he is has will must arrive
 b GERMAN *Er hat ankommen wollen/müssen* *MV-V/V-MV
 c DANISH *Han har villet tjene mange penge* . MV-V/*V-MV
 he has will-ed earn much money

As soon as we give up the periphrasis, i.e. under the synthetic preterite form on the main verb, the reading of the verbal cluster is different. Compare (15a),(16b) showing MV-periphrasis, with (18) with periphrasis on the main verb.

- (18) a *Er will/soll/muß Geld verdient haben* *DMV, EMV
 he will/shall/must money earned have
 b *Er will/soll/muß angekommen sein* DMV, EMV
 he will arrived be
 c *Er will/soll/muß Geld verdienen* DMV, EMV
 he will money earn

(18) corresponds to (15b). See the different grammaticality checks in (14) above. When AUX and MV change functions, as compared to (15b) and (16b), in the role of tense and aspect periphrasis, respectively, the readings in (18) are the inverse of those in (16).

While (19) displays distributional characteristics under periphrasis on MV: a periphrastic MV excludes the EMV-reading; see (15a),(16b) vs. (15b).

(19)

MV	PRETERITE	PERFECT/PLUPERFECT/FUTURE
EMV	+	-
DMV	+	+

5.3. Summary

(20) collapses (15) and (19) and summarizes the constraints for the analytic forms on the main verbs.

(20)

MV	[α TERMINATIVE]	PRESENT INFINITIVE	PRETERITE PARTICIPLE + <i>haben/sein</i>
EMV	+	-	+
EMV	-	+	+
DMV	+	+	-
DMV	-	+	-

The inferential uses of MVs (EMVs) in West Germanic (of which I have illustrated only German, but which material could easily be extended to cover also Dutch, West Frisian, and Yiddish as well as the substandards and dialects of German; see Abraham 1998) possess an ostensive similarity with evidentials in terms of their particular illocutive, non-veridical function, however not as regards their diachronic emergence from lexical or other grammatical elements and functions. We have illustrated above the fact that whatever the semantic remnants of the original preterite present-turned modal verbs in Modern German, the syntactic distributions valid for the epistemic, or

evidential readings, of the MVs are in complementary distribution to the perfective aktionsart on the embedded lexical predicate and with the periphrastic perfect of the MV itself, whereas one would expect the opposite given the evidence of a wide number of unrelated languages of the world. I have called this above the linguistic puzzle of the epistemic modal verb disallowing periphrastic perfect contexts. Notice that there was reason to believe that the epistemic denotation of modal verbs in German evolved due to their original preterite-only (praeteritum tantum) status. Not only is it not the case that the distributional behavior of modern modal verbs in German and the other West Germanic modals (except for English) do not confirm the general perfect(ive) triggered typological picture, but, much rather, it outright contradicts it. It is the epistemics alone that are excluded from perfect(ive) contexts.

5.4. Interrelations between EMVs and evidentials

Since the interrelations between EMVs and evidentials (EVs) have never been sketched, to the best of my knowledge, I would like to pursue a few obvious paths of consideration.

Notice, first, that the discussion of EMVs as emerging from DMV-meanings allows - or, rather, forces - a more concrete understanding of the retained lexical specifics despite the encompassing bleaching results, which are due to grammaticalization. In the following list of EMV-inferentials in German, the evidential meanings of each lexical are in some way weakly reflecting the original deontic meaning (Abraham 1998: 232).

- (21)a X [_{EMV} *will-*]+V = "X will/wants others to believe V"
 = "X pretends"
 b X [_{EMV} *soll-*]+V = "X soll/must be the case according to others"
 = 'hear-say'
 c X [_{EMV} *muß-*]+V = "X muß/must be due to the accompanying facts"
 = "X's factual conclusion warranted"
 d X [_{EMV} *mög-*]+V = "X is capable of V-ing"
 = "X is possibly V-ing"

There is thus a common source to this array of evidentials in German. However, none of them has bleached to the point where the original lexical source (deontic meaning) is deleted completely. There is no reason to assume that, in some future time, the four meanings will merge to one common evidential function: not because the different meanings are meaningful distinctions upon the common reading of non-veridical evidentiality; and, second, because of the ever virulent principle of *'one form, one meaning'* in German.

6. Conclusion: the diachronic-developmental stage of epistemics

The following conclusions serve the purpose to add up on general positions reached in the literature as regards the processes of grammaticization of the class of modal verbs in Germanic, in particular with respect to English.

The historical change from the pure perfect to the regularized readings of the perfect evidential has, at the bottom of the phenomenon, nothing to do in any direct fashion with what Traugott (1988: 409), and, in a less direct way, also Sweetser (1990), have called the general tendency of change from external, fact-bound, relations to internal, speaker-oriented relations, and, consequently, from external to internal causality. Much rather, and a lot more pointedly and empirically soundly, this turns out to be a result of, and thus dependent upon, the weakening of selection constraints of the subject actants in the agreement carrying predicates (from fact-bound to person-bound subjects, thus from 'objectification' to 'subjectification'). There is no need to assume that a term such as 'subjectification' is in any way explanatory in a sense truly committed to detailed linguistic analysis unless this term in itself is explained on the basis of the weakening selection constraints on the part of the predicates.

The diachronic account that EMVs, just as EVs in general, are derived historically, and, thus, are diachronic dependents upon, DMVs is correct only to the extent that the basic selection restrictions were not relaxed from scratch, i.e. relaxed already in historical times. In fact and to the contrary, Traugott (1988) has observed numerous cases where such selection relaxations force readings much in the sense of modern EVIDENTIALS. Notice that this observation also nags on the triggering status of 'subjectification' as a historical explanation. EMVs, to recall the point of departure of the present section of this paper, are thus to be seen as diachronically concomitant with DMVs from scratch depending purely on the linguistic 'stringency' of the language user.

The various features of sensitivity of the German MVs under perfect and perfective weight is thus no longer surprising if judged against the two obvious parameters of historical weight: the fact that MVs were preterites with a resultative meaning at stages of the Germanic languages when these, for one, were still highly aspectual, and, second, when the synchronic constraints under perfect and perfective weight in Modern German (and Dutch, Yiddish, and West Frisian) apply. It is to be noticed in this context that the perfect in Georgian triggers the observed evidentials only in the temporal-aspectual context of an aspectual system, where the aorist contrasts eminently in function with the perfect. German, in this sense, is no longer a language aspect-prominent in any paradigmatically based way. Yet, there are sufficient syntactically distributional characteristics retained which reflect the previous former aspectual status of German, in what may be called a 'retrieving syntagmatic-combinatorial syntactic and semantic sector of a former temporal-aspectual paradigmatics'.

The distinct evidential meanings of EMV in Modern German support the more general observation that the resultative perfect and evidentials are interlinked in other, less subclassifying languages. German lends support to this general findings by retaining some of the deontic, 'root' semantics of DMV in its evidential intension, while echoing the common factor of perfectivity in the verbal subclass of 'preterite presents'. Proof of this can be derived from studies on oral German texts entertained by Letness (1998: 9) with the result that occasionally the specific EMV *soll-* cannot be substituted by one of the other MV.

As a general conclusion with respect to Lightfoot's general assumption that the Middle English MVs relinquished the main paradigm of verbs, one may assume on the basis of our in-

sights that this is due to the fact also that aspect as well as morphologically reflected aktionsart was totally lost as a determining factor. This, in turn, must have been a consequence mainly of the pervasive attrition of verbal inflectional and derivational morphology during the Middle English period - certainly a revolutionary development not reflected in the other Germanic languages, which were never under such profound exposition to, and influence of, a fundamentally different language as Old English, and thus never subject to such profound creolizing influences as Middle English.

7. The epistemic-evidential puzzle of German modal verbs

The epistemic-evidential puzzle of German modal verbs has remained unsolved so far. The following list of criteria for the distributional and diachronic emergence of epistemic modal verbs in German and evidentials across languages provides a clue as to what matters, and what does not match, in the comparison of the two categories.

(22)	GERMAN EPISTEMIC MODAL VERBS		EVIDENTIALS ACROSS LANGUAGES
a	none in periphrastic perfects	≠	occur primarily in periphrastic perfects
b	none in non-finite contexts	=	does not arise in non-finite contexts
c	none in perfective contexts	≠	occur primarily in perfective contexts

The only property where the two categories do not differ is the restriction to finite contexts. Thus, German EMVs relate syntactically to DMVs according to the following range of possibilities. Bear in mind that German as well as the other continental West Germanic languages extend valency government and verbal scope from right to left (in keeping with the basic SOV-ordering type).

- (23) EMV needs to dominate DMV because of the finiteness requirement of EMV-readings - therefore
- a DMV [_{FIN} EMV], but *EMV [_{FIN} DMV]
 - b *EMV [_{FIN} EMV]
 - c DMV [_{FIN} DMV], at least unless disallowed semantically (for example, for 'horror aequi modi')

With true evidentials, of course, the finiteness criterion never popped up, in contrast to epistemic modal verbs in German and general in Germanic.

What remains, then, is the following conclusion. The obvious similarity of epistemic denotations of Mvs in (West) German(ic) is due to their original status as 'preterite presents'. This alone establishes the crucial parallel of modal verbs in Germanic and evidentials and their specific perfect and perfective trigger. The fact that temporal and aspectual (or Aktionsart) distributions not only do not support the epistemic readings of the MVs, but even exclude them, is a phenomenon which has to be kept apart and allows no direct conclusion as to the findings about the typological perfect trigger for evidentials (to the extent that evidentials are sensitive to perfect and perfectivity triggers in the first place). Modern modal verbs in Germanic, therefore, once were,

but are no longer, subject to the triggering perfect condition for epistemic and evidential denotations this is all the more true in German since the modern periphrastic perfect has no perfect(ive) reading any longer, but has given way to a general preterite reading under the general loss of the preterite paradigms. This holds for German as well as Yiddish and, partly, also for Dutch dialects, and possibly also for English and other Germanic languages. Our expectation that German modal verbs, once preterite perfects, would have to show distributional sensitivity to the periphrastic perfect is thus unfounded in the first place due to the grammaticization of the temporal paradigms in German, though not so much, or not at all, to the grammaticization of the modal verbs themselves.

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