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This is a contribution from *Functions of Language 16:1*
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Evidentiality and epistemic modality

On the close relationship between two different categories*

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This paper attempts to explain the terminological and conceptual confusion of evidentiality and epistemic modality. It presents a functionally oriented semantic analysis which does not belong to a specific theoretical framework. It shows that the alleged epistemic speaker commitment of evidential expressions does not come from the specific evidential value or mode of information, but rather boils down to the speaker's and hearer's interpretation of the source of information. A source of information can be attributed different degrees of reliability, but these should not automatically be translated into degrees of epistemic speaker commitment. The latter involves an evaluation of the likelihood, which is quite different from the evaluation of the reliability of the source of information. Thus, the account presented here challenges previous analyses in which the labels "epistemic" and "evidential" are applied to linguistic expressions either in too broad a way or in too exclusive a way. The analysis also contrasts with accounts based on the "inclusion" or the "overlap" of the two categories. Finally, the paper also discusses Nuyts' (2004) claim that a clause can only have one qualification at a time.

1. Introduction

This paper discusses what the attitudinal categories of evidentiality and epistemic modality have in common as well as what separates them from each other. Many accounts of evidential or modal expressions (e.g. auxiliaries such as *must* or mental state predicates such as *guess*) observe both evidential and epistemic dimensions. The reasons of this conflation are still to be specified. Is it due to the functional similarity of the two qualifications? Or does it derive from the lack of clarity about the different types of reasoning involved? At the end of this paper, I will argue that the terminological confusion is the result of mixing up epistemic speaker commitment and reliability of knowledge, which is related to evidentiality.

The paper is structured in the following way. In Section 2, I will first present a definition of evidentiality and epistemic modality. In Section 3 I will analyze the different types of relations between the two categories that have been proposed in the literature. I will then go on to discuss three case studies that offer counter-evidence for the alleged correlation between evidential values and degrees of epistemic commitment, with special attention to inference and hearsay (Section 4.). Section 5 is devoted to the underlying reasons for the often claimed link between the two qualifications and makes the suggestion that the confusion of epistemic modality and evidentiality is due to the evaluation associated with the respective subdimensions of reliability and epistemic speaker assessment.

2. Definitions of evidentiality and epistemic modality

Since a great variety of definitions of evidentiality and epistemic modality has seen the light in the linguistic literature, it is necessary to first specify how the two qualifications are understood in this paper.

Evidentiality is defined as the functional category that refers to the perceptual and/or epistemological basis for making a speech act. In traditional classifications, evidentiality is divided into direct and indirect evidentiality. Direct evidentials are used when the speaker has witnessed the action while indirect evidentials are used when the speaker has not witnessed the action personally but has either deduced the action or has heard about it from others. When the action is deduced, we are talking about inferentials; when information about the event is conveyed through others, they are called hearsay markers, report(at)ives or quotatives.

Recently, different dimensions of evidentiality have come to the fore. Nuyts (2001a,b) and Cornillie (2007) differentiate between source-evidentiality and (inter)subjectivity. The former notion refers to the different types of knowledge involved, while the latter is about the shared status of the evidence (and the proposition). In a paper on different types of inferentials, Squartini (2008) argues for a clear distinction between the mode of knowing and the source of evidence. The mode of knowing can be sensorial or visual evidence, inference and hearsay. The source of information, then, is either the speaker or other evidence. Distinguishing between these two notions allows for a description of the interplay of different evidential dimensions such as inference from shared visual evidence or from reports.

Aikhenvald (2004) makes a strong case for evidentiality as a purely grammatical category. Yet, the functional domain of evidentiality is present in most languages, and hence may be considered a language universal. Evidentiality is relevant to both languages with an obligatory grammatical evidential system and languages that have evidentiality as an optional linguistic category. The former comprise

Native American and Eurasian languages, amongst others, and have grammaticalized evidentials, most often affixes. The Romance and Germanic languages, by contrast, belong to the latter group in that evidential qualifications are expressed either by lexical elements such as adverbs, e.g. English *allegedly* and *presumably* (1a) and by more grammaticalized expressions such as evidential auxiliaries, e.g. English *seem* (1b).

- (1) a. The author is *allegedly* a member of a comedy troupe and *presumably* was trying to be witty.
 b. It *seems* to be a good movie.

In this paper, I will emphasize that hearsay readings, e.g. *allegedly* in (1a), and inferential reading, e.g. *seem* + infinitive in (1b), are the most common evidential readings in languages without an obligatory grammatical category of evidentiality. Languages with an obligatory evidential system, by contrast, often have grammatical marking of direct evidence (visual, auditory, etc.). Yet, in general, processes of reasoning involving different modes of knowledge may be the most widespread feature of the functional domain of evidentiality.

Let us now pass on to the definition of epistemic modality. The epistemic category refers to the “evaluation of the chances that a certain hypothetical state of affairs under consideration (or some aspect of it) will occur, is occurring or has occurred in a possible world” (Nuyts 2001b: 21). The result of the evaluation goes from absolute certainty that a state of affairs is real to absolute certainty that it is not real. In between these two extremes there is a continuum including probability to possibility, e.g. *may* and *maybe* in (2).

- (2) Our friend *may* have been secretly hoping someone would notice the problem and reach out to help. *Maybe* others along the way have said they’re concerned about it. And now your friend is ready to get assistance. How can you help?

The above-presented definition of epistemic modality contrasts with traditional (too) broad definitions of the term “epistemic” such as the one by Aijmer (1980) and Palmer (1986): (i) Aijmer (1980: 11): “Epistemic quantifiers are expressions which say something about the speaker’s evidence and degree of certainty”. (ii) Palmer (1986: 51): “the term ‘epistemic’ should apply not simply to modal systems that basically involve the notions of possibility and necessity, but to any modal system that indicates the degree of commitment by the speaker to what he says. In particular, it should include evidentials such as ‘hearsay’ or ‘report’ (the quotative) or the evidence of the senses”.

In sum, the definitions of evidentiality and epistemic modality presented in this section indicate that the two notions are conceptually different. Evidentiality

refers to the reasoning processes that lead to a proposition and epistemic modality evaluates the likelihood that this proposition is true. Notwithstanding this functional difference, analysts often find it very hard to determine the main reading of an expression. As a consequence, proposals for combining the two qualifications have seen the light.

3. Different views on combining evidentiality and epistemic modality

The tradition of western linguistics has largely seen evidentiality and epistemic modality as overlapping concepts. American structuralists explicitly linked reference to sources of information (i.e. evidentiality in the narrow sense) with reference to certainty of knowledge (i.e. epistemic modality). A similar view is presented in Givón (1982), Chafe & Nichols (1986) and Willett (1988).¹ Since the end of the 1990s on, the focus has been increasingly on the distinct nature of evidentiality. However, the relationship between the two semantic domains remains “one of the main problems in the research area of evidentiality” (Dendale & Tasmowski 2001: 340).

Previous accounts of epistemic and evidential verbs illustrate the confusion of the two categories. For example, the English verb *seem* (3) and its counterparts in other languages are considered either epistemic (Aijmer 1980, 1997; Usoniene 2001) or evidential (Anderson 1986; Nuyts 2001b; Cornillie 2007). Along the same lines, modal *must* and *moeten* (4) either receive the label “evidential” (Anderson 1986; Nuyts 2001b), or are claimed to belong to the same category as epistemic modal *might* (5) (cf. De Haan 2001).

(3) This *seems* to confirm that Fujimori and Hermoza are strengthening their ties.

(4) John *must* be at home. The light is on. (De Haan 2001: 8)

(5) They *might* have run out of fuel. (Nuyts 2001b: 207)

Although there are cogent reasons to differentiate between evidentiality and epistemic modality (see De Haan 1999, 2001; Nuyts 2001b: 35–36, 341–343; Faller 2002: 79–120), the two categories have often been combined in the literature, namely in terms of inclusion (3.1.) and overlap (3.2.).

3.1 Inclusion

Whether authors see the relation between evidentiality and epistemic modality as one of inclusion, or not, seems to depend on their definition of evidentials. Two main positions can be distinguished in the field of evidentiality studies.

On the one hand, some authors mention that the epistemic qualification can be derived from the evidential marking. Palmer (1986: 64–67), for instance, gives the example of evidentials in Tuyuca, a language spoken in Colombia and Brazil. Tuyuca has a series of different suffixes for visual, non-visual, apparent, second-hand, and assumed information. According to Palmer, these five values can be readily interpreted on an epistemic scale indicating decreasing probability.² However, this view has not gone unchallenged. For example, it is not evident that assumptions systematically lead to a weaker assessment of likelihood. Furthermore, Tuyuca evidentials may implicate some kind of speaker assessment, but they are not meant to convey an evaluation of the factual status of the proposition, as this is expressed by other suffixes.

On the other hand, Plungian (2001: 354) argues that the evidential value is always inherently present in the epistemic meaning: “while an evidential supplement can always be seen in an epistemic marker, the opposite does not always hold: not all evidential markers are modal in that they do not all necessarily imply an epistemic judgment”. Interestingly, such a view implies that the evidential dimension does not necessarily overrule the epistemic modal qualification.

The second proposal seems to be more plausible than the first one. Most evidential values in Tuyuca — assumed information may be an exception — do not express the speaker’s evaluation of the possibility of the state of affairs. On the other hand, it is not clear what kind of role the evidential values are attributed in the formulation of the epistemic evaluation. Some authors suggest that the strength of the epistemic assessment in epistemic modal expressions depends on the evidential dimension involved. This, of course, leads to overlap, which will be discussed in the next subsection.

3.2 Overlapping domains

As for the overlap between the two qualifications, van der Auwera & Plungian (1998: 85–86) link strong epistemic commitment (necessity) with a particular evidential type, namely inferential evidentiality. They contend that there is an overlap domain for evidentiality and epistemic modality:

The claim is only that the inferential reading amounts to epistemic modality and more particularly necessity: for both categories we are dealing with the certainty of a judgment relative to other judgments. From this point of view it also causes no surprise that inferential evidentials often receive an English translation with epistemic *must*. Inferential evidentiality is thus regarded as an overlap category between modality and evidentiality (see Table 5[1]).

Table 1. Inferential evidentiality = epistemic necessity

		Necessity			
...	Deontic necessity	Epistemic necessity = Inferential evidentiality	Quotative evidentiality	...	
		Evidentiality			

This proposal explains the case of *must*, but assumes that all inferential statements are concerned with certainty of a judgment. That is, inference is seen as a monolithic concept that lacks any variation. At the same time, the very relation between the inference and the epistemic qualification is not made clear. Moreover, the proposed correlation between inference and necessity implies that other modes of knowing, such as quotative (or hearsay) evidentiality, are automatically outside the realm of necessity. This implicitly correlates them with weaker forms of modality such as possibility and probability.

In the following sections, I will present three case studies that do not corroborate the assumptions behind the above-presented proposals. I will address the specific nature of the two qualifications by means of examples of evidential and epistemic auxiliaries, adverbs and mental state predicates. Since the paper is primarily concerned with a theoretical discussion, it will mainly rely on previously presented data from Italian, Spanish and Dutch (De Haan 1999, 2001; Cornillie 2007; Nuyts 2004; Squartini 2008).

4. Case studies

The first case study deals with the different kinds of inferences that the Italian future tense can convey (4.1.). The second case study analyzes the hearsay readings of Spanish *parecer* (4.2.). Finally, the last case study is concerned with Dutch *moeten* 'must', whose readings can shift from an inferential one to either an epistemic or a hearsay one (4.3.). In the three case studies, it will be argued that the evidential reading is the primary one and that the epistemic meaning is a secondary, implied reading.

4.1 Case-study 1: Inferences

Given that there exist several types of inferences, inferential evidentiality is a broad term that needs to be refined. In what follows, I will distinguish between

circumstantial, generic and conjectured inferences. In a circumstantial inferential reading, the speaker indicates that there is direct (visible) evidence for the inference expressed. Consider the reading of *must* in (6). The speaker sees a wounded dog lying in the road and concludes that it is suffering.

(6) There is a wounded dog lying on the other side of the street. It *must* be in pain.

In this reading, the speaker believes that their own assessment of the state of affairs, i.e. that a wounded dog lying on the street is in pain, is likely to be true. Now, the question is whether this likelihood is motivated by the inferential qualification and the visible evidence it is based on. Inferences from direct evidence are generally considered to convey a strong epistemic speaker commitment. But (6)' shows that the evidential dimension does not block a weaker epistemic statement by means of *may*.

(6)' There is a wounded dog lying on the other side of the street. It *may* be in pain.

Hence, with circumstantial inferences different degrees of epistemic commitment are possible. In this respect, they do not differ from generic inferential readings, i.e. readings based on inferences from reasoning, which are said to correlate with a weaker epistemic assessment.

Squartini (2008) discusses circumstantial and generic inferences in Italian, comparing them with conjectures. I copy his examples of the inferential future in (7). The generic inference is exemplified in (7a), while (7b) and (7c) represent conjectures.

- (7) a. [Suonano alla porta] Sarà il postino.
ring-3PL to the door be-FUT the postman
'[The bell rings] It will be the postman'
- b. [Suonano alla porta] Sarà sicuramente il postino.
ring-3PL to the door be-FUT certainly the postman
'[The bell rings] It will certainly be the postman'
- c. [Suonano alla porta] Forse sarà il postino.
ring-3PL to the door maybe be-FUT the postman
'[The bell rings] Perhaps it is the postman'

The question is whether conjectures lead to less speaker commitment. The answer is negative. Squartini (2008) offers evidence for the claim that inferences do not systematically have a reading of weak or strong probability. The addition of *sicuramente* 'certainly' resp. *forse* 'maybe' to the conjectures in (7b) and (7c) illustrates that the epistemic speaker assessment can be made explicit in different ways, leading to different assessments of the likelihood. Interestingly, the epistemic evaluation expressed by the future involving conjectures varies from certainty

to possibility. By contrast, the generic inferential reading in (7a) does not specify whether it involves epistemic possibility or epistemic necessity. Two things may be concluded from this: (i) Conjectures allow for a variety of epistemic evaluations. (ii) The generic inferential reading of the future boils down to epistemic indeterminacy and only indicates that the speaker has reasons to assume the proposition. Thus, it can be assumed that other evidential values do not correlate with a specific epistemic value either, and hence, may vary.

These above-presented observations cast doubt on van der Auwera & Plungian's (1998) assumption that inferential evidentiality correlates with a certain degree of epistemic modality and that they are largely overlapping domains. On the contrary, they corroborate the idea that epistemic modality and evidentiality are two distinct categories. Rather than representing a concrete overlap domain, epistemic or evidential expressions may more accurately be described as having similar subdimensions that meet at some point. In Section (5), I will account for these subdimensions in terms of reliability of knowledge (evidentiality) and speaker commitment (epistemic modality).

4.2 Case-study 2: Hearsay

Let us now examine whether the discussion about inference can also be applied to hearsay. Although it is often stated that hearsay markers express less commitment to the proposition than inferential statements, stringent evidence for such an assumption is still lacking. Below I will give counterexamples from languages with an obligatory, grammatical evidential system as well as languages lacking such a system.

Languages with a grammatical evidential system offer interesting counterexamples for the link between evidential values and epistemic speaker commitment (see Aikhenvald 2004). For instance, Givón (1982) discusses the case of a Lama who narrates in his Tibetan language the *Life of the Buddha* using almost exclusively the hearsay/indirect evidence suffix. Yet, by no means should one deduce from this that the narrator does not believe that the story is true, since for Buddhists the *Life of the Buddha* cannot be more true — see Floyd (1996: 931) and Faller (2002: 86) for similar examples of hearsay in Quechua. As De Haan (1999, 2001) and Faller (2002) argue, there are languages with markers that only indicate the speaker's source of information (cf. the Tuyuca example that Palmer (1986) borrows from Barnes (1984)), and other markers that only indicate the speaker's judgment regarding the truth of the proposition expressed. In these languages, the choice for specific evidential values is pragmatically unmarked.

In European languages, the case of hearsay is not clear either. Let us look at the evidential readings of the Spanish semi-auxiliary *parecer* 'to seem' in *que*-clause and infinitival constructions, such as (8a) and (8b).

- (8) a. Las condiciones del tratado *parecen irritar* a los diplomáticos.
 ‘The conditions of the treaty seem to irritate the diplomats’
 b. *Parece que* las condiciones del tratado irritan a los diplomáticos.
 ‘It seems/is said that the conditions of the treaty irritate the diplomats’

Note that the verb *parecer* only conveys an evidential and no epistemic dimension: there is no evaluation of the chance that a hypothetical state of affairs is or will be occurring in a possible world. Although the speaker commitment in (8) is lower than in a traditional declarative utterance without evidential marking, the proposition is more factual than one qualified by an epistemic marker. When speakers use an evidential marker, they check versions of the evidentially qualified state of affairs, but the state of affairs is in no case questioned. The most important function of evidential markers is to indicate that there is evidence that leads to the utterance.

It has been established that the evidential basis of *parecer* + infinitive is restricted to inference, whereas *parece que* has two possible modes of knowing, namely inference and hearsay (cf. Cornillie 2007). In (9), the speaker communicates by means of *parecer* that (s)he has the impression that people are reluctant to stand up to the power of television. The evidential reading of *parecer* + infinitive is based on inference from direct evidence or reasoning.³

- (9) a. Speaker A: ... y la música pervierte en la misma forma como un vocabulario vulgar. Exactamente, es lo mismo.
 Speaker B: — Sí. Es que em... la gente *parece* tener miedo al enfrentar esos poderes de la televisión... (Habla Culta: Caracas: M12)
 A: ‘and the music is perverting in the same way as popular language. Exactly, it is the same.’
 B: ‘Yes, in fact... people *seem* reluctant to stand up to the powers of broadcasting.’

The tests in (9b) detail the kind of inference at stake. The infelicitous contextualizations illustrate that the reading of *parecer* + infinitive does not rely on hearsay. The example in (9a) cannot be followed by the adversative clause *pero yo no lo veo así* ‘but I don’t see it that way’ (9b), by which a speaker would be able to distance himself from the qualification. In other words, the evidential statement is based on his/her own reasoning about the surrounding reality. Moreover, a hearsay question by the interlocutor, e.g. *¿quién lo dice?* ‘who says that?’ (9b) does not felicitously correspond to the inferential statement in (9a) either. Thus, it can be concluded that no secondhand evidence, such as hearsay, is involved without the speaker’s own processing. This is in line with the observation that the statement can easily be followed by the speaker-oriented question *¿tú crees?* ‘do you think so?’

- (9) a. ... la gente *parece tener miedo* al enfrentar esos poderes...
- b. A: *pero yo no lo veo así.
 ‘but I don’t see it that way’
 B: * ¿Quién lo dice?
 ‘Who says that?’
 B: ¿Tú crees?
 ‘Do you think so?’

In contrast with *parecer* + infinitive, the *parece que* construction can refer to two modes of knowing. *Parece que* (10a) can rely on hearsay or on inference from different types of evidence, as the contextualization in (10b) shows.

- (10) a. A: Y ahora, después, conociendo los entretelones del asunto, ...
 hubo que tener una explicación del problema porque *parece que* el secretario general le quiso hacer favores a una dama y la eligió de secretaria y trabajaba poco en secretaría; en cambio se dedicaba a otras cosas. (Habla Culta: Santiago: M49)
 ‘And now, afterwards, knowing the details of the case, ...he had to have an explanation of the problem, because it *seems* that the secretary-general wanted to do favors to a lady and elected her as a secretary and she worked little in the secretariat; instead she devoted herself to other things’
- b. A: pero yo no lo veo así.
 ‘but I don’t see it that way’
 B: ¿Quién lo dice?
 ‘Who says that?’
 B: ¿Tú crees?
 ‘Do you think so?’

The evidence used for the *parece que* construction in (10a) is not as strictly speaker-oriented as that used for the infinitival construction. The reformulations in (10b) point to different evidential readings. First of all, it is clear that the evidential readings are not restricted to the inferential type. The felicitous combination with an adversative clause *pero yo no lo veo así* in (10b) indicates that the evidential statement can also involve evidence that is not linked to the speaker. This observation is confirmed by the unproblematic hearsay question *¿Quién lo dice?* The fact that the *¿Tú crees?* question does not pose a problem either shows that the *parece que* construction can rely on hearsay as well as on inference.

Interestingly, several authors working in the Hispanic tradition⁴ observe that the “factivity” expressed by *parecer* + infinitive is low. In epistemic terms, low factivity corresponds to weak epistemic certainty. The use of *parece que*, the Hispanic literature argues, leads to a near-factive reading of the proposition expressed in

the *que*-clause, which corresponds to an epistemic speaker assessment in terms of near-certainty. This would mean that, for Spanish *parecer*, non-factivity is related to inference and low epistemic commitment, whereas near-factivity correlates with hearsay/inference and stronger epistemic commitment.

It is clear that this is problematic for the assumption that evidential values systematically lead to specific degrees of epistemic speaker commitment. The foregoing observations are counter-evidence to this assumption for two reasons: (i) if the two constructions have an inferential reading, they do not necessarily lead to the same degree of epistemic commitment; (ii) if *parecer* + infinitive renders an inferential reading, while *parece que* has a hearsay reading, inferential evidentiality is associated with lower epistemic commitment than hearsay evidentiality. Since the degree of epistemic commitment cannot be pinned down straightforwardly for *parecer*, the conclusion is that other dimensions play a role. In Section 5, I will argue that this dimension is properly evidential.

4.3 Case study 3: The evidential readings of Dutch *moeten* ‘must’

In this section, I present a case study of *moeten/must*. In the recent literature on modality, Dutch *moeten* and its English counterpart *must* are sometimes excluded from the group of epistemic modals because of their evidential meaning (see Nuyts 2001b for example). The argument is that the speaker has recourse to this modal because of its evidential value rather than because of the specific degree of epistemic commitment it conveys. Furthermore, applying Chafe’s (1994) claim of one idea per intonation unit, Nuyts (2004, forthcoming) argues for the cognitive implausibility of combining more than one modal qualification per clause. If we limit ourselves to evidentiality and epistemic modality, this would mean that a modalized clause receives either an epistemic or an evidential qualification.

Now, whereas (i) the classification of *moeten* as a purely evidential auxiliary is unproblematic, it is less clear that (ii) the one qualification per clause claim is supported by the data. In line with the previous case study of *parecer*, I will show that evidential *moeten* stands for both inferential and hearsay meanings. Yet, when the verb combines with an epistemic marker, we only find an inferential reading.

As for the first issue, De Haan’s (2001:8) view of *must* is opposed to the one presented here. He argues that *must* expresses doubt and that there is no other reason to use the verb. In other words, although the evidential dimension is certainly present, according to him, *must* is not used because of the evidence it conveys. Moreover, De Haan illustrates that, as far as modals are concerned, evidential processes are not restricted to *must* (11c), but also readily appear in constructions with epistemic *may* (11b) or even take place without a modal whatsoever (11c).

- (11) a. John *must* be at home. The light is on.
 b. John *may* be at home. The light is on.
 c. John is at home. The light is on.

Although De Haan is right to argue that the evidential dimension is present in all three examples of (11), it cannot be denied that the speaker's interpretation of the situation with *must* is linked to processing of evidence, whereas this is not the case of *may*. It goes without saying that the evidential dimension is more prominently present in epistemic *must/moeten* than in epistemic *may/kunnen*. Previous research has shown that, from a conceptual point of view, *must* and its equivalents in other languages undergo a shift from deontic modality to evidential modality which gives rise to inductive and deductive inferential reasoning (Cornillie 2005, 2007). This is not the case of *may*, which originates from a capacity or ability reading and, hence, does not refer to reasoning processes.

Just as with *parece que*, evidential *moeten* has at least two readings: an inferential reading and a hearsay reading. Note that the reading of *moeten* can differ according to the evidential or epistemic hedges that the verb appears with.⁵ For example, in the utterance introduced by *naar verluiddt* 'according to reports', in (12), a hearsay reading of *moeten* is more plausible than an inferential one. Other contextual elements such as the vague temporal reference *ooit* 'ever' and the reference to the quotative status of the judgment, by means of *volgende* 'following', may also play a role in yielding a hearsay reading. On the other hand, the epistemic mental state verb *Ik denk* 'I think' entails an inferential reading of *moeten* in (13).

- (12) Naar verluiddt *moet* minister Stevaert ooit tijdens een losse babbel de
 to appears must minister Stevaert ever while a loose chat the
 volgende gevleugelde uitspraak hebben gedaan. (Uitweg n° 25)
 following concise declaration have done
 'According to reports, minister Stevaert is said to have made the following
 judgment in an informal chat'
- (13) Ik denk dat hij thuis *moet* zijn. (frequently heard in Flemish Dutch)
 'I think that he must be at home'

The hearsay reading was also observed by De Haan (1999), who accounts for the shift from epistemic *must/moeten* to hearsay *must/moeten* without referring to hedges. Instead, he argues that the hearsay reading is the report of an inference that was made by someone else. De Haan (1999:16) goes so far as to argue that the evidential reading of *moeten* is detached from any speaker commitment in examples (14a–b). He contends that this detachment can be concluded from the observation that the same evidential reading can receive two different kinds of speaker commitment.

- (14) a. Het moet een goede film zijn en ik ben daar zeker van.
 'It is said to be a good movie, and I am convinced of it'
 b. Het moet een goede film zijn, maar ik heb er mijn twijfels over.
 'It is said to be a good movie, but I have my doubts about that'

Although De Haan's observation is quite telling, it should be noted that his tests are not completely felicitous: in (14a), the strong speaker commitment in the second part of the utterance seems to be too strong for the intended hearsay reading, whereas in (14b), it is as if the doubts expressed in the second part of the utterance are at odds with the adversative marker *maar* 'but'. That is, if you use hearsay *moeten*, you are not supposed to be sure about what you say. Moreover, it stands to reason that the speaker is not completely excluded from the hearsay-based judgments conveyed by *moeten*. In other words, De Haan's (1999: 16) idea that hearsay *moeten* only "report[s] the presence and the nature of the evidence on which the statement is made" is perhaps too strong a claim. It may be concluded that when speakers report on a state of affairs, they necessarily express some kind of commitment to it, albeit a rather undetermined one.

Nuyts (2004: 60) convincingly argues that the reading of *moeten* is invariably evidential, because of the inherent reasoning of the speaker involved in the verb's reading.⁶ Yet, the combination of evidential *moeten* with the epistemic verb *denken* in (15) is a challenge for Nuyts' assumption that a clause cannot have more than one qualification per clause.

- (15) M. D'er is toch wel, d'er is toch 's een socialistisch voorman geweest en misschien was het wel eh-u-je voorganger, die eh-ooit gezegd heeb-heeft: eh-champagne is eigenlijk de drank van de werkman gedronken bij monde van zijn leiders.
 'There was certainly, there was certainly a socialist leader and perhaps it was your predecessor, who said once: eh, champagne is actually the drink of the workers drunk through the mouth of their leaders'
 B. Ah.. eh-Ik weet niet wie dat zou gezegd hebben, maar...
 'ah... er...I don't know who would have said that, but...'
 M: Ik *denk* dat het Louis Major *moet* geweest zijn.
 'I think that it must have been Louis Major'

Starting from Nuyts' assumption, there would be two 'ideal' utterances with one qualification: *Ik denk dat het Louis Major geweest is* (without *moeten*) 'I think that it was Louis Major' or *Het moet Louis Major geweest zijn* (without *denken*) 'It must have been Louis Major'. As for the combination of the polysemous verbs *denken* and *moeten* in (15), there are two possible accounts of the latter verb: (i) *moeten* as an epistemic modal, (ii) *moeten* as an evidential marker.

(I) the main qualification in the clause is epistemic. The epistemic reading of *denken* sets the tone and influences the qualification expressed by *moeten*. The concrete result is then that the reading of *moeten* changes from referring to the deductive process to conveying an assessment of the likelihood. Its reading here is epistemic probability, that is, an epistemic evaluation that is stronger than that of *denken*. Thus, the epistemic reading of *moeten* is then put in contrast as an intensified version of the epistemic commitment conveyed by *denken*.

(II) the main qualification is evidential. The author's reasoning is expressed by both *denken* and *moeten*. The focus is on the evidence conveyed by the latter expression. The role of the hedge *Ik denk* 'I think' is then marginal, being a subjective attenuator that does not convey an epistemic qualification in terms of assessing the likelihood of a state of affairs. When one takes into account Plungian's (2001) claim that inclusion of evidentiality in epistemic modality is more plausible than the reverse, the question then is why priority is given to the overall evidential qualification. Such an account attributes a completely marginal role to *Ik denk*.

Although *moeten* and *denken* are polysemous verbs, neither of the two above-presented accounts is satisfactory. On the one hand, it is hard to imagine that, because of the marker *Ik denk*, *moeten* loses the inferential reasoning reading completely. On the other hand, it is not clear how *Ik denk* can be seen as a hedge without an epistemic reading. Alternatively, the combination of *Ik denk* and *moeten* can be explained in terms of combining an epistemic qualification and an evidential qualification in one clause, pace Nuyts (2004, forthcoming). The evidential reading of *moeten* reflects then the inferential process that the speaker has gone through, while the epistemic reading of *Ik denk* reinforces the degree of commitment to the proposition. This example not only shows that the two categories can qualify the same clause; by doing so, they also indicate that they do different things. Evidential expressions indicate that there are reasons for the assumption made by the speaker and epistemic expressions evaluate that assumption.

5. Towards an integrated account of the categorial confusion

It seems that, in actual use, reference to the knowledge that leads to a proposition is often interpreted as a kind of evaluation of it. In this section I will argue that equating the evaluation of the reliability of the evidence with the epistemic evaluation of likelihood leads to the current confusion between the two categories.

In the literature on modality, different degrees of likelihood are proposed. An often-made distinction is the one between strong epistemic modality and weak epistemic modality, which are also presented as epistemic necessity and epistemic possibility (e.g. van der Auwera & Plungian 1998). The problem is that these

clear-cut intuitions on epistemic values have been projected onto evidential readings. Yet, the latter do not allow for such a clear-cut categorization. Inferences have generally been associated with strong speaker commitment, but the case of *parecer* + infinitive has shown that such an association does not always hold. Moreover, it has been shown that the very link between epistemic necessity and inferentials such as *must* can be questioned too. The motivation for authors to classify an inferential like *must* as belonging to the category of epistemic necessity is that *must* seems more reliable than *may*.

The adjective “reliable” usually means “dependable” or “trustworthy”. In scientific research, the term “reliability” also means “repeatability” or “consistency”. For example, a measure is considered reliable if it gives the same result over and over again with the same data set. In this paper, a reliable evidential statement is understood as a statement that is generally (repeatedly) considered as trustworthy. Now, degrees of reliability are often associated with modes of knowing or evidential types. Yet, as Chafe (1986: 263) shows, a top down presentation of the modes of knowing (from belief to hearsay) “does not imply that belief is more reliable, or deduction less reliable than the others”. Moreover, different linguistic expressions of the same mode of knowing can differ as to their reliability.

Reliability can be explained by looking at the shared or non-shared status of the evidence. Different sources of evidence are possible: (i) the speaker only, (ii) both the speaker and other participants/entities or (iii) exclusively the other(s). Importantly, the information is considered most reliable when the speaker shares the source with other subjects. In other cases, the reliability is not stable: for example, since the strength of the speaker’s own conjectures varies, it is not easy to determine the reliability associated with them; furthermore, some reports are considered reliable whereas others are not. Finally, focusing on the status of the evidence can also help differentiate between evidentiality and epistemic modality: if the evidence for the qualification can be shifted from the speaker to another source and vice versa, an expression is evidential.

The reliability account presented here is in line with the evidential dimension of (inter)subjectivity proposed by Nuyts (2001a,b). Nuyts observes that in epistemic expressions this evidential dimension involves the shared or non-shared commitment to a qualification. In this way, he acknowledges the existence of evidentiality in epistemic modality, albeit by separating it from the mode of knowing involved in the qualification. For the evidential expressions too, (inter)subjectivity is a separate dimension from the modes of knowing (Cornillie 2007). The (inter)subjectivity of the evidence allows for an alternative account of the above-discussed *parecer* constructions. These can be analyzed in terms of the shared (intersubjective) or non-shared (subjective) access to the evidence. The central argument is that *parecer* + infinitive necessarily expresses a subjective statement based

on the speaker's interpretation of the evidence, while the *que*-clause construction can yield an intersubjective view based on shared evidence. The intersubjectivity of the *parece que* construction seems to be more reliable and, as a consequence, entails the impression that it conveys stronger commitment.

Reliability should not be lumped together with the evaluation of likelihood and its expression in terms of degrees of epistemic speaker commitment. Whereas reliability is included in epistemic modality, the reverse is not true. The reliability of the assessment of likelihood is measured in terms of degrees of speaker commitment. By contrast, the reliability of evidential values cannot be presented in terms of an assessment of likelihood. Yet, this is exactly what many accounts do. A further difference between reliability and likelihood consists in the fact that the former notion mainly refers to states of affairs that have happened or, at least, are happening, whereas the latter also refers to the future. The difference between *must*, which mainly refers to the past, and *may* can be interpreted against this background.

6. Conclusions

In this paper, I have presented arguments for differentiating between evidentiality and epistemic modality and explained why they are so often confused. The analysis of a series of inferential and hearsay expressions has shown that the epistemic evaluation does not necessarily correlate with a specific mode of knowing. The conclusion is that there is neither inclusion nor overlap between the two qualifications. It has been illustrated that an expression is either evidential or epistemic and that within these qualifications different readings are possible. For example, both the Spanish auxiliary *parecer* and the Dutch auxiliary *moeten* combine an inferential reading with a hearsay reading. Finally, in order to account for the impression that qualifications are combined, I turned to the notion of reliability. It has been suggested that the shared or non-shared status of the evidence, which differs from the modes of knowing, can be more or less reliable. Thus, the appreciation of the status of the evidence may vary, but does not inherently involve an epistemic evaluation of likelihood. The conceptual confusion between evidentiality and epistemic modality may be attributed to this subdimension.

Notes

* The research reported on in this article was funded by the Research Council of the University of Leuven and the GOA-project Mood and Modality of the University of Antwerp. An earlier

version was presented at the workshop on “Evidentiality: theoretical and applied” convened by Lena Ekberg and Carita Paradis (Lund University, 3 May 2005). I would like to thank the organizers, the audience, the anonymous reviewer, Barbara De Cock, the journal and guest editors for their stimulating feedback.

1. Apart from the distinction between epistemic modality and evidentiality, there are additional dimensions proposed in the literature. DeLancey (2001) argues for “mirativity”, as distinct from evidentiality, in that it refers to the unexpected status of information. When dealing with evidentiality, the French tradition refers to both *evidentialité* (Vet 1988, Dendale & Tasmowski 1994) and *information médiatisée* ‘mediated information’ (see Lazard 1956:149, 1999 and Guentchéva 1994:8, 1996).
2. Palmer’s (1986) position is heavily criticized in the literature by amongst others De Haan (1999) and Faller (2002). In the new (2001) version of Palmer (1986) there is no longer a direct link between evidential and epistemic values.
3. The analysis of *parecer* presented below is based on native speaker judgments of questions and statements that refer to different modes of knowing (Cornillie 2007: Chapter 2).
4. See Hernanz (1982:235–237, 1999:2232–2233), Porroche (1990:129 *et passim*), Fernández Leborans & Díaz Bautista (1991) and Fernández Leborans (1999:2450–2453).
5. See also Mortelmans (2001) and Nuyts (2001, 2004) for a discussion about hedges.
6. Nuyts (2004:60) suggests the following interpretation: “Louis Major, als persoon kennende, kan zo’n uitspraak nauwelijks anders dan van hem gekomen zijn”, ‘Louis Major, knowing him, such a declaration can hardly come from another person.’

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