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Position paper: The links between evidentiality, modality, and grammaticalization

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This paper introduces the main notions that are addressed in this special issue, namely evidentiality, modality, and grammaticalization. It defines each notion and briefly synthesizes the literature. It also presents some of the controversies which surround the ideas that prevail in these research fields. Crosslinguistic examples illustrate the main evidential and modal categories, and clarify why the two domains are both distinct and related. The paper then sketches the main pathways of grammaticalization of modal and evidential markers as they have been documented in typological work. Finally, it introduces the contributions to this special issue, highlights the new insights, and discusses what remains to be investigated on the links between evidentiality, modality, and grammaticalization.

Keywords: evidentiality; modality; grammaticalization; function

1. Setting the scene

All languages may not possess fully grammaticalized forms encoding modality and evidentiality, but they all have ways to refer to these semantic domains. Relying on some of the latest advances in the study of semantics and language change, this special issue focuses on the connection between evidentiality and modality as functional domains, and the reasons why their expression displays various degrees of grammaticalization within and across languages. It provides an in-depth theoretical and empirical perspective on the semantics and morpho-syntax of various evidential and modal forms in order to investigate the motivation behind their evolution patterns. In the past decade, evidentiality studies have seen an ever-growing number of publications (Guentchéva 2018; Foolen et al. 2018; Aikhenvald 2018b; Wiemer & Marín-Arrese 2022 *inter alia*). However, because general interest in evidentiality remains fairly recent, many crucial questions on the development of evidential systems and the interaction of the notion with neighbouring concepts have remained unanswered. Evidentiality has long been conflated with modality, but there is now a consensus that the two notions constitute distinct functional domains. Their manifest interaction nonetheless deserves further research (Nuyts 2016; Tournadre 2017; Wiemer 2018; Aikhenvald 2021). Hearsay evidentials are often used in discourse to modify the speaker's epistemic support of the proposition (AnderBois 2014). Inferential and epistemic semantic features often co-occur in the same linguistic forms, and may both develop from morphemes that first denoted dynamic or deontic modality (Ziegeler 2016 *inter alia*). Modal and evidential forms also reveal comparable patterns of language change, such as subjectification (Nuyts 2016; Brinton 2017).

This special issue aims at establishing a fruitful dialogue between the research in general typology and more fine-grained analyses of specific forms in diachrony and synchrony. Drawing from recent data on a diversity of languages, it sheds light on the mechanisms of

change which are at work when linguistic forms enter or exit the evidential and modal domains.

2. Defining evidentiality and modality

2.1 How to define evidentiality?

As is the case for probably most notions in linguistics, the definition of evidentiality has not reached full consensus (see notably Boye 2018). Its most common definition is the one proposed by Aikhenvald (2004; 2018a; and *this issue*), that is, ‘the grammatical expression of information source’. What is sometimes debated is whether evidentiality should be limited to grammatical forms, or should also include lexical expressions, since many lexical or semi-grammatical items have been shown to perform very similar functions as evidential inflections (Squartini 2007; Cornillie 2007; Boye & Harder 2009; Mélaç 2022). In addition, other notional terms ending in ‘-ity’, such as ‘modality’, generally cover all linguistic forms expressing their semantic domains (see Narrog 2016; Boye 2016; Huddleston & Pullum 2002: 115 *inter alia*). The second point that is sometimes contested is what ‘information source’ exactly means, and whether this is the best term to define what evidential markers actually encode. For instance, Tournadre & Lapolla (2014) argue that evidentials cover both ‘sources’ of information and ‘accesses’ to information. The distinction between these two categories is illustrated by the syntax and semantics of evidentials in the Tibetic languages, where hearsay markers (referred to as information ‘sources’ in Tournadre & Lapolla 2014) belong to another paradigmatic slot than other evidential markers expressing ‘non-verbal access’, such as direct perception or inference (see also Mélaç & Bialek, *this issue*; and Drolma & Suzuki, *this issue*).

The literature on evidentiality offers various taxonomies structuring the semantic space covered by this notion. The domain is frequently divided in three broad categories, which each possesses several subcategories. The three main categories may be labelled ‘direct perception’, ‘inferential’, and ‘hearsay’, although many other labels exist.¹ Some languages possess grammatical morphemes that encode these three evidential categories, and I will now illustrate them with examples from a corpus of conversation in Lhasa Tibetan (TSC, 2011-2012). ‘Direct perception’ markers are used when the speaker has had a firsthand experience of the state of affairs through any of the five senses. In Lhasa Tibetan, the verbal suffix *-song* belongs to this evidential category, as its use is incorrect if the speaker is sharing information only accessed through inference or hearsay. In (1), the speaker was holding a plastic bag in which there were living fish, and he felt one move. In this sentence, the suffix *-song* thus expresses direct perception through the sense of touch.

- (1) *nya cig=gis 'gul skyod brgyab-song*
fish INDEF.SG=ERG move LV-DPERC.PFIVE.PAST
'A fish moved.' (Lhasa Tibetan; TSC, 2011)

¹ The semantic space (or a very similar one) which I label ‘direct perception’ here is also frequently referred to as ‘firsthand’, ‘sensory’, or ‘witnessed’. ‘Inferential’ markers are often named ‘inferred’ depending on the grammatical tradition of the focal language, or even the preferences of authors describing the same language. ‘Hearsay’ evidentiality also has many other names, such as ‘reported’, ‘reportative’, or ‘secondhand’. As evidentiality is now a large field of studies encompassing many language families, such inconsistencies are inevitable. One may refer to the glossary in *The Oxford handbook of evidentiality* for further information (Aikhenvald 2018a: 40-43).

‘Inferential’ markers encode that the speaker has not witnessed the state of affairs but has figured out its existence through indirect cues.² In (2), the inferential suffix *-bzhag* is used, because the speaker did not see the drawing being made (otherwise *-song* would have been used), but only saw its result (i.e. the drawing itself).

- (2) *ri mo bhis-bzhag*
drawing draw-INFR.PFCT
‘Someone has made a drawing.’ (Lhasa Tibetan; TSC, 2011)

Finally, ‘hearsay’ markers indicate that the speaker has heard or read about the state of affairs. In (3), the speaker explains that there used to be treasures in the *Potala* (the winter palace of the Dalai Lamas). He did not see the treasures himself, but can only report what he has heard, which is why he uses a factual existential verb with the hearsay enclitic *=ze*.

- (3) *sngon ma-r po ta la-'i nang logs nor bu rtsa chen po*
before-DAT Potala-GEN inside gem precious

zhe po cig yod red=ze
very EXIST.FACT=HSAY
‘There used to be very precious stones inside the *Potala*.’ (Lhasa Tibetan; TSC, 2011)

The category of ‘direct perception’ evidentiality may be divided in several subcategories. For example, some languages possess visual and non-visual markers. This is the case in rGyalthang Tibetan (see Drolma & Suzuki, *this issue*), in which the copula *sni* (4) and *grag* (5) both encode direct perception, but the former is limited to sight, and the latter is used for the other senses (i.e., hearing, touch, smell, taste, and inner sensations).

- (4) *de ba sni*
DEM COW COP.VIS.DPERC
‘That is a cow.’ [the speaker can see the animal] (rGyalthang Tibetan; adapted from Drolma & Suzuki, *this issue*)

- (5) *'di a rag grag*
DEM alcohol COP.NONVIS.DPERC
‘This is alcohol.’ [the speaker knows what the liquid is by having tasted it] (rGyalthang Tibetan; adapted from Drolma & Suzuki, *this issue*)

Some inferential markers may be distinguished depending on what types of cues and reasoning processes have enabled the speaker to know about the state of affairs. Aikhenvald (2004: 2-3) calls inferentials that rely on sensory cues ‘inferred’, and those that are based on general knowledge and logic ‘assumed’. For example, present day speakers of Tariana (a North Arawak language) use different inflections to express ‘inferred’ or ‘assumed’ evidentiality. In (6), the inferred suffix *-nikha* is used because the speaker’s inference is based on the visible

² Although the concepts of ‘state of affairs’ and ‘proposition’ may be difficult to tease apart, I do not use them interchangeably. I use ‘state of affairs’ for the concrete situation in the external world expressed by the sentence, and ‘proposition’ to refer to the idea that may be abstracted from the sentence (which may be true or false).

result of the action, while in (7), *-sika* appears, because the speaker’s inference is based on logical reasoning.

(6) *nu-pheru* *du-dia-nihka*
 1SG-older_sister 3SG.F-return-REC.PAST.INFRD
 ‘My older sister has returned.’ [e.g., the speaker sees her bag hanging in the doorway] (Tariana; from Alexandra Y. Aikhenvald’s own fieldwork in 2020-23, an example to be published in Mélac et al. *forthcoming*)

(7) *nu-pheru* *du-dia-sika*
 1SG-older_sister 3SG.F-return-REC.PAST.ASSUM
 ‘My older sister has returned.’ [e.g., the speaker knows she always comes home at this time] (Tariana; from Alexandra Y. Aikhenvald’s fieldwork in 2020-23, an example to be published in Mélac et al. *forthcoming*)

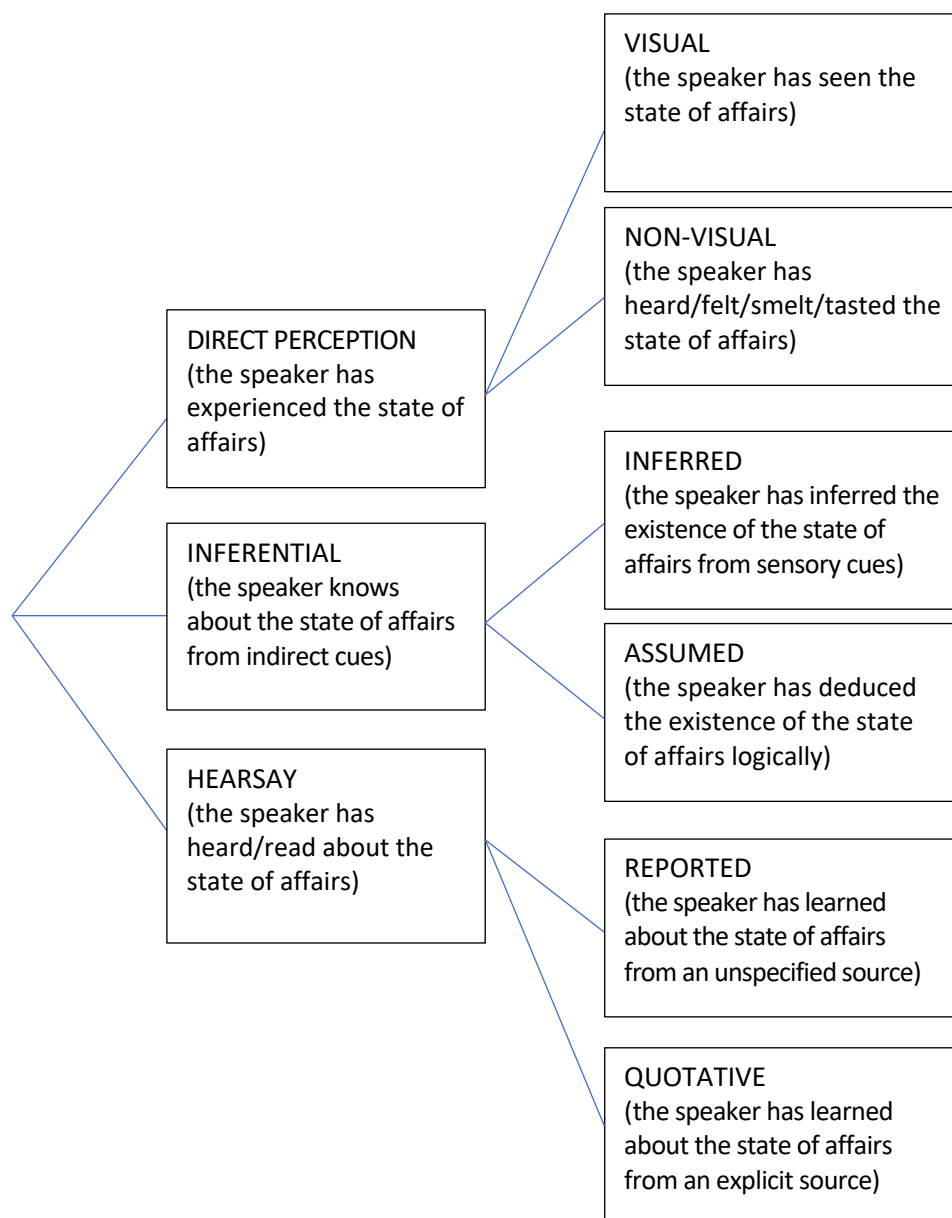
There are also different types of ‘hearsay’ evidentials. Some markers can only be used without mentioning the actual reported source (i.e., the person or text from which the information was obtained), while other markers are only felicitous if the reported source is explicit. The former are usually called ‘reported’, while the latter are called ‘quotative’ (Aikhenvald 2004: 63-64). Example (8) in Central Ladakhi (a Tibetic language) uses the reported enclitic =*lo*, while (9) in Comanche (an Uto-Aztecan language) contains the quotative particle *me*.

(8) *zhing-nga* *chu* *btangs-te.yod.kyag=lo*
 field-DAT water give₂-PFCT.FACT=REP
 ‘The field has been watered.’ [the speaker has been informed that someone did it] (Central Ladakhi; from Nicolas Tournadre and Eric Mélac’s fieldwork in 2023, an example to be published in Mélac et al. *forthcoming*)

(9) *hãã* *me-se* *suti=* *patsi*
 yes QUOT-CNTR that_one older_sister
 ‘The older sister said, “yes”.’ (Comanche; adapted from Charney 1993: 190, cited in Aikhenvald 2004: 50)

Figure 1 presents the basic evidential categories and their most common subdivisions. This taxonomy is mainly adapted from Aikhenvald (2018a).

Figure 1. A taxonomy of evidential markers



There are several disputes over what should be included inside the notion of evidentiality. The domains of epistemic modality, subjectivity, stance, and egophoricity are sometimes presented as parts of evidentiality. Solving any of these disputes is beyond the scope of this introductory paper, so I will only briefly explain why most of the contributions to this special issue do not consider these notions to be evidential. First, epistemic modality (i.e. the evaluation of likelihood of a state of affairs) is linked to evidentiality but the two are now usually distinguished, as we will see in § 2.3. Secondly, subjectivity is defined as the ‘absence of common ground’ by Nuyts (2014), and was argued to be part of evidentiality in Nuyts (2001b).³ Evidentials may have subjective overtones, but subjectivity is usually a nuance that is superimposed on an evidential distinction and is not a category on the same level as the

³ Note that ‘subjectivity’ here is different from the notion of the same name proposed by Traugott (1995).

other evidential categories. As subjectivity does not specify any type of information source *per se*, it is now usually presented as distinct from evidentiality. Thirdly, some authors see stance and evidentiality as inextricably linked (Biber & Finegan 1989; Bergqvist 2018). Stance may be defined as ‘the way speakers position themselves in relation to their own or other people’s beliefs, opinions and statements’ (Simaki et al. 2020: 217). Stance thus has a discursive meaning, and does not specify any type of information source, which is why it is relevant to draw a line between the two notions, despite some connections. Finally, egophoricity is defined quite differently depending on authors. It usually involves the speaker’s direct perception of the state of affairs, but also their participation in it, or the participation of an entity close to them. It also covers a domain that is partly similar to subjectivity, that is, personal knowledge as opposed to shared knowledge. Many Tibetanists (including Drolma & Suzuki, *this issue*) consider egophoric markers to be evidential, while many typologists (including Aikhenvald, *this issue*) argue egophoricity should clearly be distinguished from evidentiality.

2.2. How to define modality?

Modality is a very broad semantic domain that involves the speaker’s modification of the proposition. The notion is widely relevant cross-linguistically insofar as it is usually accepted that all languages encode modality (Palmer 2001: 1-23), while evidentiality, in its strict grammatical sense, is often considered applicable to a limited number of languages (Aikhenvald 2004: xii). Modality is a concept that is far from homogeneous, and its definition can be more or less extended depending on the authors (for further information, see Nuyts 2016). To keep its semantic space at a manageable size, one may restrict modality to the expression of what is ‘possible or necessary’ (van der Auwera 1996 *inter alia*). The dominant taxonomy of modal markers is tripartite: dynamic, deontic, and epistemic modality.

Dynamic modality refers to a possibility or necessity which is intrinsic to a participant of the state of affairs, that is, their ability, disposition, or needs.⁴ Dynamic modality usually includes volition, given that the latter indicates a participant’s inner drives, and is often closely related to their disposition or what they feel necessary in a given situation.⁵ Examples (10) and (11) are in Japanese and Dutch respectively. Each includes two dynamic markers: one expressing ability (*deki* in Japanese, *kan* in Dutch) and one expressing volition (*hosi* in Japanese, *wilt* in Dutch).

- (10) *kitinto kik-u koto=ga deki-te hosi-i*
 properly listen-NPST thing=NOM be_able-GER want-NPST
 ‘I want you to be able to listen properly...’ (Japanese; adapted from Narrog 2016: 107 and Narrog 2009: 179)

⁴ Note that dynamic modality is often extended to the inherent possibilities or necessities of the state of affairs itself.

⁵ Volition (or related notions, such as ‘intention’ or ‘commissive’) is not always included in the domain of modality itself (notably van der Auwera & Plungian 1998; Nuyts 2008). Other scholars consider that this type of meaning may be part of deontic and not dynamic modality (see Palmer 2001: 72-73 for ‘commissive’).

- (11) *als je dat geheim wilt houden kan dat*
 if you DEM secret want keep can DEM
 ‘...if you want to keep it secret, that is possible.’ (Dutch; *Corpus Gesproken Nederlands*, 2004; Nuyts, *this issue*)

Deontic modality, in a restricted sense, refers to what is permitted or obligatory. Like dynamic modality, it encodes possibilities or necessities, but these are not intrinsic to a participant, but rely on moral, authority, instructions, or social conventions. The imperative is often included in this modal category, as it typically expresses an ‘order’, or a ‘suggestion’. Example (12) illustrates the use of an imperative in Spanish. The inflection *ven* of the verb *venir* (‘come’) is dedicated to the second person singular imperative, which encodes the ‘obligation’ subcategory of deontic modality. Example (13) contains the inflection *puis* of the French verb *pouvoir* (‘can, be able to’). In Present Day French, this inflection is almost entirely dedicated to the ‘permission’ subcategory of deontic modality.

- (12) *ven aquí*
 come.2SG.IMP here
 ‘Come here!’ (Castilian Spanish; constructed)

- (13) *puis -je parler à la personne qui s’*
 may.1SG.PSNT.IND 1SG speak to DEF.SG.F person REL REF

occupe de ce type d’achat
 be_in_charge.3SG.PSNT.IND of DEM kind of purchase
 ‘May I speak to the person who’s in charge of this kind of purchase?’ (French, CLAPI)

Epistemic modality is concerned with the likelihood of the state of affairs. It is thus generally more abstract than dynamic or deontic modality in the sense that it is based on ‘supposed’ possibilities or necessities leading to an assessment of the truth of a proposition. In English, epistemic modality is frequently expressed by modals, such as *should*, which encodes a medium-to-high probability, as in (14).

- (14) I have to go. Yeah, Carol **should** be home by now, so... (American English, 1996; from the sitcom *Friends*, season 3 episode 6)

The literature rarely presents subcategories of epistemic modality, since the notion of probability is scalar, and not category-based.⁶ The auxiliary *should* in (14), may be replaced by *must* to encode a very high probability (15), or *might* to express a medium-to-low degree of likelihood (16).

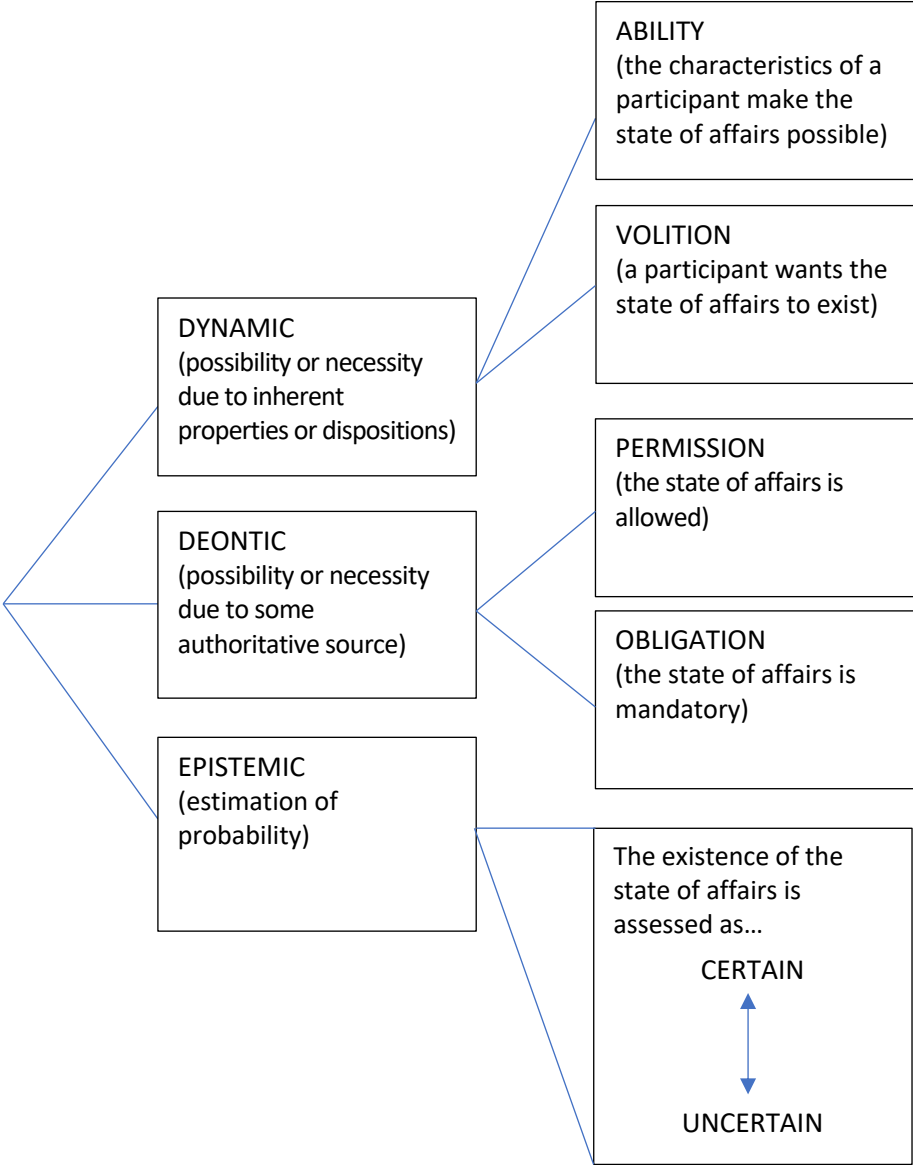
- (15) I have to go. Yeah, Carol **must** be home by now, so... (American English; constructed)

- (16) I have to go. Yeah, Carol **might** be home by now, so... (American English; constructed)

⁶ Palmer (2001: 24-31) does present three epistemic sub-categories: speculative, deductive, and assumptive. From the perspective of our framework, however, deductive and assumptive are evidential categories, as they refer to specific types of inference.

Figure 2 presents the basic modal categories and their most common subdivisions.

Figure 2. A taxonomy of modal markers



Despite the many inconsistencies in the definitions of modality that may be found in the literature, it is still considered a cohesive notion because its categories are closely interconnected. For example, the fact that a participant wishes to do something (dynamic modality) and is allowed to do so (deontic modality) makes the state of affairs likely (epistemic modality). In the world’s languages, it is quite common for the same markers to be used to denote several modal categories. In (17, 18, 19), the English modal auxiliary *can* is used in its negative form to encode dynamic, deontic, and epistemic modality respectively.

(17) “I **can't** remember the name of the place,” says my father. (American English, 2015; COCA, SERIES section, *Blue bloods*)

- (18) Well, you **can't** smoke in these buildings. (American English, 2016; COCA; The Seattle Times)
- (19) I've seen loads of rings like this, so they **can't** be worth much. (British English, 1990; BNC; Pamela Scobie, *A twist of fate*, Oxford University Press)

Several dimensions of modality are disputed, notably its inclusion, link or overlap with other domains, such as realis/irrealis, directive, polarity, sentence type, and evidentiality. Most of these issues have been dealt with in Nuyts (2016), and I can only address them briefly here. First, the use of a modal marker typically entails that the state of affairs is not actualized, which makes the definition of modality quite close to that of 'irrealis' (Palmer 2001: 1-3). However, 'realis' and 'irrealis' have been used as mood labels in a number of languages despite substantial differences. These disparate uses of realis and irrealis have made these terms quite ambiguous. They have been avoided by the contributors of this special issue. Secondly, there is a significant overlap between the notions of deontic modality and directive. The latter refers to a statement that aims to induce the hearer's action so that the state of affairs may be actualized (Bybee & Fleischman 1995: 6 *inter alia*). A deontic modal expression is usually required in any directive statement, but the difference is that 'directive' is an illocutionary notion, rather than a strictly semantic one. Thirdly, polarity is not usually included in modality, but it is difficult to deny that, strictly speaking, marking a proposition as positive or negative may be seen as the speaker's assessment of the truth of the proposition, which is the domain of epistemic modality. The same is true for sentence type, since an interrogative clause is in essence non-assertive, and other types of sentences usually modify the speaker's attitude to the proposition. It is thus relevant to consider polarity and sentence type to be frequent tools expressing modality. However, the contributors have hardly addressed these issues as they are not central to our main questions. Finally, some scholars have argued that evidentiality is part of modality. The contributions of this special issue all acknowledge the links between these two domains, but consider it necessary to distinguish them (see § 2.3).

2.3. How are evidentiality and modality linked?

Early linguistic analyses have conflated evidentiality and modality, but it is now largely accepted that they are two distinct notions. The semantic subcategories of the two domains that might be the most difficult to tease apart are inferential evidentiality and epistemic modality. Several scholars have dealt with this issue (De Haan 2001; Cornillie 2009; Squartini 2016; Nuyts 2017; Wiemer 2018 *inter alia*), and I will now further illustrate why a rigorous analysis should be clear whether a morpheme encodes inferential evidentiality, epistemic modality, or both. Let us consider these three possibilities in Lhasa Tibetan. The perfect suffix *-bzhang* is an example of a morpheme that denotes inferential evidentiality, but not epistemic modality. The morphemes that contain *a yin/yod* (copula, existential verbs or verbal suffixes) encode epistemic modality, but not inferential evidentiality. Finally, the morphemes that contain *pa 'dra* (copula, existential verbs or verbal suffixes) express both inferential evidentiality and epistemic modality.

Firstly, example (20a) (repeated from ex. 2, § 2.1) contains the perfect inferential suffix *-bzhang*. This suffix is inferential because it entails that the speaker did not witness the state of affairs, but inferred its existence by observing its resultant state. Although *-bzhang* is

inferential, there is no explicit assessment of probability, and the sentence is as assertive as any basic sentence with another non-epistemic suffix, such as the factual perfect *-yod red* (20b), or the direct perception perfective *-song* (20c).

(20a) *ri mo bris-bzhag*
drawing draw-INFR.PFCT

(20b) *-yod red*
-FACT.PFCT

(20c) *-song*
-DPERC.PFIVE.PAST

'Someone (has) made a drawing.' (Lhasa Tibetan; TSC, 2011)

[20a: the speaker has figured out the state of affairs from seeing the result]

[20b: the speaker simply knows it as a fact]

[20c: the speaker has seen the state of affairs]

Secondly, example (21) contains the epistemic copula *a yin*. It was uttered in a context where the speaker was trying to guess what an unclear picture represented, and was sceptical about his partner's answer.

(21) *mig a yin*
eye COP.EPI_{LOW}

'I don't think it's an eye.' (Lhasa Tibetan; TSC, 2010)

The copula *a yin* indicates that the speaker estimates the probability of the proposition to be true as particularly low. The context is inferential, but it would be wrong to conclude that *a yin* (as well as the other forms in *a yin/yod*) is itself an inferential morpheme, since it is perfectly compatible with non-inferential contexts. While assessments of likelihood often appear in inferential contexts, they are not limited to them, as it is possible to express uncertainty about a situation which has been experienced directly but is not remembered in detail. It is also possible to express uncertainty about facts we know from a secondary source (e.g. the date of a historical event). In all these cases, the forms in *a yin/yod* are felicitous in Lhasa Tibetan, which shows that the source of information does not determine their use, but the speaker's uncertainty does. The forms in *a yin/yod* are therefore epistemic, and not evidential. In (22), the speaker speaks about his memories of primary school where he and his friend did not study much. He uses the suffix *-kyi a yod*, which encodes low probability but does not entail an inferential access to the proposition, since the speaker is recounting a situation that he has lived and is now accessing through his uncertain memory.

(22) *nyi ma gcig=la yi ge gcig shes-kyi a yod*
day one=DAT letter one know- EPI_{LOW}.IMPFV

'I don't think we learned even a letter a day.' (Lhasa Tibetan; TSC, 2011)

Finally, in (23), the speaker is trying to identify sounds that are being played. His guess is that he is hearing the wind blowing, but as he is not completely sure, he uses the epistemic suffix *-gi yod pa 'dra*.

(23) *lhags pa brgyab-gi yod pa 'dra*

wind LV-SENS.INFR.EPI_{MED}.IMPFV

'It sounds like the wind blowing.' (Lhasa Tibetan; TSC, 2011)

This context is suitable for the use of an epistemic morpheme containing *pa 'dra*, because the speaker's inference is based on a sensory cue (i.e. the sound of the wind). The same suffix would have been infelicitous in a context of vague memory (e.g. if the speaker was trying to remember someone's age), or of logical inference (e.g. if the speaker was trying to figure out what someone may like simply by knowing their age/gender/nationality). The Tibetan morphemes containing *pa 'dra* are therefore both epistemic and sensory inferential (see also Vokurková 2008: 239-249)

Examples (20, 21, 22, 23) show that it is necessary to consider evidentiality and epistemic modality distinct semantic domains. Some forms may encode both notions (e.g. *pa 'dra*, as in ex. 23), but some clearly express only one of the two (*-bzhaḡ* is only evidential as in ex. 19a, and *a yod/yin* is only epistemic, as in ex. 21, 22). This does not mean, however, that evidentiality and modality are not connected. The three main evidential categories indeed are statistically correlated with a type of attitude towards the truth of the statement (Mélac 2014: 56-59). A direct perception marker is typically associated with a full assertion, while inferential markers often imply a certain degree of uncertainty, and hearsay markers tend to entail a lack of commitment from the speaker. These correlations seem logical when considering the following situations. Specifying that one has witnessed an event typically means that one is sure of its reality. Saying that one has not witnessed an event, but only inferred it through indirect cues, may easily imply that one is not completely certain that it happened. Finally, reporting what one has been told usually transfers the responsibility of the truth to the person who first shared the information, and does not specify whether one believes the situation to be real. These logical correlations are observable when considering many evidential markers in the world's languages, but do not entail that one type of information source equates one type of epistemic evaluation. As we saw, inferential markers associated with a full assertion exist, such as *-bzhaḡ* in Lhasa Tibetan. Grammaticalized direct perception markers that also encode uncertainty may seem unlikely, but do exist, as it is possible to be unsure about what one has witnessed. For example, non-visual evidentials in Tariana express what the speaker directly perceives through other senses than sight. However, they also have another meaning of encoding what the speaker cannot see well, and is thus uncertain of (Aikhenvald, *this issue*). Finally, certain hearsay evidentials may specify, or at least frequently imply, to what extent the speaker believes the proposition to be true (an issue that is addressed by Mortelmans, *this issue*).

3. The grammaticalization of evidentiality and modality

3.1. What is grammaticalization?

Grammaticalization refers to the development of grammatical forms from lexical items, as well as to the further progression of these forms towards the grammatical end of the lexicon-grammar continuum (Kuryłowicz 1975 [1965]). This definition is relatively consensual, but is sometimes criticized for being circular. In order to know what grammaticalization is, one first has to know what distinguishes lexical forms from grammatical forms, which is a rather controversial topic. Considering evidentiality and modality to be predominantly grammatical

notions implies that they should be encoded by grammatical forms. However, linguistic forms may be placed at various positions on a continuum, so most markers are in the grey zone between the two extremes (fully lexical forms vs. fully grammatical forms). Scholars seem to agree that the most grammatical elements that a language may possess are inflections. However, limiting our study of modality or evidentiality to inflections would not be wise since it would leave behind many languages, notably isolating ones, and numerous forms, such as the English modal auxiliaries.

Lexical items develop into inflections gradually through processes that are associated with grammaticalization. Scholars have described a variety of such processes, and one of the most comprehensive accounts is probably derived from Lehman's (1995 [1982]: 16), who presents six parameters of grammaticality: i. Integrity, ii. Paradigmaticity, iii. Paradigmatic variability, iv. Structural scope, v. Bondedness, and vi. Syntagmatic variability. Because the parameter of integrity is divided in three distinct dimensions (phonology, semantics, and morpho-syntax), eight processes represent the diachronic equivalents of these parameters: i. Phonological attrition, ii. Desemanticization, iii. Decategorialization, iv. Paradigmatization, v. Obligatorification, vi. Condensation, vii. Coalescence, and viii. Fixation. In order to illustrate each of these processes, I will briefly consider the development of the direct perception verbal suffix *-song* in Lhasa Tibetan (see ex. 1, §2.1):

- i. **Phonological attrition** refers to the partial loss or simplification of a form's pronunciation. The suffix *-song* – pronounced [sõŋ], and sometimes even [s] – comes from the periphrastic construction *ste song* [stesõŋ].
- ii. **Desemanticization** corresponds to a loss of concrete semantic features, thus allowing a form to be used in a greater variety of contexts. From a lexical verb of physical motion, *song* ('go' in Old Tibetan) has developed into a direct perception evidential compatible with all types of dynamic states of affairs.
- iii. **Decategorialization** stands for the loss of morpho-syntactic properties typical of the members of a lexical class. *Song* used to be a lexical verb, so it could be directly preceded by a subject and followed by verbal inflections or conjunctions. As an inflectional suffix, it has now lost these lexical properties.
- iv. **Paradigmatization** refers to the inclusion of the form in a closed set of items. When *song* was a lexical verb, it belonged to a syntactic category that contained a potentially unlimited number of members, while inflectional *-song* is now part of the closed class of verbal suffixes.
- v. **Obligatorification** stands for the gradual impossibility to delete a form in a specific syntagmatic context. In an independent or matrix clause, deleting the suffix of a Lhasa Tibetan verb is now ungrammatical. This applies to *-song*, whose deletion would make example (1) incorrect: **nya cig=gis 'gul skyod brgyab*.
- vi. **Condensation** is the contraction of a form's syntactic scope. When *song* was a verb, it could have scope over large phrases, but Lhasa Tibetan *-song* is now an inflection whose syntactic scope is limited to its host verb.
- vii. **Coalescence** refers to the tightening of a form's bond with its host. The morpheme *song* underwent this process as it used to appear in the coordinated sequence *V=ste song* and is now a suffix attached to the verb: *V-song*.
- viii. **Fixation** corresponds to the loss of movability of a form within a sentence. The lexical verb *song* could indeed be placed more freely in the sentence than the direct perception suffix *-song*, which must follow its host.

Some of these processes have been questioned, notably 'condensation', since many forms actually see their syntactic scopes expand, rather than contract, as they move along the lexicon-grammar continuum (Tabor & Traugott 1998). Several other aspects of the theory of grammaticalization are also still debated. For example, some authors (notably Newmeyer 2000) argue that grammaticalization is just an epiphenomenon, because each of the processes presented above may happen independently. Proponents of construction grammar also tend to be sceptical of the special status of grammaticalization, and have shown how the scenarios of language change are extremely diverse. Scholars such as Traugott & Trousdale (2013) and Gildea & Barðdal (2022) argue that grammaticalization theory should be subsumed in Diachronic Construction Grammar. Grammaticalizing forms do not always go through all the processes presented above, and large typological works, such as Bisang et al. (2020), have shown that it is quite common for forms to undergo only a few of these processes. Some critical approaches of grammaticalization theory have also appropriately questioned the relationship between the processes generally associated with this framework, and have offered precise analytical tools to account for various types of language change. However, the contributions of this special issue have adopted the general grammaticalization framework for several reasons. First, although cases of partial degrammaticalization are attested (Norde 2009 *inter alia*), the unidirectionality of the changes undergone by a form moving towards the grammatical end of the lexicon-grammar continuum has been overwhelmingly confirmed crosslinguistically. Processes that are involved in the creation and evolution of lexical words can easily go backwards, while a form that has become grammatical can hardly move again in the opposite direction. Changes towards a grammatical status thus deserve some special treatment. Secondly, approaches such as Diachronic Construction Grammar tend to minimize grammaticalization as a special type of language change, which usually implies that the distinction between lexicon and grammar is rather inconsequential. In reality, the core of grammaticalization studies is also to acknowledge the whole spectrum of forms that go from the most lexical to the most grammatical, but the special characteristics of grammatical forms should not be downplayed. When adopting a broad typological perspective, one cannot help but notice that a limited number of notions can be encoded by inflections or items that are typically considered grammatical, such as auxiliaries. The identification of such classes of morphemes may partly change from one language to another and the boundaries are inevitably fuzzy, but no approach seems to be denying the existence of word classes completely. Among the different parts of speech, the number of forms that prototypically meet the criteria of grammar is much more limited than those meeting the lexical criteria (see also Croft 2005; Haspelmath 2012; Hengeveld 2013), which also makes grammatical forms special. Finally, some scholars argue that grammaticalization has no predictive power. The evolution of a given form may indeed not be predictable, but grammaticalization studies have clearly established frequent and highly unlikely scenarios. A robust phenomenon that grammaticalization theory has revealed is that all languages transform lexical forms into other forms that gravitate around other lexical forms (or are bound to them) in order to encode a limited number of notions. If I am presented a language I do not know, I can predict with almost absolute certainty that this language will possess elements that surround or are fused with verbs (or verb-like forms). These elements will typically express notions such as time, aspect, modality, and/or evidentiality. I can also predict that most of these forms ultimately come from the lexicon, and that all the surviving languages will continue to develop such forms. The predictive power of grammaticalization may not be very strong when determining

the future of individual forms, but is extremely high when looking at the big picture. Because the notion of grammar is central to the definition of evidentiality and, to a lesser extent, to that of modality, grammaticalization theory is a relevant framework for analysing the diachrony of modal and evidential markers. The contributions to this special issue have adopted this framework with a critical eye, and only very few minor aspects of grammaticalization theory have been challenged by the new data presented on the various focal languages.

3.2. What do we know of the grammaticalization of modals and evidentials?

Even though most works dealing with modality focus on its grammatical expression, there have been several descriptions of the various linguistic tools that may encode this semantic domain. Nuyts (2001a) has notably offered one of the first in-depth analyses of the parameters motivating the use of a grammatical or a lexical form to express epistemic modality. The situation is different for evidentiality, because its dominant definition excludes lexical forms. However, several linguists have investigated the lexical expression of information sources, and some have also analysed the differences between encoding this domain with lexical or grammatical tools (Squartini 2018; Wiemer & Marín-Arrese 2022; Mélaç 2023; Aikhenvald, *this issue*).

Many studies have been dedicated to the grammaticalization of modality, since it is a very old notion in general linguistics, and is central to the most investigated languages, that is, the Indo-European languages (Bybee et al. 1994; Ziegeler 2011, 2016 *inter alia*). Evidentiality, however, is a more recent notion that primarily concerns languages that are under-investigated, which explains why fewer works have addressed its grammaticalization (see notably Lazard 2001; Aikhenvald 2011; Friedman 2018). The *World Lexicon of Grammaticalization* (Kuteva et al. 2019) contains several sections dedicated to the grammaticalization pathways leading to evidentiality or modality.⁷ The following pathways of the grammaticalization of evidential markers are documented in various languages (Kuteva et al. 2019: 60-61, 318-319, 381-382, 384-386, 390):

- a. Direct perception evidentiality from a verb meaning 'go' or 'see';
- b. Inferential evidentiality from a perfect construction;
- c. Hearsay evidentiality from a verb meaning 'say'.

As for modality, these are the pathways presented in Kuteva et al. (2019: 63, 92-93, 126, 150, 185-187, 190-191, 197-198, 200, 209-210, 219-220, 277, 249-250, 254-255, 288-291, 309-310, 343-346, 412-416, 422-423, 454-455):

- a. Dynamic modality from a verb meaning 'arrive', 'get', 'know', 'love', 'take', or from epistemic modality.
- b. Deontic modality from a copula, a verb meaning 'be', 'come', 'do', 'get', 'give', 'go', 'leave', 'need', 'owe', 'stop', 'want', an adjective meaning 'good', 'suitable', or from dynamic modality.
- c. Epistemic modality from deontic modality or the future.

⁷ Note that the first edition of the *World Lexicon of Grammaticalization* (Heine & Kuteva 2002) contained many sections on modality but very few on evidentiality. The new edition (Kuteva et al. 2019) offers more space on evidentiality than the previous one, showing the recent advances in this research field.

These pathways have been documented in a variety of languages, but as research progresses, several other pathways are being revealed. First, many markers that have been labelled ‘epistemic modal’ in the world’s languages are actually both epistemic and inferential, such as the English auxiliary *must*, or the Italian *futuro*. When they express uncertainty, they also express an inferential access to the proposition, and not any type of access (such as an uncertain memory of a witnessed situation). Deontic modality and the future are therefore a source for the grammaticalization of epistemic modality as well as inferential evidentiality. Modality is also a source of grammaticalization for hearsay evidentiality, as shown by the evidential uses of the French *conditionnel*, German auxiliary *soll*, and Dutch auxiliary *zou* (Mortelmans, *this issue*). The extensive diachronic data on the Tibetic languages have also revealed that direct perception and inferential evidentiality may grammaticalize from a verb meaning ‘to sit’ or ‘to appear’ (Mélac & Bialek, *this issue*).

One should also remember that there are substantial areal patterns of grammaticalization due to linguistic contact (Heine & Kuteva 2005). The subjunctive mood – which tends to appear in modal contexts of volition, obligation, or uncertainty – is quite typical of Indo-European languages. Many languages in the Balkan area (Turkish, Bulgarian, and Albanian, among others) possess small evidential systems with comparable indirect evidentials (also encoding nuances of the speaker’s attitude) (Friedman 2003 *inter alia*). Conversely, most languages of the Vaupés River Basin display very large systems with many similar evidential categories (Aikhenvald 2018c). Some evidential distinctions are also typical of Tibetic languages, as well as non-Tibetic languages in contact with them. The forms encoding these evidential categories have grammaticalized through similar pathways (Mélac & Bialek, *this issue*; Dolma & Suzuki, *this issue*).

Our knowledge of the grammaticalization of modality and evidentiality is expanding, but many aspects of this topic are still unknown. Few of the world’s languages have a substantial written history, and not all reconstructed data are reliable. The present issue has confirmed that the pathway between a grammaticalization source and the resultant grammaticalized form may be quite convoluted.

4. The contributions of this volume: New insights

The present issue contributes to our current understanding of the links between evidentiality, modality, and grammaticalization with new theoretical and empirical data.

Alexandra Y. Aikhenvald adopts a broad typological approach and investigates the interaction between the different notions related to the linguistic expression of knowledge. She argues that not only should evidentiality and epistemic modality be distinguished, but one should also consider two other notions – egophoricity and mirativity – to cover the whole spectrum of knowledge-related grammar. She offers a definition of each notion, and clarifies what they may have in common and what makes them distinct. She explores how a morpheme specialized in the encoding of one of these notions may acquire overtones of the others. It is indeed quite common for grammaticalized evidentials to keep evolving by developing semantic extensions that typically belong to epistemic modality, egophoricity, or mirativity. The author shows that a comprehensive description of the grammaticalization pathways of evidential or modal markers needs to take into account those under-investigated extensions into neighbouring domains. There are diverse factors that may impact the semantics of grammatical forms. Aikhenvald provides genuine examples in Tariana (collected over the past

decades) that illustrate how changes in the environments create new contexts of use for evidentials. Modern communication technology – radio, television, telephone (with the fast-developing use of text messages), and the internet – has radically changed the ecology of relatively small, endangered languages. This has often led to the semantic reinterpretation of evidential markers, which may blur the borders between evidential categories and neighbouring domains.

Kasper Boye investigates the differences between the lexical and grammatical expression of information sources, and between discourse primary and discourse secondary indications of information source. He analyses the conditions that seem necessary for evidentials to grammaticalize, and offers several tests to diagnose grammaticalization. In keeping with the theory developed in Boye & Harder (2012), discourse secondariness is argued to be the most essential dimension distinguishing grammar from the lexicon. Grammatical markers of information sources are thus conventionally secondary, that is, they cannot be in the foreground of discourse. The author further argues that four conditions are necessary for a given meaning to grammaticalize as an evidential: it must have propositional scope, must belong to the semantic domain of information source, must be frequent enough to be conventionalized, and must be discourse secondary. The first condition is linked to Anderson's (1986) definition of an evidential as a marker which should have scope over a whole proposition (see also Boye 2010). The second condition draws upon Boye's (2023) suggestion that grammaticalization should be defined narrowly in terms of conventionalization of discourse secondariness, and thus independently of the conceptual-semantic changes that accompany grammaticalization. This means that grammaticalization of evidential meaning starts with a (discourse secondary) evidential meaning and consists in the conventionalization of this meaning. The third condition highlights the role of frequency in grammaticalization. As the previous literature has shown, the high frequency of both the source and the target of grammaticalization are prerequisites for this type of language change. Boye argues that the grammaticalizing form's frequency does not have to be especially high, but at least sufficiently high for conventionalization to occur. The last condition of 'discourse secondariness' refers to the fact that the essence of evidentials, and of grammatical meaning in general, is to be ancillary to syntagmatically related meaning. This subordinate relation must already exist before any item can grammaticalize. The process of grammaticalization thus occurs by repeating the same form to express the same type of secondary meaning, making the form conventionally secondary, and not just potentially secondary. The author proposes three tests to diagnose this last condition necessary for the emergence of grammaticalized evidentials: focusability (i.e. evidentials cannot be hosted by a focus construction), addressability (i.e. evidentials cannot be referred to in an independent statement), and modifiability (i.e. evidentials cannot be modified by any other element, contrary to lexical expressions of information source). By applying these tests to forms encoding information sources in various languages, Boye proposes innovative tools to help us capture the emergence of evidentials.

Jan Nuyts investigates the link between subjectivity and the grammaticalization of modality or evidentiality. The connection between grammaticalization and subjectivity has attracted a lot of attention since the beginning of grammaticalization theory, and the parallel development of both notions in the evolution of a linguistic form is sometimes taken for granted (Traugott 1995, 2010 *inter alia*). As a form grammaticalizes, its semantics typically becomes more subjective, in the sense that it increasingly adopts the perspective of the speaker. For example, the imperative mood is a highly grammaticalized modal form which expresses that the sentence corresponds to the speaker's instructions, while a lexical verb like

'demand' is compatible with a third-person subject. An evidential inflection also encodes the information source of the speaker, while a lexical verb such as 'see' or 'infer' may refer to the information source of any participant to the state of affairs. With extensive diachronic data on Dutch modals, Nuyts offers telling examples questioning the unidirectionality of grammaticalization, and invalidating that highly subjectivized meanings correlate with highly grammaticalized forms. The history of Dutch modals shows that they entered a process of partial degrammaticalization as they developed meanings that are more subjective, namely deontic modality, epistemic modality, and inferential evidentiality. The explanation proposed by the author is that these subjective notions do not have scope over the participants of the state of affairs but encode a link between the speaker and the whole proposition. Because highly grammaticalized forms, such as auxiliaries or inflections, are deeply embedded in the syntax of the clause, they are iconically not the ideal hosts for such speaker-related, meta-propositional notions. The history of Dutch modals reveals the complexity of the link between grammaticalization and subjective meanings. They seem to go hand in hand to a certain extent, but also in opposite directions when examining the diachronic data more closely.

Eric Mélac and **Joanna Bialek**'s paper synthesizes the data that are available on the grammaticalization of evidentiality, and presents an in-depth analysis of the development of evidentials in Lhasa Tibetan. The Tibetic languages offer a rare opportunity to investigate the complete grammaticalization of evidentiality, as they possess multi-term evidential paradigms (encoding direct perception, inference, and hearsay for most of them), and a vast diachronic corpus starting from the 8th century. The historical data in Tibetan show that the grammaticalization of evidentiality is quite different from that of other common notions, such as modality. Evidential meanings tend to emerge through pragmatic strengthening in linguistic forms that are already grammatical. Evidential clitics and inflections are thus prototypical instances of secondary grammaticalization. The authors therefore argue that evidentiality is more often a 'grammaticalization passenger' (i.e. a secondary meaning that accompanies a grammaticalizing form) than a 'grammaticalization target' (i.e. a functional domain that pulls forms towards a fully grammatical status). Reconstructed and diachronic data from a large sample of languages also seem to confirm these patterns. They indicate that fully grammaticalized evidentials usually need another dominant notion that has attracted a form towards the grammatical end of the lexicon-grammar continuum. The fact that evidentiality tends to be an incidental passenger of a grammaticalizing forms and not a grammaticalization target may explain why the notion is less often fully grammaticalized in the world's languages than other dominant notions, such as time or modality.

Tanja Mortelmans addresses the distinctive semantic profiles of hearsay evidentials. In contrast to other evidentials, hearsay evidentials are generally compatible with distancing interpretations, allowing the speaker to deny the truth of the proposition under their scope. This possibility specific to hearsay evidentials has been called 'reportative exceptionality' (AnderBois 2014). The author compares the frequency of such distancing interpretations for the grammaticalized evidentials of three languages: the German auxiliary *soll*_{IND}, the Dutch auxiliary *zou* + *INF*, and the French *conditionnel*. Statistics from a contrastive trilingual corpus reveal that the French *conditionnel* is the most frequently associated with distancing interpretations. It could have been hypothesized that there is a link between the full grammaticalization of a hearsay evidential and its affinity with denial contexts, since the French *conditionnel* is expressed with inflections while German *soll*_{IND} and Dutch *zou* + *INF* are just auxiliaries. However, the correlation between 'reportative exceptionality' and the degree of grammaticalization of a marker is unclear, given that the behaviour of Dutch *zou* + *INF* is

closer to that of the French *conditionnel* than German *soll*_{IND}, even though *zou* + INF and *soll*_{IND} are both auxiliaries. Mortelmans shows that the environment of uses of these forms is crucial to understand their frequent implicatures involving the speaker's attitudes to the truth of the statement. The French *conditionnel* is preferred in contexts where another perspective than the speaker's is highly salient, such as in subordinate clauses or in the vicinity of direct quotations. It is also argued that the general association of the French *conditionnel* and Dutch *zou* + INF with the expression of irrealis – unlike German reportative *soll*_{IND}, which only occurs in the present tense – contributes to their frequent associations with distancing interpretations. This paper thus reveals that hearsay markers differ greatly in the epistemic evaluation they tend to imply, and that these overtones cannot be predicted from their degree of grammaticalization. For the three markers under study, it is rather their origins and their semantic make-up that motivate the frequency of distancing contexts.

Dawa Drolma and **Hiroyuki Suzuki** argue that our taxonomy of evidential markers should be adapted to the language family under consideration. By focusing on two Khams Tibetan varieties (rGyalthang and Lhagang), they show that the evidential paradigms of Tibetic languages are made up of six categories: egophoric, statemental, visual sensory, nonvisual sensory, sensory inferential, and logical inferential. Although they may have different names, the four last categories are usually included in typological presentations of evidentiality. However, the first two categories – egophoric and statemental – are generally absent. The authors show that this six-term paradigm is an essential template that allows us to describe any Tibetic language, even if certain languages make fewer distinctions. A descriptive approach that starts from this template is shown to be more relevant than one that seeks to establish a different paradigm for each verb type (copular, existential, and lexical verbs). Drolma and Suzuki argue that a family-agnostic approach leads to the neglect of evidential categories that are essential to understand Tibetic evidentiality, and does not acknowledge the diversity of evidential systems. As evidentiality is considered a grammatical notion, a description of the grammatical paradigms of the language under study should be the first step of an accurate description of its evidential system. Starting from the verbal paradigm and not from any preconceived taxonomy may unveil semantic categories that do not fit in the traditional evidential framework. Because such a paradigm-driven approach seems to better account for evidentiality in the Tibetic languages, it could be generalized to benefit the documentation of other language families.

5. Discussion

This special issue cannot have solved all the puzzles of these vast fields of studies, but we believe each of the six papers has provided new insights on the links between evidentiality, modality, and grammaticalization. First, the contributors have provided quite consistent definitions that clarify the differences between evidentiality and modality, and show that a consensus is being reached on what each area should cover. The pathways of grammaticalization of modal markers are now well-known, but this issue has expanded our knowledge of the processes leading to the development of evidentials. Many cross-linguistic examples show that fully grammaticalized evidentials tend not to develop from lexical material already expressing information sources, but rather from partially, or already fully, grammaticalized forms that first encoded other notions, notably spatial deixis, tense-aspect, or modality. The differences between evidential categories, as well as their links with epistemic modality (or the speaker's assertion vs distancing) have been further explored.

Direct perception markers tend to express certainty, but some may be associated with other types of epistemic evaluation in specific contexts. Many inferential markers also encode uncertainty, but it is necessary to disentangle these two meanings, since inferentials marking certainty are not rare in highly grammaticalized evidential systems. Hearsay markers usually do not specify what the speaker thinks to be true, but they frequently imply or sometimes entail some distance or proximity between the speaker's beliefs and what is being reported. The encoding of the speaker's commitment seems independent of the advancement of the marker on the lexicon-grammar continuum.

This collective work has also investigated what may motivate the grammaticalization of evidentiality and modality. The new qualitative and quantitative data provided have refined, and sometimes challenged, current ideas that prevail in these fields. Highly subjective meanings – deontic modality, epistemic modality, and inferential evidentiality – have been shown to trigger partial degrammaticalization in Dutch modals, and this should be further investigated cross-linguistically. The development of evidentials in the Tibetic languages points to a distinction between a 'grammaticalization passenger' and a 'grammaticalization target', partly explaining why evidentiality is less frequently grammaticalized in the world's languages than other notions. The developments of evidentials in many language families confirm that evidentiality tends to infiltrate forms that have targeted other notions. This may lead to a re-investigation of other notions that have been presented as 'grammaticalization targets', thus exploring the reasons why some notions are cross-linguistically more often grammaticalized than others. Fine-grained analyses of the motivations behind the grammaticalization of evidentiality have also been provided. All the causal factors may not be elucidated, but these analyses confirm that the grammatical status of evidentials allow them to be relatively unnoticeable and unaddressable. Acquiring tools to refer to information sources without drawing attention to them is thus an essential function of the grammaticalization of evidentiality.

This special issue has addressed many questions on evidentiality, modality, and grammaticalization, and has also revealed some of the work that remains to be done in order to shed light on all the theoretical aspects of these notions. Our understanding of evidential and modal categories has improved, but using these categories and their names consistently in all language families remains a major challenge. The notion of egophoricity is still quite controversial, as it is usually considered an evidential category by Tibetanists, while it is also used cross-linguistically to cover a different semantic area. Scholars disagree on the extent of each modal category, and the distinction between inferential evidentiality and epistemic modality remains confused in the description of markers in many other publications. The overall function of grammaticalization is still partially obscure, and our investigations have revealed a great diversity of scenarios, thus making general explanations an arduous task. Modality, evidentiality, and grammaticalization are very dynamic fields of study, so future work will probably provide more empirical evidence on their links. Since many languages are still under-investigated, we hope that the phenomena highlighted by the contributions to this special issue will help researchers to reveal similar or contradictory facts in a wide variety of languages.

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Abbreviations

=	Clitic boundary
-	Affix boundary
.	Multiple metalanguage elements
1, 2, 3	First, second, third person
2	Secondary inflection ('past' in traditional Tibetan grammar)
ASSUM	Assumptive
CLAPI	Corpus de langue parlée en interaction (http://clapi.icar.cnrs.fr)
CNTR	Contrast
COCA	Corpus of contemporary American English (Davies 2008-)
COP	Copula
DAT	Dative
DEF	Definite
DEM	Demonstrative
DPERC	Direct Perception
EPI _{MED}	Epistemic (medium probability)
EPI _{LOW}	Epistemic (low probability)
ERG	Ergative
EXIST	Existential verb
F	Feminine
FACT	Factual
GEN	Genitive
GER	Gerund
HSAY	Hearsay
IMP	Imperative
IND	Indicative
INDEF	Indefinite
INFR	Inferential
INFRD	Inferred
LV	Light verb
NOM	Nominative
NONVIS	Non-visual
NPST	Non-past
PAST	Past

PFCT	Perfect
PFIVE	Perfective
PSNT	Present
QUOT	Quotative
REC	Recent
REF	Reflexive pronoun
REL	Relative pronoun
REP	Reported
SENS	Sensory
SG	Singular
TSC	Tibet Student Corpus (collected by Eric Mélac in Lhasa, 2010-2011)
VIS	Visual

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