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Defining evidentiality

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Abstract: This paper explores how evidentiality is defined in recent research. It was inspired by the recent publication of *The Oxford Handbook of Evidentiality* and several other volumes, which provide a rich body of new material. The definition (or rather demarcation) of evidentiality encompasses both morphosyntactic and semantic parameters. I will address criteria for the distinction of dedicated grammatical evidentials, and survey the values distinguished in evidentiality's semantic domain. In addition, I discuss deictic views of evidentiality, which seem a fruitful approach to the study of evidentials in context.

Keywords: survey, deixis, evidentiality

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Introduction

Research on evidentiality, or the linguistic encoding of information source, has grown exponentially in recent years. Grammatical forms referring to a type of information source are mentioned as early as the 4th century BCE, in Pāṇini's grammar of Sanskrit [Friedman 2018: 125], and they surface in descriptions of a variety of languages throughout history. The idea of a distinct grammatical category with this function, however, is relatively new.[1] Evidentiality became an established concept in linguistics only during the past two to three decades, which have been especially prolific in terms of qualitative descriptions and new theoretical and empirical approaches. A quick search of the keyword "evidentiality" on Google Scholar learns that in the period between 2000 and 2009 a total of 4 330 publications appeared, and another 11 300 between 2010 and 2019 (in contrast: only 941 publications are retrieved for the period

[1] A concise chronological overview of the history of evidentiality in linguistic research is provided in [Aikhenvald 2004: 11–17].

1990–1999).[2] Nonetheless, some issues regarding the definition and delimitation of evidentiality as a linguistic concept persist. In the present paper I explore how evidentiality is defined in contemporary studies. This concerns the morphosyntactic phenomena associated with the category, as well as the specific values composing its semantic domain (e.g. sensory perception, inference, hearsay). Additionally, evidentials can be defined in terms of their relationship to a discursive context.

The paper was inspired by the recent publication of *The Oxford Handbook of Evidentiality* [Aikhenvald (ed.) 2018] along with two other new volumes: *Epistemic Modalities and Evidentiality in Cross-Linguistic Perspective*, edited by Zlatka Guentchéva, and *Evidence for Evidentiality*, edited by Ad Foolen, Helen de Hoop and Gijs Mulder. The *Oxford Handbook* is intended as a reference work that provides an up-to-date state of the art in the study of evidentiality. The papers in [Foolen et al. (eds.) 2018] are proceedings of a workshop held in Nijmegen (the Netherlands) in 2014, and the volume edited by Guentchéva [2018] is a successor to *L'énonciation médiatisée* [Guentchéva (ed.) 1996], and *L'énonciation médiatisée II* [Guentchéva, Landabaru (eds.) 2007]. All three volumes focus on empirical evidence and provide a wealth of new material. *The Oxford Handbook* consists of 21 chapters dealing with evidentiality in specific languages or groups of languages. The remaining 15 chapters provide overviews of more general topics, such as the interaction of evidentiality with other categories, evidentiality in experimental research and in formal semantic theories, cultural pragmatics, and evidentials in language contact. The volumes edited by Guentchéva and Foolen et al. contain, among other things, corpus-based studies of particular languages, and theoretical considerations. As Aikhenvald is the main proponent of a strictly grammatical interpretation of the term "evidentiality", *The Oxford Hanbook* focuses on grammatical evidentials. The other two volumes adhere to a more inclusive, functional approach, which views evidentiality as a universal semantics that can be realised with various means. Functional approaches overall are more common, in particular among researchers of European languages, which lack evidentiality as a grammatical category. Thus, the introductory paper to a thematic issue of the Journal of Pragmatics was paradoxically entitled: *Evidentiality in non-evidential languages: Are there evidentials in Spanish?* [Albelda Marco 2015]. At the same time, evidentiality gained recognition as a distinct grammatical category. It has become a common addition to the TAM triad, cf. *The grammaticalization of tense, aspect, modality and evidentiality* [Hengeveld et al. 2017], and

[2] The search query was made on 06.04.2019. It should be kept in mind that Google Scholar's search engine does not offer a 100 % coverage of existing literature. In addition, the term "evidentiality" also occurs in other disciplines, such as philosophy. As a matter of fact, of the handful of results from the period before 1960, none are on linguistics. I assume that the exponential growth of studies on evidentiality from the 2000s onwards is due to the surge in popularity of evidentiality in linguistics, but I did not make a detailed study of these search results.

Tense, aspect, modality and evidentiality: Cross-linguistic perspectives [Ayoun et al. (eds.) 2018].

Regardless of the opposing preliminaries, most scholars would agree that the study of both grammatical and non-grammatical (including lexical and semi-grammatical) expressions contributes to our understanding of evidentiality, although dedicated grammatical forms should be distinguished from lexical expressions and contextual interpretations. After Section 1, which presents an overview of the terminology used in the present paper, Section 2 evaluates some criteria for distinguishing different types of marking. In Section 3 I investigate the specific values associated with evidentiality, and whether empirical data warrant some revisions in the semantic domain. Evidentials in general can be construed as deictic. Section 4 explains how to do this and which advantages it has for language-specific and comparative analyses. Section 5 explores experimental evidence for the cognitive mechanisms involved in identifying information source, and how they relate to linguistic structure. Evidentials are highly context-sensitive items. Some interesting perspectives on how discursive context influences their use are the topic of Section 6, in which I also address some methodological implications. Section 7 summarises the main conclusions of the preceding sections.

1.Preliminaries and terminology

For clarity, I adopt the convention of capitalizing language-specific categories while writing comparative concepts with lower case letters. Below I specify the concepts I will use throughout this paper. Equivalents used by other authors are indicated between brackets. Since most studies treat "evidentiality" as a universal semantics, I use this term to refer to the linguistic encoding of information source in a BROAD sense. The noun "evidential" is reserved for grammatical expressions only, following the lead of Anderson [1986: 274]. Information sources are divided into types, which are rendered as adjectives here. Together with "information" they characterize a type of information source, e.g. "visual information" is information obtained through visual perception. In combination with "evidential" they refer to a grammatical morpheme with a specific function; a "visual evidential" is a grammatical morpheme dedicated to marking information obtained through visual perception.

Evidentiality — a semantic-functional category for the encoding of information source
Evidential (adjective) — expressing information source, e.g. "evidential strategy"
Evidential (noun) — grammatical form used to mark information source
Direct — personally witnessed (firsthand)

Indirect	— not personally witnessed (non-firsthand)[3]
Visual	— seen
Auditory	— heard sound (not speech)
Non-visual sensory	— any type of sensory perception besides visual
Participatory	— active participation
Revelative	— witnessed in a dream
Inferential	— inference based on a visual result or traces (deduction)
Presumptive	— inference based on some prior knowledge and/or chain of reasoning (assumed, conjecture)
Reportative	— hearsay from an unidentified source
Second-hand	— reportative evidence from a source who witnessed the event
Third-hand	— reportative evidence from a source who did not witness the event
Reported speech	— umbrella term for various ways of reproducing the speech of others
General knowledge	— knowledge that is part of a community's beliefs, and to which source qualification does not apply, e.g. "the world is round"
Quotative	— indicates the boundaries of a quotation
Folklore evidential	— dedicated marker of reported speech for which the use is restricted to traditional tales

2.Isolating grammatical evidentials

As mentioned in the introduction to this paper, evidentiality can be viewed as a grammatical category or a universal semantics. The latter is especially popular among researchers of European languages that lack the grammatical category. Aikhenvald is a well-known opponent of treating evidentiality as a semantic-functional category, in part because functional approaches tend to extend the term to cover any type of expression related to knowledge. Aikhenvald characterised the tendency to analyse phenomena from familiar European languages in terms of some "exotic" category like evidentiality as a fad.

> "This is similar to how, a few years back, when ergativity was in 'vogue', languages which have ambitransitive verbs of type S=O (e.g. English *I broke the glass* and *The glass broke*) were analyzed as 'ergative' <...>" [Aikhenvald 2003: 19]

[3] In my view, indirect is not an equivalent of Indirective, Mediative or Non-confirmative, contra Aikhenvald (cf. the glossary provided in [Aikhenvald (ed.) 2018: 40–43]). See Section 2 of this paper for more detail.

Many languages, however, feature forms that are in the process of grammaticalisation. Some of them are interpreted as grammatical evidentials in the typology of Aikhenvald (such as the auxiliary 'find' from the East Caucasian language Bagvalal [2004: 155], though compare the treatment of this construction in [Daniel, Maisak 2018]. Aikhenvald dismisses other forms, such as German modal verbs, as "evidential strategies": forms that indicate information source in context, but have one or more other meanings. German *sollen* 'should, must' can have reportative meaning as in example (1), but remains a modal verb in other contexts.

(1) GERMAN [Vanderbiesen 2018: 174]

Die Schienenfreunde ***sollen*** *<...> Champagner für 250 Euro die Flasche bevorzugt haben.* (FNP/12–09/4)

'The railway colleagues **are said** to have preferred champagne of €250 the bottle.'

Separating grammatical information source marking from other ways of expressing the same meaning presupposes a definition of what is grammatical and what is evidential. Aikhenvald [2004: 38] proposes that, to qualify as a grammatical evidential, a form should have information source marking as its "main meaning". By this criterion, grammatical evidentials can be separated from evidential strategies. Isolating the main meaning of a form is left to the subjective interpretation of researchers of specific languages, which might lead to contradictory evaluations, as I will discuss below. Aikhenvald additionally defines "grammatical" in contrast to lexical as dealing with "closed systems, which can be realized by bound morphemes, clitics and words which belong to full grammatical classes, such as prepositions, preverbs or particles" [Ibid.: 11]. A closed system in Aikhenvald's framework may consist of an evidential on one hand, and an unmarked term on the other, where unmarked terms represent varying degrees of neutrality in different languages [Aikhenvald 2018: 15–16]. Kronning [2018] argues that Reportive Conditionals (RC) in Romance languages are grammatical expressions of evidentiality. His argument is based on the RC's morphemic status as flectional suffixes, and their systematic opposition to a neutral paradigm of indicative forms [Ibid.: 73–74]. This would characterise them as evidentials according to Aikhenvald's criteria. In addition, Kronning rejects the idea that the evidential function is a mere "contextual interpretation" of the conditional, suggesting that they also satisfy the "main meaning" criterion. However, the analysis does not address how the evidential function of RC's relates to their conditional function in terms of the contexts where one or the other is used.

Cornillie et al. [2015] advocate a broader approach based on Boye & Harder's [2012] usage-based theory of grammatical status. According to this theory, lexical items contribute

discursively primary information, while grammatical items have an ancillary function. Thus the meaning of a grammatical item cannot constitute the main communicative point of an utterance. Similarly, Anderson [1986: 274] proposed that evidentials in particular "are not themselves the main predication of the clause, but are rather a specification added to a factual claim about something else". From this point of view, matrix or parenthetical clauses with verbs of speech or perception are not evidentials, but certain types of adverbs are [Cornillie et al. 2015: 3]. This approach allows for more consistent judgments regarding forms in evolution and elements of ambiguous morphosyntactic status, although it does not solve the semantic puzzle.

Clearly delimited notional definitions of evidential semantics are necessary to avoid interpreting as "evidential" any construction associated with the knowledge of the speaker that shows some signs of grammaticalisation on a morphosyntactic level. A case in point is de Hoop et al. [2018], who set out to prove that the first person matrix clause *ik denk* 'I think' in Dutch is an incipient grammatical evidential denoting inference. Inferentiality is defined as referring to situations when "the speaker can infer from certain contextual clues <...> or when they assume for one reason or another <…>" [de Hoop et al. 2018: 78]. As a matter of fact, the construction refers to a certain view of reality held by the speaker, in line with the lexical meaning of *denken* 'think'. Inference is a contextual interpretation projected on the examples by the authors. This becomes especially clear in the case of the supposed "past inferentials" [Ibid.: 89–91].

(2) *ik dacht dat jullie er rond 1 uur wel zouden zijn*
I thought that you.PL there round 1 hour PRTC would be
'I thought you would have arrived by one.'

In this example, the speaker held a view that some people would have arrived around one, but this turns out to be untrue. Their initial view could be based on inference from prior knowledge and reasoning (i.e. presumptive, a specific type of inference). Perhaps they agreed to meet around one and the guests in question are usually punctual, hence, the speaker infers that the guests will have arrived by one. Another possible scenario is that someone called the speaker to inform them of their guests' estimated time of arrival, in which case the source is reportative. The point is that the construction simply does not specify where the speakers' view came from, which is rather far removed from any notional definition of evidentiality based on information source, that is, how the speaker acquired the information.

Other types of clauses with complement-taking verbs do convey an evidential meaning, such as *ik zie dat* 'I see that', which can be interpreted in context as 'I infer based on some visual evidence' [de Hoop et al. 2018: 77–78]. The inferential reading of this construction arises as a

conversational implicature, which is a common mechanism for the development of evidential functions. Another well-known example of this process is the path from resultative or perfect to inference (see [Bybee et al. 1994: 51–105]). Increasing conventionalisation of the evidential reading can result in a dedicated grammatical expression, although it is not quite clear how to evaluate forms situated in different stages of the intermediate process.

In addition, evidentiality rarely comes alone. A form with an evidential meaning may also express epistemic modality (i.e. speaker's certainty and commitment regarding the truth value of information [Boye 2012: 1–6]) and/or mirativity (indicating that the information is somehow new or unexpected, or "not yet integrated into [the speaker's] overall picture of the world" [DeLancey 1997: 36]. These meanings can be contextual variants, or they may arise simultaneously. What remains unclear, is how to identify the "main meaning" among them, in order to determine to which category the marker in question belongs and consequently, whether it is an evidential or not. This results in contradictory accounts for general indirect forms in particular.

General indirect forms tend to be semantically diffuse. First, because they combine inferential and hearsay readings. The exact reading in a given situation should thus be retrieved from the context. Consider the following example from Komi-Zyryan.

(3) KOMI-ZYRYAN [Leinonen 2000: 427]

Asylnad kor kytšoltim, lys-vatö völi kysköma.
morning.in when run.1PST.1PL dew-ACC COP shake.2PST.3SG
*Sijö **völöma** oš. Seni i kujlö völöm*
it COP.2PST.3SG bear there PRTC lie.PRES.3SG COP.2PST.3SG
potšos doras tsökyd inas.
fence by dense place.in
'In the morning, as we were running around, the dew had dried. It turned out that it **was** a bear. There it had been lying by the fence in the thicket.'

In this case, the Second Past form *völöma* 'was' indicates inference: the speaker inferred the information ('it was a bear') based on animal tracks they had seen. In another context, the same form could indicate that the relevant piece of information was based on hearsay.

Second, indirect forms can be used to indicate a more abstract kind of distance between an event and a speaker, which can have a mirative or epistemic modal flavour, as is the case with verb tenses with a non-attributivised auxiliary, or NAFs (which are paradigmatically opposed to those with an attributivised auxiliary) in the East Caucasian language Tsakhur.

> "The distribution of NAFs definitely correlates with that of genuine markers of non-attested evidence and mirativity. At the same time, assuming that the meaning of NAFs is restricted to "inferred evidence", "reported evidence", and "unexpected information" does not allow one to account for the whole range of their uses. Our claim is that NAFs have a more general function, namely, that of showing the speaker's distancing, or detachment from the event referred to." [Maisak, Tatevosov 2007: 391]

Researchers of areally contiguous languages make similar observations. Indirect past tenses are an areal feature of a large belt that stretches across the Eurasian continent. This area forms one of the main evidential areas in the world [Plungian 2010: 19–23]. Evidentiality in this part of the world is special because specialists of individual languages prefer not to call it evidentiality at all. Lazard [1999] proposed the term "mediative" for this type of markers in Turkish, Persian and Tajik, and in the study of Turkic languages, "indirective" is commonly used for the same purpose (see [Johanson 2018] inter alia). According to Friedman, the main function of indirect pasts in several languages of the Balkans and the Caucasus is to mark "non-confirmativity", i.e. the speaker does not vouch for the truth of the information [Friedman 2000]. As Friedman demonstrates, unvouched for information often (but not necessarily) coincides with information acquired indirectly. Generally speaking, the evidential interpretation of Eurasian indirect forms tends to dissipate in light of detailed semantic analyses of their usage, as in Golosov & Kozlov's [2018] analysis of past tenses in Hill Mari. Still, some authors prefer to view non-evidential meanings of indirect forms as "extensions" or "overtones": meanings that arise in addition to a central evidential meaning, see e.g. [Brosig, Skribnik 2018] on Mongolic or [Skribnik, Kehayov 2018] on Uralic languages.

Amidst these contrasting points of view, it remains unclear how the status of competing and co-occurring meanings can be established and compared. Nevertheless, many researchers assume that indirect forms are uncontroversial examples of grammatical evidentiality. A famous case is Turkish, which features in the bulk of research on the acquisition and cognitive effects of grammatical evidentiality (see overviews in [Ünal, Papafragou 2018] and [Fitneva 2018]). Compare this to Johanson's recent characterization of Turkic indirect forms below.

> "Indirectivity markers do not fit into evidential schemes distinguishing between 'the speaker's non-firsthand and firsthand information'. Their primary task is not to express the external origin of the addresser's knowledge." [Johanson 2018: 512]

If Johanson's claim is true, Turkic languages lack grammatical evidentiality according to Aikhenvald's "main meaning" criterion. Note also that many languages feature portmanteau morphemes with multiple meanings of equal status, such as evidentiality and tense (see [Forker 2018]), or evidentiality and spatial deixis (e.g. [Jacques 2018]). Such combinations are possible because the semantic domain of evidentiality is adjacent to or even overlaps with those of other categories. Plungian [2010: 46] situates presumptives (inference based on prior knowledge and/or reasoning) at the intersection of evidentiality and epistemic modality, because they inherently contain an assessment of what is likely to be the case. As a result, it is not quite clear what can qualify them as evidentials in a given case. Paradigmaticity cannot resolve these kinds of problems, since evidentials are often "scattered" across the grammar of a language (cf. [Aikhenvald 2003: 8–11] on scattered coding), and they may share a paradigm with exponents of other categories, such as mood suffixes (see [Usenkova 2015] on Samoyedic) or egophoric markers (see [Tournadre, LaPolla 2014] on Tibetic).

3.Composition of the semantic domain

This section focuses on the specific meanings subsumed under the concept of evidentiality. Existing accounts depart from a notion of evidentiality as a grammatical category marking information source. Consequently, the semantic domain is constructed based on the presence of grammatical expressions. Each meaning associated with information source that is marked with a distinct grammatical morpheme in some language becomes part of the domain. Similar meanings are grouped under generalised labels. The table below compares three different accounts. Bold indicates significant differences. Non-bold terms occupying the same row in the table refer to the same value, regardless of the variation in terminology.

Table

Evidentiality's semantic domain

<table>
<tr><th></th><th>[Willett 1988]</th><th colspan="2">[Aikhenvald 2004]</th><th>[Plungian 2010]</th></tr>
<tr><td rowspan="5">Direct</td><td rowspan="2">Direct / Attested</td><td colspan="2" rowspan="2">Firsthand</td><td>Direct / Personal</td></tr>
<tr><td>Participatory
<common knowledge></td></tr>
<tr><td>Visual</td><td colspan="2">Visual</td><td>Visual</td></tr>
<tr><td>Auditory</td><td colspan="2">Sensory</td><td rowspan="2">Sensory</td></tr>
<tr><td>Other sensory</td><td>Non-visual sensory</td><td>Auditory</td></tr>
<tr><td>Indirect</td><td>Indirect / Inferring</td><td colspan="2">Non-firsthand / Inferred</td><td>Indirect / Personal</td></tr>
</table>

	Results	Inference	Inferential
	Reasoning	Assumed	Presumptive <common knowledge>
	Indirect / Reported	Non-firsthand / Reported	Indirect / **Non-personal**
	Second-hand	**Quotative**	Reported (with subtypes)
	Third-hand	**Reported**	
	Folklore	**—**	

All three authors maintain a division of direct vs. indirect source types. This is licensed by the presence of general direct and indirect forms in certain languages. Direct information typically covers any type of sensory evidence. Visual perception can be distinct from the other senses. Willett's taxonomy implicates the possibility of a language that marks both visual and auditory perception separately from the other senses. To my knowledge this is attested only in the Pomoan language Kashaya [Oswalt 1986]. Other languages single out auditory perception as opposed to unmarked terms (e.g. Yuchi, an isolate of Oklahoma [Linn 2000]). The Auditives (auditory evidentials) attested in Samoyedic languages also cover other types of non-visual sensory perception, as well as internal sensations, according to Usenkova [2015: 183]. There is no evidence for dedicated evidentials marking olfactory, gustatory or tactile perception [Aikhenvald 2018: 13]. Southern Nambikwara has an Internal Support Evidential for information derived from a speaker's "gut feeling", according to Lowe [1999], but this requires verification (cf. [Eberhard 2018: 336–341]).

Jakobson referred to direct information as "memory evidence" [1984: 46]. In case of past events, "memory evidence" is perhaps psychologically more accurate than "direct visual evidence". Humans are not recording devices, and our memory has a distorting effect on sensory input (see also Section 5 of this paper). We remember some events vividly and in great detail, while of other events, we might wonder whether and how they took place, even when we know at some level that we witnessed them. Interestingly, the evidential system in Taku Tibetan encodes the quality of observation. The Immediate Evidential marks instantaneous observations, whereas the Direct Evidential is appropriate after prolonged observation, according to Sun "leading to assured knowledge of the event" [Sun 2018: 51–54].

Plungian adds participatory evidence to the direct subdomain. Participatory evidentials mark situations in which the speaker actively participated (as opposed to merely having witnessed an event). They are attested in Pomo and New Guinean languages [Plungian 2010: 34]. Tibeto-Burman languages feature egophoric markers, which are defined similarly as marking information the speaker has unique access to, such as their own internal states and volition [Sun 2018: 49]. In case the speaker was not the one who slapped the other person in

example (4) below, a Direct (Sensory) evidential would be used instead of the Egophoric *lə* which is employed here.

(4) TAKU TIBETAN [Sun 2018: 49]

ŋi:	te:	^{n}dʒã:^{h}tʃaʔ=tsə	dʒoʔ-**lə**
1SG:ERG	3SG.DAT	slap=INDEF	do:PERV-EGO

'I gave him a slap in the face.'

The use of Egophoric markers can be extended to mark events where not the speaker but someone close to them participated [Sun 2018: 55–56]. In situations over which the speaker has no control, a Direct (Sensory) Evidential is used instead of the Egophoric marker [DeLancey 2018: 591–592]. Egophoricity does not necessarily form part of an evidential system, and can be considered a category in its own right (see [Floyd et al. 2018]). DeLancey [2018: 584] characterises the Tibetic egophoric system as follows: "Rather than an evidential category, Egophoric is a category to which evidentiality is not applicable." In other words, Egophoric markers refer to a specific type of personal knowledge that exempts the speaker from specifying information source with an evidential. An argument in favour of such an interpretation is the possible extension of participatory marking to situations where someone close to the actual speaker participated, suggesting it is a more general marker of personal evidence. Nonetheless, cases where it marks the speaker's participation are consistent with a definition of evidentials as referring to a participant's information source, such as their own volitional action and internal state in contrast with visual perception.

General indirect markers cover inference and hearsay. Inferred information constitutes a fairly uncontroversial subdomain. Inference from visible results or consequences (inferential) is distinct from inference based on prior knowledge and reasoning (presumptive), although a single form may cover both meanings. The appropriate context for their use may vary across languages. Recall example (3) from Komi-Zyryan, where a speaker inferred that "it was a bear" based on bear tracks they saw. Bear tracks are not a direct result of the action denoted by the verb - they are an obvious consequence identified by the speaker. The use of an inferential in such a case requires that the speaker knows what bear tracks look like. As discussed in [Tatevosov 2003], one person's obvious consequence might be another person's wild guess, depending on their prior knowledge. Cross-linguistically, inferentials pattern with hearsay (and thus indirect) most frequently,[4] but they can also combine with sensory evidence (see [Brugman, Macauly 2015: 206] on Karuk). Inference based on results occupies an intermediate position between direct and

[4] This means that a single marker expresses both meanings.

indirect, since it implies that the speaker or "origo" witnessed at least part of the event they are talking about.

Information from other people's verbal reports can be second-hand or third-hand, according to Willett's classification. Second-hand information is based on a report from an eye-witness, while third-hand is based on a report of a report. Eberhard describes a Reported Thirdhand suffix (*-sĩn-*) in addition to a distinct Reported Secondhand (*-satau-*) suffix for Mamaindê [Eberhard 2018: 349–350]. The presence of two distinct morphemes for each of these meanings seems to be cross-linguistically rare. A folklore marker is attested only in the now extinct Athabaskan language Tonkawa. Hoijer described a Quotative Suffix *-lakno'o*, which was obligatory in reported narratives and existed alongside a general Quotative Suffix *-no'o* [Hoijer 1933: 105–106]. The fact that all of these functions are attested with distinct markers at least in one language licenses their inclusion in the domain, although they should probably be subsumed under Aikhenvald's reportative and quotative categories as more specific subtypes.

Quotatives render a quotation ascribed to a discrete source, while reportatives indicate that a statement is based on hearsay, without specifying a source [Aikhenvald 2004: 64]. Examples (5) and (6) from Botlikh illustrate a Reportative and a Quotative Particle, respectively.

(5) BOTLIKH (personal fieldwork 2018)
zini *hiƛ'a* *b-uk:-u=**χʷata***
cow down N-fall-AOR=REP
'A cow fell down, **it is said**.'

(6) BOTLIKH [Saidova, Abusov 2012]
in.š:u-č'u *arsi* *guč'i=**talu*** *hiƛ'u*
REFL.M-AD money NEG.COP=QUOT say.AOR
'[He] said that he has no money.'

The Reportative Particle *χʷata* in (5) indicates that the proposition 'a cow fell down' is based on hearsay. The Quotative Particle *talu* in example (6) marks the boundary of a quotation — 'I have no money' — attributed to a certain male person.[5] The main distinctive feature of quotatives is their identification of a discrete source, but this criterion is not met by all quotatives. The Botlikh Quotative can reproduce an utterance from the perspective of the addressee and omit any reference to a source, as in (7).

[5] The reflexive pronoun has a logophoric function in this case.

(7) BOTLIKH [Saidova, Abusov 2012]

ilu-χi *masas:i=talu* *hiƛ'u* *di-qi*

mother-APUD tell:PROH=QUOT say.AOR 1SG-APUD

'"Don't tell your mother", I was told.'

Even in a situation where a quotative does introduce a source, it renders a construction that is different from other evidentials in terms of its communicative function. Evidentials determine a type of information source and as such, refer to how a speaker acquired certain information. Quotatives on the other hand mark a quotation, which can be a repetition of one's own words, a verbalisation of thoughts, or even an imagined utterance (see also [Holvoet 2018] on "echoic" use of quotative constructions). They refer to a type of information source only by extension. Boye [2010] dismisses the idea that quotatives are evidentials based on their scope properties in comparison to reportatives and other evidentials.

General knowledge is not recognised as a distinct value in any of the approaches summarised in Table 1, though Plungian adds "common knowledge" as a secondary meaning to both participatory evidence and presumptive.[6] Mamaindê features a General Knowledge Evidential, marking "information that is known to the whole community, either because it is habitual, or because it is part of their mythological lore" [Eberhard 2018: 350]. A dedicated marker is also attested in Lamjung Yolmo [Gawne 2014: 87]. Example (8) below shows the General Fact Copula in a generic statement that cannot be traced to a specific information source.

(8) LAMJUNG YOLMO [Gawne 2014]

kálaŋ sè *ŋàrmu* *mèòŋge*

lapsi sweet COP.GF.NEG

'lapsi (fruit) are not sweet'

DeLancey [2018: 587–589] analyzes Tibetic Factual markers as forms that indicate the absence of a specific source, rather than factual or general knowledge, which is supported by their use in neutral contexts. Stating general facts is thus not their main function, but simply the most common context for their use. General knowledge is often cast in a neutral or the least marked form available. This is the case in the East Caucasian language Hinuq. Hinuq has Unwitnessed Past tenses, which are opposed to Neutral Pasts with direct evidential overtones; the latter are employed for "encyclopaedic knowledge" [Forker 2014: 54]. Traditional narratives,

[6] Note that the marking of general knowledge should not be confused with the marking of inference based on general knowledge (i.e. presumptive).

including stories about the history of the village, are told using Unwitnessed forms. Another value not mentioned in the accounts presented in Table 1, is information from dreams (or "revelative"). Boas [1911: 496] described a special suffix for this purpose for Kwakiutl, although he does not provide much detail on how it is used.

To sum up, participatory evidentials in my view deserve a place in evidentiality's semantic domain. Quotatives on the other hand, do not, cf. also Anderson's [1986: 284] semantic maps of evidentiality, where quotatives are adjacent to, but not part of evidentiality's semantic domain. General knowledge is marked with a separate morpheme at least in Mamaindê, which licenses its recognition as a distinct value. The same applies to second-hand and third-hand reportatives, albeit as subtypes of reportative, and perhaps also to folklore, depending on whether the Tonkawa Quotative for narratives is a reportative or a quotative marker. Revelative is another possible distinction.

4.Evidentials as deictic

Evidentials can be construed as deictic because they specify an information source from the perspective of a speech event participant (usually the speaker). As such, they are determined by the context in which they are used, similar to e.g. tense marking or personal pronouns. In other words, evidentials are indexical, or "shifters" in the terminology of Jakobson [1984]. In deictic approaches, evidentials implicate three events: an original event, an event where a speaker acquired information about this event, and a speech event.[7] Evidential specifications determine the relationship between the original event and the speech event. They render a sort of "metaproposition" that scopes over a proposition and remains discursively backgrounded (see [Evans et al. 2018] on evidentials as metapropositional operators). Additionally, the various relationships embodied by specific evidentials can be ranked on a cline in terms of their proximity to a deictic centre, parallel to other deictic categories, e.g. proximal — medial — distal for spatial deixis, direct — inference — hearsay for evidentiality.

Several recent studies explore the idea of evidentials as deictic. Not all of them explicitly refer to evidentials as deictic, but they construe their function in a similar fashion as outlined above.[8] Murray, for example, defines evidentiality as a type of not-at-issue content from the point of view of formal semantics, and describes the relation contributed by evidentials as an evidence base, which links an evidence holder to a proposition [Murray 2017]. Relational theories within

[7] The reference point or origo for an evidential expression is typically the speaker. In questions, this can be the addressee (though this "interrogative flip" does not occur in all languages, cf. Murray [2017: 43–50]). Some languages allow for embedded evidentials.

[8] A more appropriate term might be simply indexical, see also [Boye 2018: 266] and [Hanks 2014] for discussion on the term "deictic" with respect to evidentials.

formal semantics introduce the notion of Evidence Acquisition Time as an intermediary between a speech event and a proposition, to account for parallels between tense-aspect and evidential relations (see a concise overview in [Speas 2018]). This is rather similar to how Jakobson decomposes statements marked for evidentiality into three distinct "event types": the narrated event, the narrated speech event (i.e. evidence base, or evidence acquisition time), and the speech event [Jakobson 1984].

Bergqvist [2018] defines evidentials as denoting a relation between an event and a "ground" in terms of the directness of access. Following Goffman [1981] and Kockelman's [2004] analysis of Q'eqchi' modal clitics, he associates each of Jakobson's event types with a specific "speaker role". Speaker roles divide the tasks performed by a speaker in a speech event into three distinct roles: the author composes an utterance, the animator utters it, and the "cognizer" has access to the information conveyed by the utterance.[9] Consequently, the author verbalises the original event, the animator is in charge of the speech event, and the cognizer is the reference point for the "source event" (i.e. Jakobson's narrated speech event). When speaker roles align, each role is performed by the same person. On the other hand, in case of a direct quote the animator is distinct from the author. According to Bergqvist, the degree of overlap between event types due to the alignment of speaker roles correlates with the evidentials' scope properties. For example, participatory evidentials (where a speaker's active participation in an event forms the source of their information), align all three roles, and have narrow scope. Reported speech marking creates more distance between event types, and tends to have wide scope. As a result, evidentials can be ordered along a cline as in Figure 1, adapted from Bergqvist [2018: 37].

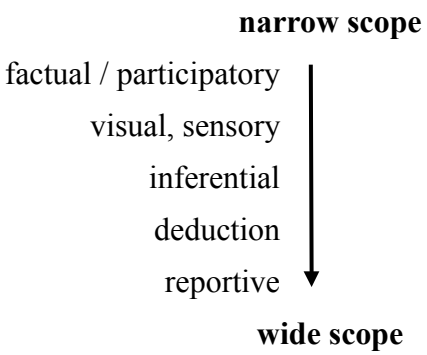

Figure1. Cline of evidential values [Bergqvist 2018: 37]

Kockelman's [2004] analysis showed the opposite result: for modal clitics, more overlap between event types results in wider scope. Although this is an interesting suggestion, Bergqvist

[9] Bergqvist's cognizer corresponds to the role of 'principal' in [Goffman 1981] and [Kockelman 2004].

does not examine the scope properties of various evidentials beyond a single example where a reportative scopes over a visual evidential in Oksapmin [Bergqvist 2018: 34–37].

From the perspective of functional discourse grammar, Hengeveld & Hattnher [2015] argue that reportatives operate on a different level of grammar, motivated by their "high" scope in comparison to other evidentials. According to Hengeveld & Hattnher, reportatives can scope over imperatives and hortatives, whereas other evidentials are limited to declarative and interrogative illocutions [Ibid.: 487]. They illustrate this with an example where the Hup Reportative Clitic *mah* scopes over an imperative. In her reference grammar of Hup, Epps comments on this example that the reportative is used here "as a type of quotative" [Epps 2008: 656], which seems like a more reasonable explanation. Note that it is not uncommon for a single marker to cover both reportative and quotative functions. In his discussion of evidentials' scope properties, Boye [2010] argues that the wider scope of reportatives in available examples is probably a pragmatically motivated phenomenon, rather than the result of syntactic restrictions:

> "Situations in which you have direct or inferential evidence for some reportive evidence are pragmatically implausible. […] By contrast, a situation in which someone wrote to or told you about some piece of direct or inferential evidence is perfectly conceivable." [Boye 2010: 303]

For the remaining evidential values besides reportative, Hengeveld & Hattnher [2015: 509] provide the following implicational hierarchy.

event perception (direct) ⊂ deduction (inferential) ⊂ inference (presumptive)

Figure2. Implicational hierarchy of evidentiality[10]

This hierarchy predicts that a language marking presumptive will also have markers for inferential and direct sensory perception. If a language marks only one of these three values, it is direct sensory perception. The study is based on a sample of 64 languages of Brazil, which are known for their elaborate systems of evidential marking. As a result, the implications predicted are not cross-linguistically valid. In other parts of the world (such as the "Evidential Belt" discussed in Section 2 of this paper), it is rather common to mark inferential (and reportative), but not direct sensory perception.

Langacker [2017] analyses evidentiality as a form of clausal grounding within the framework of Cognitive Grammar. He characterises evidentials as indicating increments of

[10] My notes between brackets.

distance from a deictic centre, and maps evidential values from specific languages onto the "cognitive substrates" presumably underlying them. Figure 3 shows the ordering of cognitive substrates and their surface realisations in Wanka Quechua.

internal – perception – inference – report	(Substrate)
direct – inference – report	(Wanka Quechua)

Figure 3. Cognitive substrate of evidentiality and surface realisation in Wanka Quechua [Langacker 2017: 30]

Most immediate is internal experience, which includes pain, emotion and proprioception [Ibid.: 20]. Based on data from English, Hopi, Tariana, Wanka Quechua, Eastern Pomo and Shipibo-Konibo, Langacker predicts that less immediate source types are more likely to be marked, which is diametrically opposed to the prediction of Hengeveld & Hattnher discussed above. Evidence from research on acquisition seems to support an ordering of evidentials from direct to indirect, with inference occupying the intermediate position between perception and report, since this is the order in which source distinctions and their corresponding evidentials are acquired (see Section 5). It should be pointed out, however, that currently available research is mostly limited to languages with relatively small evidential systems.

Langacker also infers that the relative distance of an information source to the deictic centre translates into the deictic centre's attitude towards certain knowledge: "Evidentials are nonetheless organized egocentrically with respect to source and reliability of information" [Langacker 2017: 30]. Givón [1982: 44] draws a similar conclusion from his four "scalar hierarchies of evidence", e.g. personal / deictic hierarchy: speaker > hearer > third party and sensory / source hierarchy: vision > hearing > other senses > feeling. This is not borne out in cross-linguistic data. Evidentiality and epistemic modality are two distinct conceptual categories [de Haan 1999]. They often interact in complicated ways, and it remains unclear how their relationship is best described (for example in terms of overlap or inclusion, as discussed in [Wiemer 2018: 87–90]), but they do not necessarily co-occur.

An advantage of deictic or deictic-like approaches is that they capture the communicative function of evidentials beyond their semantic content. The proposition of an intermediary reference point in the form of a source event or evidence acquisition time helps to distinguish evidentiality from other categories such as tense and epistemic modality, because they designate other types of relations. They also exclude quotatives by definition, since quotatives designate the proposition itself rather than an intermediary event between the proposition and the speech

event. On the other hand, it allows the inclusion of participatory evidence, because the speaker's participation can be viewed as a source event that runs parallel to a narrated event, similar to visual perception. General knowledge is a bit problematic in this regard. It can be described only as a non-specified source event. Obviously the speaker obtained this kind of information somehow, but they either cannot or will not attribute it to a particular type of source. A promising aspect of deictic approaches is that they take into account the speech event as a reference point that may influence the use of evidentials, although so far this component has not been explored in great detail within these frameworks (see Section 6 on the use of evidentials in interaction). Scalar hierarchies and their implications also require further investigation.

5.Evidentiality and cognition

The idea that certain languages oblige speakers to specify how they know something speaks to the imagination.

> "Franz Boas [1942: 182] suggests that 'we could read our newspapers with much greater satisfaction if our language would compel them to say whether their reports are based on self-experience, inference or hearsay!'. And in Palmer's [1996: 200] words, 'what a lot of breath and ink this might save us in English if we had evidential suffixes that we could use in the courtroom.'" [Aikhenvald 2018: 1]

However, as pointed out by Fitneva [2018: 186], evidentials are not necessarily used "veradically". Speakers can employ evidentials to support a lie (see e.g. [König 2013] on !Xun). Their information may come from mixed sources, for example when a speaker witnessed an event and heard about it from another eyewitness' perspective, in which case they simply select the source they wish to convey. Speakers can also misremember how they know something. The use of evidentials in language relies on humans' cognitive ability to "monitor sources": to identify the source for a piece of information [Johnson 1988]. As pointed out by Ünal & Papafragou [2018: 175]: "people do not tag their memories with source information", hence they can make mistakes when retrieving how they know something. Test subjects can claim, for example, that they saw pictures of an event when actually they read a vivid description of it [Intraub, Hoffman 1992]. Research on source monitoring among speakers of English and Turkish did not reveal a cognitive advantage for speakers of an evidential language (i.e. Turkish) in this regard (see the discussion of various experiments in [Ünal, Papafragou 2018]), although it

remains to be ascertained whether this also applies to speakers of languages with more complex evidential systems.

Children seem to develop the ability to ascribe a source to a piece of information prior to their acquisition of evidentials [Ibid.]. Visual access is understood first, and consequently, direct evidentiality is acquired first. Interestingly, the acquisition of indirect evidential meanings follows a parallel trajectory in Turkish and Quechua [Fitneva 2018: 191]. Turkish features a general indirect form, which covers inference and hearsay, while Quechua has distinct morphemes for both meanings. Turkish children learn to use the indirect marker as an inferential first, and later extend its use to include hearsay. In Quechua, children start using the inferential clitic earlier than the hearsay clitic. This path is also mirrored in the grammaticalisation path of general indirect markers from resultative or perfect forms of the verb [Bybee et al. 1994: 105]. After the form obtains an inferential reading, it can expand its usage to hearsay contexts and generalises towards a general indirect marker.

In children's speech, the use of indirect evidentials in storytelling precedes the use of these markers to indicate a hearsay source, specifically, which probably results from the role this discourse genre plays in child-directed speech (a detailed observational study on this topic is [Aksu-Koç 1988]). Estonian children by contrast rarely use the indirect marker *–vat.* According to [Tamm et al. 2018], this is due to its low frequency overall and in child-directed speech in particular. The Estonian indirect marker, which also conveys doubt on the part of the speaker, is grammaticalized but not obligatory.[11] This is different from the situation in a language like Turkish, where the unmarked alternative to the indirect form at least implies that the speaker had more direct access. Cross-linguistic comparison of how children acquire evidential expressions provides another dimension for the study of what distinguishes forms of varying grammatical status expressing the same meaning.

6.Evidentials in discourse

The relationship between evidentials and actual underlying information sources is not straightforward. The previous section addressed some complications in this regard on a subjective level, such as failure to recall the correct information source and compressing multiple sources into one. In the present section, I discuss how the intersubjective level influences the choice of forms. Evidentials used in interaction are influenced by the genre of discourse, and by the way in which speakers want to assert themselves based on what they imagine to be the expectations of the addressee. Joint knowledge markers encode the perspective of the addressee

[11] The suffix originates from a partitive participle suffix.

within the evidential paradigm. They do not represent a separate evidential value, but add a specification to a type of information source. Maaka, for example, has a Visual Evidential which refers to directly witnessed events. The Joint Visual Evidential refers to things visible to the speaker and the addressee [Storch 2018: 624–626]. See also [Evans et al. 2018: 150–158] for examples and discussion of evidentials that incorporate the addressee perspective.

Grzech [2016] describes how Discourse Enclitics in Tena Kichwa (which have been described as evidentials for other Quechuan varieties) are employed in the marking of epistemic authority and the negotiation of the common ground between discourse participants. The clitic *=mi*, for example, marks the speaker's "epistemic primacy" — they are certain that X is the case. (This is not necessarily because they have direct information.) The clitic *=tá* has the same function, but *=mi* is used specifically in cases where the speaker suspects that X is new information for the hearer, and they might not accept it. On the other hand, *=tá* is used with previously known or expected information [Ibid.: 413–414]. Though the Discourse Clitics of Tena Kichwa are not strictly evidentials in Grzech's analysis, she concludes that:

> "[…] the choice of whether and how to use an evidential/epistemic marker is rarely made solely on the grounds of the speaker's evidence for, or epistemic evaluation of, the proposition expressed. The speakers' concerns related to their positive and negative face, their position as an authority on the subject, and even their social standing, might also be relevant to 'evidential/epistemic practice'" [Grzech 2016: 414].

In a similar vein, Korean reportatives are employed to render information acquired directly by the speaker to avoid threatening the positive face of the addressee [Ahn, Yap 2015].

Another way in which the (projected) expectations of speech act participants other than the speaker come into play is through cultural pragmatics. Nuckolls [2018] provides a detailed discussion of how Evidential Enclitics in Pastaza Quichua are used in interaction. In Pastaza Quichua discourse, properly contextualising an utterance in terms of perspective is key, and imposing a personal perspective on another participant results in a highly marked construction. The clitic *mi*, which is a cognate of the Tena Kichwa clitic *mi* discussed above, is used to mark "a source of knowledge as based on the perspective of the speaker of a speech event or on the perspective of the speaker of a reported speech event" [Ibid.: 202]. In combination with the second person, the result is a face-threatening act, as in the example below. (Example (9) is embedded in a narrative, and reflects the perspective of the person whose speech is quoted.)

(9) PASTAZA QUICHUA [Nuckolls 2018: 209–210]

kan-manda-mi *kasna* *tuku-nchi* *ni-shka*

you-from-EVID1 like.this become-1PL say-PERV

'**Because of you** we have become like this, she said (accusing him).'

In traditional narratives, the use of evidentials is subject to conventionalisation. The narrative context in this case overrides the information source parameter. Conventions in turn can be manipulated. Traditional narratives in Tsez, for example, can be rendered entirely in the Unwitnessed Past. The narrator may also commence in the Unwitnessed Past and then switch to the Witnessed Past. According to Comrie & Polinsky [2007], the use of the Witnessed Past in an unwitnessed context "enlivens" the narrative, similar to the use of the Historical Present in English. In the Turkic language Salar, direct forms are used to "foreground" information in an otherwise indirect narrative [Dwyer 2000: 55–56]. Indirect forms in Turkish and Old Japanese are associated with fictional narratives, while historical accounts are rendered with their unmarked counterparts (which may have overtones of direct evidentiality) [Shinzato 1991: 32–33; 38–41], see also Friedman [2003] on the manipulation of similar forms in Macedonian and Albanian newspapers.

An interesting perspective comes from Howard's [2018] analysis of stories about the mythological creature Achkay in Huamalíes Quechua. Geographical surroundings form an important component of these narratives. Howard noticed that speakers who situate the events in known surroundings using local toponyms tend to use past tenses associated with personal experience, as opposed to the reported past used as default narrative tense by other speakers. The choice of evidentials in this case correlates with the spatial framing of the story, rather than the information source of the speaker in a strict sense.

Evidentials' dependency on context naturally has consequences for methodology and field work. Sentence-by-sentence elicitation with questionnaires, where speakers are given a context and a sentence to translate from a lingua franca, requires a high degree of concentration and immersion in the situation intended by the researcher. The speaker has to imagine a speech event where they tell someone about another event, about which they acquired information in a third, implicit event. The unnatural setting of such elicitation can prompt speakers to simply omit evidentials, and to render literal and dry translations that are far removed from their behaviour in spontaneous discourse (see [Aikhenvald 2004: 18]). Of course this is not necessarily the case. A speaker may very well be rather good at imagining the intended context and produce a natural utterance. Nonetheless, immersion (or lack thereof) on the side of the speaker as a variable in possible outcomes of an elicitation task is difficult to measure or verify. According to

Aikhenvald, elicitation should be used only to corroborate ideas about evidentials, whereas the basis of knowledge about evidentiality should always be natural language use in a diverse range of situations [Ibid.: 358]. Elicitation can be used as an auxiliary method to determine cases where evidentials cannot be used, and with which elements they cannot co-occur. Brosig [2018] complemented his analysis of ten hours of natural discourse in Khalkha Mongolian with consultations with native speakers, in which he asked them to interpret the examples, and judge whether another form could be used in the same context.

Corpora can be problematic in their own way. A corpus ideally contains copious amounts of material covering any discourse setting imaginable. For many languages with grammatical evidentiality, however, large and heterogenous corpora are not available, because the languages have no written tradition or writing system and are limited to small(er) communities. As a result, corpora consist of material recorded by field researchers, opening the possibility of an observer's paradox. As pointed out by Kittilä et al. [2018: 292–294], the mere presence of the researcher during the recording process may influence the use of evidentials. Aside from the fact that field corpora in the best case are still relatively small and sample a limited number of speakers, certain evidentials are rare even in large and diverse sets of data. Alternatively, the researcher can generate natural speech with experimental tasks, such as the Family Problems Picture Task by San Roque et al. [2012], in which speakers have to construct a story based on picture cards. Speakers work together in groups and discuss the contents of the cards and how they should be arranged. These cards are designed especially to elicit emotional reactions and stimulate the use of knowledge categories. Examples of evidential-like utterances elicited using this method are in Gipper's [2018] study of the Uncertain Perceptual / Inferential marker *shi* in Yurakaré. Silva & AnderBois [2016] used the game Mastermind to elicit evidentials in Desano, and Mushin [2001] asked speakers of Macedonian, Japanese and English to retell stories from a corpus of personal experience narratives. An advantage of such approaches is that they result in moderately controlled data with a relatively high density of evidential forms and markers of other knowledge categories.

7.Conclusion

In this paper I discussed how evidentiality is defined in contemporary linguistic research. In recent years evidentiality has become established as a distinct grammatical category. At the same time, a lot of research was done on non-grammatical evidentiality (including lexical as well as not quite grammaticalised expressions). A persistent issue in the study of evidentiality is not whether we should consider it a grammatical or a semantic-functional category, but rather how

we can make a meaningful, empirical distinction between grammatical evidentials and other means of referring to an information source. As I showed in Section 2, general indirect forms, which are characteristic of languages spoken in Eurasia, are assumed to be evidentials, while this interpretation is at odds with language-specific accounts. As an example, Turkic Indirectives in Johanson's [2018] analysis do not meet Aikhenvald's criterion for separating evidentials from evidential strategies, because information source marking is arguably not their main function. At the same time, Turkish features in a large number of studies as an uncontroversial example of a language with grammatical evidentiality. More straightforward empirical criteria for the distinction of various types of evidential and evidential-like expressions are a necessary precursory to comparative research on evidentiality, which is currently lacking.

In Section 3, I discussed the specific values attributed to evidentiality's semantic domain. Although egophoricity can occur as an independent category, participatory / egophoric evidence deserves a place in the domain. It represents a natural distinction within the direct subdomain. For reported speech markers, Aikhenvald proposes an important distinction of reportatives and quotatives. The latter differ in several aspects from other evidentials. Most importantly, their function is to mark a quotation (not an information source), which may or may not implicate an actual reported speech event. Among reportatives, second-hand may be distinct from third-hand. General knowledge is marked with a dedicated morpheme at least in one language, licensing its inclusion as a separate value in the domain. As a side note, linear visualisations as presented in Section 3 of this paper are perhaps not the best tool for charting semantic fields in typology, since they cannot convey the flexibility of certain values (e.g. inferential or general knowledge, which may pair with various other meanings depending on the language).

From a variety of theoretical frameworks, evidentials are construed as deictic or indexical elements designating a relation between a narrated event and a speech event from the perspective of a deictic centre. These approaches are fruitful because they can characterise the functions of evidentials in discourse besides their semantic content (see Section 4). This is important, because evidentials are highly context-sensitive, as discussed in Section 6. Several authors propose intuitively plausible clines where information sources are ranked by their proximity to the deictic centre (e.g. direct — inference — report). It remains to be ascertained to what extent their predictions for various evidentials' scope properties and their likelihood to be marked in a given language are supported by cross-linguistic data.

It also remains unclear to what extent accounts of how various information sources are "ordered" based on linguistic data map onto cognition. It is tempting to project all sorts of intuitions onto evidential data, for example about the speaker's attitude toward specific types of information source, their motivation to choose a certain form, as well as ideas of increased

source memory or responsibility for specifying source among speakers of evidential languages, but these presumptions can obscure actual language facts, and should be used with caution.

ABBREVIATIONS

1 — first person
2 — second person
2PST — second past
3 — third person
ACC — accusative
AD — ad-locative
AOR — aorist
APUD — apud-locative
COP — copula
DAT — dative
EGO — egophoric
ERG — ergative
EVID1 — evidential
GF — general fact
INDEF — indefinite
M — masculine gender
N — neuter gender
NEG — negative
PERV — perfective
PL — plural
PRES — present
PROH — prohibitive
PRTC — particle
PST — past
QUOT — quotative
REFL — reflexive
REP — reportative
SG — singular

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