UNIVERSITY OF HELSINKI

https://helda.helsinki.fi

A metalinguistic analysis of the terminology of evidential categories : experiential, conjecture or deduced?

Keinänen, Satu

2021-11
De Gruyter Mouton
http://hdl.handle.net/10138/352749
Keinänen, S 2021, 'A metalinguistic analysis of the terminology of evidential categories : experiential, conjecture or deduced?', Folia Linguistica, vol. 55, no. 2, pp. 547-587. https://doi.org/10.1515/flin-2021-2030

Downloaded from Helda, University of Helsinki institutional repository. https://helda.helsinki.fi
This is an electronic reprint of the original article.
This reprint may differ from the original in pagination and typographic detail.
Please cite the original version.

Satu Keinänen*

A metalinguistic analysis of the terminology of evidential categories: experiential, conjecture or deduced?

https://doi.org/10.1515/flin-2021-2030
Received August 5, 2020; accepted July 28, 2021; published online September 10, 2021

Abstract: While evidential categories have similar meanings and uses cross-linguistically, the names given to the categories tend to vary. This article surveys the terms for evidentials used in descriptive grammars of 51 languages that have at least three evidential categories. Comparing terms to find common terminological tendencies can provide useful insights into the descriptions of categories. There is great deal of term synonymy and term polysemy, but each evidential category has its typical terms that are semantically motivated. The term synonymy is the result of emphasizing different semantic aspects of the evidential categories, which leads to variable term choices. There is terminological overlap between categories involving sensory perception (i.e. visual, direct, and nonvisual sensory evidentials), inference, and second-hand information, which suggests that they may not always be considered sufficiently conceptually distinct to merit unique terms, especially when the terms for inferential and assumptive evidentials are frequently created from the same words. The variation of the terminology is also connected to how the understanding of evidentiality and relationship to other adjacent categories has developed.

Keywords: evidential categories; evidentiality; term polysemy; term synonymy; terms; typology

1 Introduction

In her article on evidentials in the Wintu language, Schlichter (1986: 52) comments on the term chosen for the evidential marker *-ʔel*: "I prefer 'expectational' because of the experiential function of *-nthEr*", another evidential marker. The expectational *-ʔel* indicates knowledge based on previous experience, whereas *-nthEr* indicates knowledge acquired by the senses (except vision). Still, Schlichter (1986: 47) does not call *-nthEr* 'experiential', because it does not include visual

***Corresponding author: Satu Keinänen**, University of Helsinki, Helsinki, Finland,
E-mail: satu.keinanen@helsinki.fi

experience. Earlier, Pitkin (1984: 134) used the term 'experiential' for *-ʔel* because it indicates deduction from experience. Pitkin and Schlichter agree on the meanings of *-ʔel* and *-nthEr* but disagree on what 'experience' means as an information source – sensory or general life experience – and, consequently, how 'experience' can be employed as a label for an evidential category.

Evidentials are markers of evidentiality, a functional domain whose meaning entails the expression of information source, i.e. how the speaker learned the information (see Aikhenvald 2004: 1–3, Willett 1988: 56). Other definitions include "source of evidence" (Brugman and Macaulay 2015: 204), "access to the information" (Plungian 2010: 17), "representation of source and access to information (Tournadre and LaPolla 2014: 241), and "modes of knowing" (Cornillie 2007: 112). Another approach is to regard evidentiality as a subcategory of epistemicity and define it as "epistemic justification" (Boye 2012: 2, 19–20). For more examples of definitions of evidentiality, see Boye (2018) and Jacobsen (1986). Furthermore, Aikhenvald (2004: 10–11, 2018: 4) differentiates grammatical evidentials from lexical means of expressing information source and evidential connotations of other categories, which are evidential strategies, not evidentials proper, but this distinction is not universally shared. In this study, some lexical expressions are considered, but otherwise the definitions of the source literature are followed.

Evidential markers have similar functions cross-linguistically – expression of information source, at the very least – and the information sources can be generalized with about six semantic parameters: visual, nonvisual sensory, inference, assumption, hearsay, and quotative, according to Aikhenvald (2004). Still, many different terms are employed in descriptive grammars to highlight different semantic aspects of the categories. Besides Pitkin's (1984) and Schlichter's (1986) terms, many others are used for similar evidential categories that indicate knowledge based on previous experience or reasoning: 'conjecture', 'deduced', and 'assumed', amongst others. The category of evidentiality itself has had numerous terms as well, like 'data-source' (Hardman 1986), 'orientation' (Kroeker 2001), and 'médiatif' in French (see Aikhenvald 2004: 11–17; Boye 2018; Tournadre 1994: 151), which are left out of this study to keep the focus on terms for different evidential categories, rather than evidentiality itself.

This article examines evidentials from a terminological perspective: how evidential categories are named in linguistic descriptions, and whether the terminological choices show common tendencies. The data for the study was collected from grammars of 51 languages that have at least three evidential categories (see Section 3). In Aikhenvald's (2004) survey, the sizes of the evidential systems range from two to five categories, although five-term (or even larger) systems are comparatively rare. This study aims to increase the awareness of terminological variation with respect to evidential categories, and to contribute to

the surveys by Jacobsen (1986), Willett (1988), Aikhenvald (2004), and Boye (2018). Understanding terminological choices is important, since terms themselves convey ideas, and differing terminological practices may blur the meanings of the terms. Different practices may also blur the similarities and dissimilarities of the categories, which hinders cross-linguistic identification and comparison. On the other hand, the terminological ideals of descriptive linguistics differ from those of linguistic typology, which is one reason for terminological variation.

The structure of the article is as follows. Section 2 introduces a number of typical evidential categories, and Section 3 presents the data and methods used for my investigation. Section 4 examines term synonymy, where several terms are used for similar categories. Section 5 discusses term polysemy, where the same terms are used for different evidential categories. Sometimes the chosen terms have other uses besides evidentiality, as 'factual' has in the context of modality, but this article will focus on how terms are employed with evidentials. Sections 6 and 7 present discussion of the findings and conclusions.

2 On evidential categories

Languages can express several possible information sources. Aikhenvald (2004: 63–64) lists six semantic parameters that recur in evidentials: visual, nonvisual sensory, inference, assumption, hearsay, and quotative. Aikhenvald (2018: 12) also considers the possibility of an additional parameter, common or general knowledge, which has been attested only in some languages. Plungian's (2010) approach makes two main distinctions i.e. between (in)direct and (non)personal access to the information. In Plungian's (2010: 29) definitions, direct access means direct perception or participation by the speaker, while indirect access covers other ways of acquiring information; personal access means that the speaker acquired information her/himself, while non-personal access means information received from other people. Inference, for instance, is indirect, since the speaker did not observe the situation itself, but something related to it, and personal, because the conclusions are her/his own (Plungian 2010: 29, 37). Plungian (2010: 37) lists a number of subtypes under each access type, as seen in his classification, adapted and somewhat simplified in Table 1. Under indirect/non-personal access Plungian (2010) lists only 'reported' without further distinctions; I will use 'second-hand' as a general term and reserve 'reportative' for second-hand information without reference to the original speaker (see below).

Next, I will elaborate the information sources as understood in this study. The concept of 'visual' evidentiality is quite straightforward: the information source is visual perception of the event. 'Nonvisual sensory' means that the speaker's knowledge is based on sensory information that is not attributed to vision

Table 1: Classification of evidentials by Plungian (2010).

	Personal	**Non-personal**
Direct	Participatory/endophoric Visual (with subtypes) Non-visual	–
Indirect	Inferential (based on observed results) Presumptive (based on plausible reasoning)	Reported (with subtypes)

(Aikhenvald 2004: 63). Some languages have a category of 'direct' evidentiality, which indicates knowledge based on any sensory perception: visual, auditory, or other sensory, all coded with the same marker. 'Indirect' evidentiality means that the knowledge is not based on sensory perception or any other direct source. Indirect category can cover inference or second-hand information, but mainly just indicates lack of direct evidence. On a general level, direct can be considered a supercategory for visual and nonvisual sensory, and indirect for different inferences and second-hand information.

As indirect information sources, two types of inference are usually distinguished: Plungian (2010) calls them inferential and presumptive, but here the latter is called assumptive, to bring it closer to Aikhenvald's (2004, 2018) terminology. 'Inferentials' involve sensory experience or evidence related to the event, while 'assumptive' evidentiality is based on general cognitive skills and logical understanding (see Willett 1988: 96). Inferentials and assumptive evidentials are differentiated in this study because a number of languages in the language sample had them as separate categories. There are two types of second-hand information, as well, following Aikhenvald (2004, 2018). Both indicate that the speaker's knowledge is based on someone else's report but differ in how the original speaker is treated. With 'reportative' evidentiality, the original speaker is not mentioned and may even be unknown: the verbal report is rather like general hearsay. 'Quotative', on the other hand, has "an overt reference" to the original speaker (Aikhenvald 2004: 64), and the source is an identifiable entity.

'General knowledge', mentioned by Aikhenvald (2018: 12), indicates that the speaker's knowledge is based on accepted facts or information commonly known in the speech community. According to Kittilä (2019: 1277), general knowledge is information that is part of the speaker's world view and does not require external evidence or specified source. Although general knowledge is based on previous experiences, it does not involve inference, like assumptive evidentiality.

Plungian's (2010: 37) classification includes a direct/personal subtype called 'participatory/endophoric', which indicates knowledge based on the speaker's

role as participant or experiencer. San Roque and Loughnane (2012: 114) distinguish a similar category of 'participatory' evidentiality, which means that the speaker performed the action. Here, such a category is called 'ego' evidentiality,[1] which refers to knowledge based on the speaker's own actions or participation (Garrett 2001; Tournadre and LaPolla 2014; see also Kittilä 2019: 1273). A closely related phenomenon is 'egophoricity', a linguistic coding of personal involvement, that differentiates between self and others, or speaker, addressee, and others. The egophoric forms indicate the involvement of the epistemic authority source, which is either the speaker in statements or the addressee in questions (see San Roque et al. 2018: 2–5, 48, 53–57). The intention here is to treat one's own involvement as an information source, and the forms considered as ego evidentials do not necessarily display person sensitivity as found in egophoric systems.

3 Data and method

The terms analysed in this study were gathered from linguistic descriptions of 51 languages. A list of the languages is included in Appendix. In general, only one publication was surveyed per language, but in some cases additional descriptions were reviewed. Genealogical and geographical distributions were not specifically controlled for since evidentiality is unevenly distributed cross-linguistically and the study focusses on the terms rather than the languages themselves. The distributions are not expected to have much influence on terminology, except perhaps through different research traditions. Still, efforts were made to select languages from different areas and language families within these limits. Evidential strategies in the sense of Aikhenvald (2004) were excluded because they are unlikely to have a separate term.

The language sample was further restricted by selecting languages with at least three evidential categories. Considering Aikhenvald's (2004) classifications, the categories in smaller evidential systems may be semantically broader than in larger systems and the comparisons could be difficult. For example, a non-first-hand evidential of a binary system often covers both reported and inferred knowledge. Furthermore, binary systems tend to have unmarked 'everything else' categories that necessarily do not have a distinct term, especially if coded by the absence of an evidential marker (see Aikhenvald 2004: 25–31). The purpose of the restriction was to minimize the number of these instances to ease the comparison, but the sampled

1 *Ego* was chosen because it is a term employed in the descriptions studied (unlike *endophoric*), and it allows interpretations of the epistemic authority, whereas *participatory* would seem narrower. Furthermore, *ego* has not been employed for other information sources.

languages still had some ambiguously indirect categories that could not be classified as either inferentials or second-hand evidentials (Section 4.5).

To analyse the terms for evidential categories, the criteria for a good term are considered (see Section 6), as well as the distinction between comparative concepts and descriptive categories, popularized by Haspelmath (2010). Terms in general are names for strictly defined concepts in special fields; ideally, they are commonly known and accepted in the field, with established usage (Haarala 1981: 16, cf. Nuopponen and Pilke 2010: 70). A good term is short, distinctive, easy to use, and productive for derivation and combination (Haarala 1981: 37–39). A good term describes the concept well and is suitable also for the conceptual system. The criteria are not unambiguous: for example, if the term should describe the concept and its place in the conceptual system, the requirement of shortness may be hard to meet. Ideally, a term corresponds to one concept, but monosemy is hard to achieve (Haarala 1981: 37–39; Nuopponen and Pilke 2010: 65–69).

Comparative concepts are concepts designed for cross-linguistic comparison and defined on a conceptual-semantic basis, while descriptive categories are used for language description and defined to describe the languages in their own terms (Haspelmath 2010: 664–667). Differentiating between comparative concepts and descriptive categories complicates the terminology, since both need terms. The language-particular descriptive categories aim to describe the languages, which could require special terminology. There are no specific conventions for creating term for comparative concepts, and typologists often use the same terms that the grammars consulted by them use, which makes terminology recognizable but can create misunderstandings (Haspelmath 2010: 674). Creating new terms and reusing existing terms produce either term synonymy or term polysemy.

To recognize similar evidential categories, the comparative concepts used for this study were based on Plungian's (2010: 37) classification of information sources, with slightly adapted terminology. I distinguish between direct, visual, nonvisual sensory, indirect, inferential, assumptive, second-hand, and ego evidentiality. Additionally, a comparative concept of general knowledge was adopted. The comparative concepts are summarized in Table 2. Here 'direct' refers to Plungian's (2010) direct/personal access and 'indirect' refers to indirect access in general, whether personal or non-personal (see Section 2.2). The definitions of direct evidentiality can resemble the definitions of visual categories, but since direct categories cover other senses in addition to vision, the concepts are kept separate. Indirect evidentiality resembles both inference and second-hand information, but the definitions differ: indirect is often defined as lack of experience, whereas inference and second-hand are more specific. Here 'nonvisual sensory' does not have further distinctions, because strictly auditive categories sometimes have unclear semantic scope (see Section 4.4), and the sampled languages did not

have nonvisual categories without reference to hearing. All 'second-hand' sources were merged as well, since there were only a few languages with specialized quotatives, while several reportatives have quotative-like usage.[2] Further distinctions were not needed for the purposes of this study.

When analysing the terms for evidential categories, the relations of concepts and terms were studied, after which the terms were compared. The names of the categories are considered terms and the descriptions of the categories are considered definitions. The definitions and terms are compared to discover whether similar categories have similar terms, or whether similar terms have been used for different categories. From a terminological point of view, the categories with the same definitions should have the same terms to avoid synonymy. In Section 4, the analysis is organized according to comparative concepts to study term synonymy, and Section 5 examines polysemous terms that are employed for different categories.

4 Term synonymy

4.1 Overview

Terms are synonymous if different terms are used for the same concept (Nuopponen and Pilke 2010: 60). For example, the terms 'visual' and 'direct' are

Table 2: Summary of comparative concepts.

Comparative concept	Information source
Visual	Visual perception
Direct	All sensory information
Nonvisual sensory	All sensory information, except visual
Indirect	No sensory/direct evidence; the source is not further specified
Inferential	Inference from evidence (e.g. results)
Assumptive	Inference from previous events, habits, general knowledge; assumption
Second-hand	Reported information; from an unknown or unspecified original source (hearsay); or from a known original source
General knowledge	General, cultural, or historical knowledge; accepted facts
Ego evidentiality	Speaker's (or origo's) own participation or experience

2 Aikhenvald's (2004: 177) definition of reported evidentials includes specified sources since reported evidentials can be used "either with or without indicating the exact source of the report". Furthermore, Aikhenvald lists quotative uses as possible extentions of reported evidentials: "A reported evidential *can be used as a quotative*, to indicate the exact authorship of the information, or to introduce a direct quote" (emphasis added).

considered synonyms in terminological studies because both are used for visual categories, although their usage differs in that 'visual' is used only for visual categories while 'direct' is used for direct evidentiality as well. In this section I examine term synonymy and discuss terms used for each evidential category.

General reasons for term synonymy can be quick developments in the field, which may result in parallel terms, or different classifications of concepts which result in different naming choices (see Nuopponen and Pilke 2010: 60). Both reasons are plausible for synonymous terms for evidential categories: there has been growing interest in evidentiality since 1980s, and again after early 2000s (Boye 2018: 262; Plungian 2010: 27–28), and different evidential systems require different classifications and terms. Different approaches to the same categories, such as inferential and assumptive evidentiality, could lead to differing terms, if one analysis regards them as subtypes of inference and another as distinct information sources. Concerning linguistic descriptions, a specific reason for synonymy is supervisorial influence: the models of a supervisor are likely to determine the choices in grammar structure and terminology, which results in parallel terms (see Kelly and Lahaussois 2019, 2021: 231 et passim).

In practice, synonyms emerge when terms are created from elements that either are synonymous themselves or describe different features of the concept. For example, the terms 'inferential' and 'deductive' are derived from the semantically similar verbs *infer* and *deduce*, whereas 'experiential' and 'expectational' convey different ideas about assumptive evidentiality. Researchers might want to emphasize different aspects of the concepts. The term 'direct', for instance, implies opposition to indirect sources like hearsay, whereas 'sensory experience' expresses that information is acquired through the senses.

The following subsections investigate terms used for evidential categories, organized according to comparative concepts (see Table 2), to see which terms have been employed and where synonymy arises. The concepts are illustrated with some citations from grammars that are kept short due to space limitations. The terms are presented in tables where recurring terms are combined to term types. Term types are generalizations of frequent elements of terms, for example all terms containing the word "visual" form one term type. Terms that are too divergent as words from other terms are grouped under the heading MISCELLANEOUS. Categories that have been analysed as something else than evidential (e.g. a tense) and termed accordingly in the grammars are classified under OTHER CATEGORY. If a category has a gloss or an abbreviation (e.g. 'seem', EV) instead of a term, it is classified under NO TERM. The term types and terms are listed from the most frequent to less frequent ones, while terms that appeared only once are listed alphabetically.

4.2 Terms for visual evidentiality

The terms for visual evidentiality tend to refer to visual perception: besides 'visual', there are terms like 'observed', 'direct knowledge', and 'seen'. The terms 'factual' and 'default' are the only ones without a connotation of sight. The definitions typically refer to visual perception: for example, the 'visual' evidential *-yă* in Kashaya indicates that "the speaker knows of what he speaks because he sees, or saw, it" (Oswalt 1986: 36), and the suffix *-sio* in Edolo marks "visual evidence" (San Roque and Loughnane 2012: 149). See also example (1) from Duna. Other typical definitions mention direct experience, the act of witnessing, or observation, rather than sight: "directly witnessed" (Tsafiki: Dickinson 2000: 407), "experienced or observed directly" (Wanano: Stenzel 2008: 412).

(1) Duna (isolate, Papua New Guinea)
imanoa *ita* *koro=**tia***
people pig steambake=**VIS.PREVIOUS**
'People steambaked a pig (I saw).' (San Roque and Loughnane 2012: 126)

Categories that fit the comparative concept of visual evidentiality were found in 25 languages. There are 14 different terms. The terms are listed in Table 3, and generalized into the term types VISUAL, OBSERVE, DIRECT, FACTUAL, and SEE. MISCELLANEOUS includes one term, 'default', that is a too dissimilar word form to be classified with other terms. The most common term is 'visual', occurring 14 times. Additionally, the terms 'visual evidence' (Edolo), 'visual perception' (Ladakhi) and 'visuo-perception' (Foe), belong to the term type VISUAL. Two evidentials are analysed in the grammars as something else: a modal ('indicative' *-ya* in Eastern Pomo; McLendon 1975: 1996), and a tense marker ('recent past' *ǰĭ* in Dulong; LaPolla 2003a). These terms are not relevant for the terminology of evidentials and are listed under OTHER CATEGORY. The descriptions of Akha and Maricopa use translations rather than terms; their evidentials are in the group NO TERM. Note that some languages are featured more than once here and in other tables, because different sources have slightly different terms, and sometimes the writers alternate between terms, like Epps (2005, 2008) has different terms for Hup.

4.3 Terms for direct evidentiality

The terms for direct evidentiality tend to refer to witnessing ('witnessed') or sensory experience ('experiential', 'visual-sensory'), and a typical term 'direct' can be interpreted as both. Direct evidentiality differs from visual evidentiality by including other senses besides vision. For example, the 'sensory experience' in Mosetén covers sight

Table 3: Terms for visual evidentiality.

Term type	Term	Evidential	Language	Source
VISUAL	visual	*ŋáa*	Akha	Thurgood (1986: 217)
		=tia	Duna	San Roque and Loughnane (2012: 125)
		Ø	Hup	Epps (2008: 643–644)
		-yă	Kashaya	Oswalt (1961: 244–245, 1986: 36–37)
		ḥdug	Ladakhi	Zeisler (2017: 270; 2018: 86, 91)
		-nãn	Mamaindê	Eberhard (2009: 455)
		-si	Mỹky	Monserrat and Dixon (2003: 238)
		-ya	Southeastern Pomo	Moshinsky (1974: 71)
		Ø	Qiang	LaPolla (2003b: 197–199)
		-ka	Tariana	Aikhenvald (2003: 136–138, 2004)
		-wo	Tuyuca	Barnes (1984: 259)
		-ha	Wanano	Stenzel (2008: 411–412)
		-iyeʔ	Washo	Jacobsen (1964: 626)
		ʔel	Wintu	Pitkin (1984: 146–148, 174–175)
	visual evidence	*-sio*	Edolo	San Roque and Loughnane (2012: 149)
	visual perception[a]	*ḥdug*	Ladakhi	Zeisler (2017: 270; 2018: 86, 91)
	visuo-perception	*-bo'oge*	Foe	Rule (1977: 72)
OBSERVE	observed	*Ø*	Desano	Kaye (1970: 28, 31–32)
		-dug	Ladakhi	Koshal (1979: 195–196, 198–199)
		-na²	Nambikuara	Lowe (1999: 274)
	observational	*-na²*	Nambikuara	Lowe (1999: 274)
	observation	*-na²-hẽ³*	Nambikuara	Kroeker (2001: 62)
DIRECT	direct	*á-*	Shilluk	Miller and Gilley (2007: 192)
	direct knowledge	*-ya*	Eastern Pomo	McLendon (2003: 106–109)
	direct sensory experience	*Ø*	Tsafiki	Dickinson (2000: 407, 2002: 102)
FACTUAL	factual	*-ŵă*	Kashaya	Oswalt (1961: 244–245, 1986: 36–37)
		-a	Southern Pomo	Walker (2013: 320)
SEE	seen	*-bo'oge*	Foe	Rule (1977: 72)
	see with eyes	*a- -re*	Fasu	San Roque and Loughnane (2012: 143)
MISCELLANEOUS	default	*Ø*	Hup	Epps (2005: 623–624)

Table 3: (continued)

Term type	Term	Evidential	Language	Source
OTHER CATEGORY	indicative	*-ya*	Eastern Pomo	McLendon (1975: 95, 1996: 537)
	recent past	*ɟĭ*	Dulong	LaPolla (2003a: 679)
NO TERM	'seeing'	*ŋáa*	Akha	Hansson (2003: 248)
	'sight'	*-(k)'yuu*	Maricopa	Gordon (1986: 77)

Zeisler (2017, 2018) has some alternating terms in her writing. 'Visual' (Zeisler 2017) and 'visual perception' (Zeisler 2018) were chosen here because they are used as explanations of glosses. A similar alternation and criteria apply to 'nonvisual' and 'nonvisual perception' in Table 4.

and hearing (Sakel 2004: 340), while the 'direct' evidentials in Ersu and Matses refer to knowledge acquired through any of the senses (Fleck 2003: 402; Zhang 2014: 134). The examples in (2) show how the 'visual-sensory' (glossed as VIS) in Oksapmin is used with both visual and other sensory evidence (Loughnane 2009: 256–258).

(2) Oksapmin (Nuclear Trans New Guinea, Papua New Guinea)

a. *jəxe* *ita* *ox* *xto-n-**gop***
then father.1/2POSS 3SG.M see-PFV-**VIS.FP.SG**
'Then (I saw that) my father looked at (it).'

b. *nox* *tom* *din* *wanxe* *n-x-n-**gwel***
1SG water thirsty a.lot 1/2.OBJ-make-PFV-**VIS.YESTP**
'(I felt that) I was really thirsty.' (Loughnane 2009: 257, 258)

Categories that fit the concept of direct evidentiality were found in 19 languages. There are 10 different terms, which are listed in Table 4. The terms are generalized as the term types DIRECT, WITNESSED and SENSORY. The terms under MISCELLANEOUS are semantically similar, although they differ in word forms: 'eyewitness' is close to 'witnessed', and 'experiential' resembles 'sensory experience', for instance. The most common term is 'direct', used in five linguistic descriptions. The group OTHER CATEGORY includes the evidentials of Patwin and Fasu, which are analysed as a mood and a tense, respectively, but indicate information source as well (San Roque and Loughnane 2012: 142–143; Whistler 1986: 67–68).

4.4 Terms for nonvisual sensory evidentiality

The terms for nonvisual sensory categories typically refer to lack of vision ('nonvisual', 'unseen'), to auditory perception ('auditive', 'evidence heard'), or to

Table 4: Terms for direct evidentiality.

Term type	Term	Evidential	Language	Source
DIRECT	direct	*-lA*	Kalmyk	Skribnik and Seesing (2014: 152)
		-ra	Shipibo-Konibo	Valenzuela (2003: 35)
		-'dug	Tibetan	Garrett (2001: 5, 52, 60–66)
		-mi	Wanka Quechua	Floyd (1993: 84–87, 91–92)
		∅	Ersu	Zhang (2014: 133, 134)
WITNESSED	witnessed	*sir*	Ainu	Shibatani (1990: 84)
		-ar	Ingush	Nichols (2011: 244, 249)
		-ira	Chechen	Nichols (1994: 38)
SENSORY	sensory experience	*ishtyi'*	Mosetén	Sakel (2004: 340–341)
	sensory-inferential	*-li*	Wutun	Sandman (2016: 208–210)
	visual-sensory	*-gop*	Oksapmin	Loughnane (2009: 248, 256, 258–259)
MISCELLANEOUS	experiential	*-o*	Matses	Fleck (2003: 399, 402–403)
	eyewitness	*-(ha)ra*	Jarawara	Dixon (2003: 168, 171)
	firsthand	∅	Bora	Thiesen and Weber (2012: 306)
	personal knowledge	*-wa*	Aymara	Hardman (1986: 115–116, 118)
OTHER CATEGORY	declarative mode	*be(·)s*	Patwin	Whistler (1986: 67–68)
	past tense	*-rakasa*	Fasu	San Roque and Loughnane (2012: 143)
NO TERM	EV	*ku*	Cora	Casad (1984: 179)
	'certainty'	*ṁə*	Musqueam	Suttles (2004: 382–384)

sensory experience ('sensed'). Some terms include both lack of vision and sensory experience ('nonvisual sensory', 'nonsight sensory'). The terms referring to lack of vision are more common, mainly because the term 'nonvisual' is widely used. The definitions alternate between emphasizing the nonvisual and sensory sides of the category. For example, the 'nonvisual' *-hmĩ* in Mỹky indicates that "the speaker does not see" the event (Monserrat and Dixon 2003: 238–239). On the other hand, for the 'nonvisual' *=hɔ̃* in Hup "the most common source for the information is hearing, but can also be smell, taste, or touch" (Epps 2005: 625). The examples in (3) illustrate the use of the 'nonvisual' in Hup with auditory and tactile sources.

(3) Hup (Nadahup, Brazil, Colombia)
a. *nasia* *pæ-sɨ̃w-ɨ̃y=**hɔ̃***
boat go.upriver-COMPL-IPFV=**NVIS**
'The boat already went upriver.' (heard but did not see it)
b. *huʔ-d'əh* *ni-isap=**hɔ̃***
pium-PL exist-AUG=**NVIS**
'There are a lot of piums (small biting insects)!' (I can feel their bites)
(Epps 2005: 626)

The terms that emphasize hearing are slightly surprising, since hearing might not be the only source described for the category. The 'auditive' categories of Forest Enets and Tundra Nenets can refer to other nonvisual senses besides hearing (see Künnap 2002: 145; Nikolaeva 2014: 113–114). The descriptions of Fasu, Edolo, Kashaya, Southern Pomo, and Washo mention only hearing, but it is unclear if this is an actual restriction or if usage referring to other senses has not been attested (Jacobsen 1964; Oswalt 1961, 1986; San Roque and Loughnane 2012: 144, 149–150; Walker 2013).

Evidentials that fit the concept of nonvisual sensory evidentiality were found in 28 languages. There are 20 different terms, given in Table 5. The terms are classified into the types NONVISUAL, AUDIO/AURAL, UNSEEN, HEARD, SENSORY, and MISCELLANEOUS. The types UNSEEN and HEARD are kept separate form NONVISUAL and AUDIO/AURAL due to differing word forms. The term type NONVISUAL has 14 occurrences, including similar terms like 'nonvisual sensorial'. The most common term is 'nonvisual', which occurs nine times. The recent past *lŭŋ* of Dulong is identified as a tense by LaPolla (2003a) and is therefore in the OTHER CATEGORY here (cf. *ɲĭ* in Table 3 above).

4.5 Terms for indirect evidentiality

The terms for indirect evidentials tend to emphasize the indirectness of the information source or a lack of witnessing. In Tibetan, Patwin, Jarawara, and Kalmyk the indirect categories cover both inference and hearsay, as seen in (4) (Dixon 2003: 168–170, 172; Garrett 2001: 39–40; Skribnik and Seesing 2014: 155; Whistler 1986: 69–70).

(4) Tibetan (Sino-Tibetan, Tibet, Nepal)
kho *phyin-**pa-red***
3SG go-[**INDIR.PST**][3]
'He left.' (e.g. I infer, it is known) (Garrett 2001: 14)

3 Garrett (2001) glosses constructions as a whole, even though morphemes are separated with hyphens.

Table 5: Terms for nonvisual sensory evidentiality.

Term type	Term	Evidential	Language	Source
NONVISUAL	nonvisual	*mía*	Akha	Thurgood (1986: 217)
		=hɔ̃	Hup	Epps (2005: 625–627, 2008: 646–647)
		rag	Ladakhi	Zeisler (2017: 287–290, 2018: 86, 91)
		-hĩn	Mamaindê	Eberhard (2009: 456)
		-hmĩ	Mỹky	Monserrat and Dixon (2003: 238)
		-ink'e	Eastern Pomo	McLendon (1975: 98–99, 1996: 536)
		-mahka	Tariana	Aikhenvald (2003: 136, 138, 2004)
		-to	Tuyuca	Barnes (1984: 259–260)
		koa	Wanano	Stenzel (2008: 411, 417–418)
	nonvisual sensory	*-ink'e*	Eastern Pomo	McLendon (2003: 102–103)
		-nt^{h}e·	Wintu	Pitkin (1984: 130)
	nonvisual sensorial	*-nt^{h}e·*	Wintu	Schlichter (1986: 46–47)
	nonvisual perception	*rag*	Ladakhi	Zeisler (2017: 287–290, 2018: 86, 91)
	nonvisible	*-ko*	Desano	Kaye (1970: 28, 35–39)
AUDIO/AURAL	auditive	*-monȯ-/-munu*	Forest Enets	Künnap (2002: 145), Siegl (2013: 300)
		-m(an)oh	Tundra Nenets	Nikolaeva (2014: 113–114)
		-delem	Washo	Jacobsen (1964: 627)
	aural	*-Vnʔda*	Southern Pomo	Walker (2013: 322)
		v̂nnă	Kashaya	Oswalt (1961: 242)
	auditory	*v̂nnă*	Kashaya	Oswalt (1986: 37)
UNSEEN	non-eyewitness experiential	*hiɬts'ad*	Western Apache	de Reuse (2003: 80)
	nonsight sensory	*-(k)'a*	Maricopa	Gordon (1986: 77–78)
	unseen	*-rua*	Huli	San Roque and Loughnane (2012: 130)
	unseen sense perception	*-bidobo'oge*	Foe	Rule (1977: 72)
HEARD	hear with ears	*-rakae*	Fasu	San Roque and Loughnane (2012: 143)
	hearing and other nonvisual sensory	*-(k)'a*	Maricopa	Gordon (1986: 77–78)
	evidence heard	*-sabeo*	Edolo	San Roque and Loughnane (2012: 149–150)
SENSORY	sensed	*-lu(a)*	Ipili	San Roque and Loughnane (2012: 134)

Table 5: (continued)

Term type	Term	Evidential	Language	Source
	sense perception	*-rua*	Huli	San Roque and Loughnane (2012: 130)
	sensory	*=yarua*	Duna	San Roque and Loughnane (2012: 125)
MISCELLANEOUS	introspective	*-q̇o*	Southeastern Pomo	Moshinsky (1974: 71)
	experiential	*-ə-rəg*	Ladakhi	Koshal (1979: 207–209)
OTHER CATEGORY	recent past	*lŭŋ*	Dulong	LaPolla (2003a: 679)
NO TERM	'hearing/feeling'	*mía*	Akha	Hansson (2003: 248)
	'one can hear V-ing'	*-(r)pallaC-*	West Greenlandic	Fortescue (2003: 294)
	–	*-q̇adi*	Makah	Jacobsen (1986: 13–14)

In Patwin and Jarawara the categories are specified to mark lack of sensory evidence (Dixon 2003: 168–170, 172; Whistler 1986: 69–70). The 'nonwitnessed' *-ʔha* of Bora is defined as lack of sensory experiences (Thiesen and Weber 2012: 306), as well. In Aymara the 'nonpersonal knowledge' *-tayna* is used when witnesses are not available, mainly about remote past (Hardman 1986: 116).

Categories that fit the concept of indirect evidentiality were found in six languages. There are four different terms, listed in Table 6. The terms are grouped into the types INDIRECT or MISCELLANEOUS. The most common term is 'indirect', used for three languages. The other terms under MISCELLANEOUS, 'non-eyewitness', 'nonpersonal knowledge' and 'nonwitnessed', differ as word forms, but all reflect the lack of sensory experience or witnessing, as mentioned in the descriptions of the categories.

Table 6: Terms for indirect evidentiality.

Term type	Term	Evidential	Language	Source
INDIRECT	indirect	*-ž*	Kalmyk	Skribnik and Seesing (2014: 155)
		-boti	Patwin	Whistler (1986: 69–70)
		-yod.red	Tibetan	Garrett (2001: 5, 39–43)
MISCELLANEOUS	non-eyewitness	*-(ha)ni*	Jarawara	Dixon (2003: 168)
	nonpersonal knowledge	*-tayna*	Aymara	Hardman (1986: 115–116, 120)
	nonwitnessed	*-ʔha*	Bora	Thiesen and Weber (2012: 306–307)

4.6 Terms for inferential evidentiality

The terms for inferentials are typically derived from *infer* ('inferred', 'logical inferential'). Sometimes the terms refer to other mental processes ('deductive') or evidence ('visible evidence'). Several miscellaneous terms resemble these generalizations ('conjecture', 'circumstantial'). Research traditions have some differences: 'probabilitive' is traditionally used for Samoyedic languages (Künnap 2002: 146), and all the terms of the EVIDENCE type are from descriptions of languages of Papua New Guinea (Rule 1977; San Roque and Loughnane 2012).

The descriptions of language-particular categories typically mention that the speaker did not observe the event itself – for example in Eastern Pomo the 'logical' marker *-ine* indicates that the event "is not known from direct observation, hearsay, or non-visual sensual perception", but the knowledge is based on logical inference (McLendon 1975: 87, 2003: 104). Instead of witnessing the event, the speaker has observed some evidence (Hup, Matses, Patwin, Tariana, Tsafiki, Tuyuca, Wintu, among others) or has seen the result of the event (Matses, Tundra Nenets, Wanano). In Ladakhi the 'fact-based inferential' means that the speaker "draws an inference on the basis of seeing a concrete fact or occurrence" (Koshal 1979: 209–210). (5) from Tsafiki demonstrates how inference is based on traces of the event (Dickinson 2000: 407).

(5) Tsafiki (Barbacoan, Ecuador)
Manuel *ano* *fi-**nu**-e*
Manuel food eat-**EV/MIR**-DECL
'Manuel has eaten.' (The speaker sees the dirty dishes.) (Dickinson 2000: 408)

While inference and assumption are conceptually distinct, not all languages differentiate them. If a language has only one inferential, its scope therefore might be unclear. Occasionally, the grammars do not describe the basis of inference; for instance, the probabilitive of Forest Enets "expresses an inferred action" (Künnap 2002: 146). These instances were classified as inferentials in this study because I consider inference a more prototypical thought process than assumption (see Floyd 1993: 156–157 on the prototypicality of inference). In three languages, however, the inferential category is said to cover both inference and assumption: Ersu, Oksapmin, and Wanka Quechua. The inferentials of these three languages were classified as assumptives as well, and they are indicated with an asterisk in Tables 7 and 8.

Categories that fit the concept of inferential evidentiality were found in 43 languages. There are 32 different terms, listed in Table 7. The terms are grouped into the types INFER, OTHER INFER, EVIDENCE, DEDUCE, and MISCELLANEOUS. The most

Table 7: Terms for inferential evidentiality.

Term type	Term	Evidential	Language	Source
INFER	inferential	**=pà*	*Ersu	Zhang (2014: 135, 146)
		-qǎ	Kashaya	Oswalt (1986: 38)
		-ac	Matses	Fleck (2003: 405–406)
		-nĩn^{2}	Nambikuara	Lowe (1999: 274)
		-miə	Tundra Nenets	Nikolaeva (2014: 93–95, 106)
		-ka	Southern Pomo	Walker (2013: 323)
		ʊ́- + *-ɔ̄*	Shilluk	Miller and Gilley (2007: 193, 195)
		-bira	Shipibo-Konibo	Valenzuela (2003: 44)
		-nu	Tsafiki	Dickinson (2000: 411)
		-(i)na	Chechen	Nichols (1994: 38)
		-re·	Wintu	Pitkin (1984: 133), Schlichter (1986: 51)
	inferred	*-jo* + *-biN*	Desano	Kaye (1970: 29, 33–35)
		=cud	Hup	Epps (2005: 631–632, 2008: 650–652)
		-sn bäädltä	Kalmyk	Skribnik and Seesing (2014: 157–159)
		-ntĩn	Mamaindê	Eberhard (2009: 458)
		-aka	Mỹky	Monserrat and Dixon (2003: 240)
		**sa*	*Oksapmin	Loughnane (2009: 341)
		-ka	Tariana	Aikhenvald (2004)
		-nu	Tsafiki	Dickinson (2000: 407–408, 2002: 102)
	inference	*-ri hi*	Wanano	Stenzel (2008: 419–420)
OTHER INFER	circumstantial inference	*-monʔa*	Patwin	Whistler (1986: 69, 73)
	confident inference	*-mʔa*	Patwin	Whistler (1986: 69, 72–73)
	attested inferential	*-tok*	Ladakhi	Koshal (1979: 216)
	fact-based inferential	*-(C)og*	Ladakhi	Koshal (1979: 209–211)
	logical inferential	*-ine*	Eastern Pomo	McLendon (2003: 104–105)
	past inferential[a]	*-tok*	Ladakhi	Zeisler (2017: 273)
	physical inferential	*nolɟh*	Western Apache	de Reuse (2003: 82–83)
	specific inferred	*-nihka*	Tariana	Aikhenvald (2003: 135–136, 140)
	sensory-inferential	*-li*	Wutun	Sandman (2016: 208–210)
EVIDENCE	visible evidence	*-iba'ae*	Foe	Rule (1977: 72)
		-da	Huli	San Roque and Loughnane (2012: 130)

Table 7: (continued)

Term type	Term	Evidential	Language	Source
		-ya	Ipili	San Roque and Loughnane (2012: 134–135)
	previous evidence	*-iyo'oge*	Foe	Rule (1977: 72)
		-ya	Huli	San Roque and Loughnane (2012: 130–131)
	previously visible evidence	*-yala*	Ipili	San Roque and Loughnane (2012: 134–135)
	evidence	*=rea*	Fasu	San Roque and Loughnane (2012: 143)
DEDUCE	deduced	*-adobo'oge*	Foe	Rule (1977: 72)
	mental deduction	*-adobo'oge*	Foe	Rule (1977: 72)
	deduction	*-nũ²-hẽ³*	Nambikuara	Kroeker (2001: 62–63)
	deductive	*-(a)ke*	Mosetén	Sakel (2004: 341)
MISCELLANEOUS	apparent	*-yo*	Tuyuca	Barnes (1984: 260)
	*assumed	**sa*	*Oksapmin	Loughnane (2009: 341)
	circumstantial	*-qǎ*	Kashaya	Oswalt (1961: 243)
	*conjecture	**-chra*	*Wanka Quechua	Floyd (1993: 146–151, 154–157)
	logical	*-ine*	Eastern Pomo	McLendon (1975: 87–88, 1996: 537)
	mirative	*-áʔyiʔ*	Washo	Jacobsen (1964: 630)
	inferential/mirative	*-k*	Qiang	LaPolla (2003b: 200–201)
	nonwitnessed	*=jy*	Ingush	Nichols (2011: 254–255, 278)
	past deferred realization	*lę́k'eh*	Western Apache	de Reuse (2003: 82, 84–88)
	probabilitive	*-tta*	Forest Enets	Künnap (2002: 145–146)
	results	*=rei*	Duna	San Roque and Loughnane (2012: 125–126)
	semblative	*humi*	Ainu	Shibatani (1990: 84)
NO TERM	EV	*séin*	Cora	Casad (1984: 181)
	'apparently'	*-sima-*	West Greenlandic	Fortescue (2003: 292, 298)
	'evidently'	*-xEnt*	Kwakiutl	Boas (1911: 491, 496)
	'inferential'	*yəxʷ*	Musqueam	Suttles (2004: 373)
	'seem'	*awine*	Jarawara	Dixon (2003: 181–182)
	-	*-pi:t*	Makah	Jacobsen (1986: 12)
	-	*-ckʷi·*	Makah	Jacobsen (1986: 20–21)
	-	*-ƛ̓uk*	Makah	Jacobsen (1986: 22)
	-	*-p̓ał*	Makah	Jacobsen (1986: 23)

Even though Zeisler (2017, 2018) discusses several inferential markers in different dialects, I included only this one, which I could match with Koshal's (1979) markers.

Table 8: Terms for assumptive evidentiality.

Term type	Term	Evidential	Language	Source
INFER	inferential	*=pà	*Ersu	Zhang (2014: 133, 135)
		-xugjy	Ingush	Nichols (2011: 259)
		-bi	Kashaya	Oswalt (1961: 237, 243)
	inferential II	-bi	Kashaya	Oswalt (1986: 41)
	appearance-based inferential	-thig	Ladakhi	Koshal (1979: 211–215)
	non-mirative inferential	golṉīī	Western Apache	de Reuse (2003: 81, 83)
	inferred	*sa	*Oksapmin	Loughnane (2009: 341)
	additional inferred	-ni-	Hup	Epps (2005: 638, 2008: 659–660)
	generic inferred	-si-ka	Tariana	Aikhenvald (2003: 135–136, 139)
	inferred probability	-x̣a:- + -š	Makah	Jacobsen (1986: 19)
	tentative inference	-mt^{h}er	Patwin	Whistler (1986: 69, 71–72)
ASSUMED	assumed	sn bol-x	Kalmyk	Skribnik and Seesing (2014: 159)
		*sa	*Oksapmin	Loughnane (2009: 341)
		-sika	Tariana	Aikhenvald (2004)
		-hīyo	Tuyuca	Barnes (1984: 262)
SPECULATIVE	speculative	-étiro	Mỹky	Monserrat and Dixon (2003: 240)
		-mein	Shipibo-Konibo	Valenzuela (2003: 47–48)
CONJECTURE	conjecture	-ash	Matses	Fleck (2003: 417–418)
		*-chra	*Wanka Quechua	Floyd (1993: 146–151, 154–157)
DEDUCE	deduced	NMLZ + VCL	Tsafiki	Dickinson (2000: 407, 2002: 102–103)
	deductive	NMLZ + VCL	Tsafiki	Dickinson (2000: 412)
EXPECTATION	expectational	-ʔel	Wintu	Schlichter (1986: 52)
	expectative	kuni	Ainu	Shibatani (1990: 84)
MISCELLANEOUS	approximative	-meərəxə	Tundra Nenets	Nikolaeva (2014: 101–102)
	assertion	-ka	Wanano	Stenzel (2008: 420–423)
	customary	-te^{2}ju^{2}hẽ^{3}	Nambikuara	Kroeker (2001: 62–63)
	experiential	-ʔel	Wintu	Pitkin (1984: 134)
	internal	-hẽ^{1}	Nambikuara	Lowe (1999: 275)
	prospective	-x bol-x	Kalmyk	Skribnik and Seesing (2014: 160–161)
	reasoning	=noi	Duna	San Roque and Loughnane (2012: 125)
NO TERM	'presumably'	-gunar-	West Greenlandic	Fortescue (2003: 292)

Table 8: (continued)

Term type	Term	Evidential	Language	Source
	'speculative'	*ċtwaʔ*	Musqueam	Suttles (2004: 384–385)
	–	*-caqiƛ*	Makah	Jacobsen (1986: 15)

common term is 'inferential', used for 11 languages. Together all the terms under INFER and OTHER INFER occur 30 times. Additionally, under MISCELLANEOUS there is the 'inferential/mirative' marker of Qiang whose interpretation depends on verbal semantics (LaPolla 2003b: 200). The number of terms is increased by variations such as 'logical' and 'logical inferential' in the descriptions of Eastern Pomo (McLendon 1975, 2003), or 'specific inferred' and 'inferred' for Tariana (Aikhenvald 2003, 2004). In addition, some languages have more than one inferential category, like Western Apache, Foe, and Patwin.

4.7 Terms for assumptive evidentiality

The terms for assumptives usually refer to mental processes ('assumed', 'inferential', 'reasoning'), habits ('customary'), or expectations ('expectative'). Many terms resemble the terms for inferentials, and the terminology of assumptives is so variable that no one term appears to be generally established. 'Assumed' is almost exclusively used for assumptives, but since Loughnane (2009: 341) uses it for the Oksapmin particle *sa* that codes both inference and assumption, 'assumed' also appears in Table 7.

The definition in the description of Wanano is rather exhaustive: the 'assertion' marker *-ka* marks the statement as "founded on the speaker's own previous experience […] or on his or her cultural, historical, or physical knowledge of the world" (Stenzel 2008: 420). According to the grammars, assumption may involve general knowledge or habituality (Kalmyk, Nambikuara, Tariana, Tsafiki, Wanano), previous experiences (Tundra Nenets, Tuyuca, Wanano), or weak evidence (Matses, Patwin, Shipibo-Konibo). In (6) from Tsafiki the assumption is based on the speaker's knowledge about Manuel's habits (Dickinson 2000: 407).

(6) Tsafiki (Barbacoan, Ecuador)
Manuel *ano* *fi-**n-ki**-e*
Manuel food eat-NMLZ-VCL:**do**-DECL
'Manuel must have eaten.' (He always eats at 8:00, it's now 9:00.)
(Dickinson 2000: 408)

Evidentials that fit the concept of assumptive were found in 25 languages. There are 23 different terms, listed in Table 8. The categories in Ersu, Oksapmin and

Wanka Quechua cover both inference and assumption (indicated with an asterisk in Tables 7 and 8). If these are not counted, there are assumptives in 22 languages with 22 different terms. The most common term type is INFER with 11 occurrences of various terms. The rest of the terms are classified into the types ASSUMED, SPECULATIVE, CONJECTURE, DEDUCE, and EXPECTATION. MISCELLANEOUS includes terms that are too dissimilar to be classified according to the other term types. The most common single term is 'assumed', used in four descriptions. As with inferentials, some languages have slightly varying terminology in different descriptions.

4.8 Terms for second-hand information: reportatives and quotatives

The terms for second-hand evidentials refer to transmission of information: either by relaying information ('reportative', 'quotative') or by receiving information ('hearsay', 'heard from another', etc.). The former terms are more common and quite uniform, due to the popularity of the terms 'reportative', 'reported', and 'quotative', while the terms referring to receiving are more varied.

Often the definition of a reportative category is that the speaker has heard the information from others, like the definition of 'reportative' *-βa* in Bora: "the speaker is reporting something said by another person" (Thiesen and Weber 2012: 307). Alternatively, the definitions include expressions like "hearsay" or "second-hand". For example, *-wa:t* in Makah indicates "hearsay evidence" (Jacobsen 1986: 16), and *=mah* in Hup marks "secondhand, reported information" (Epps 2005: 634). The descriptions of specialized quotatives usually mention that the current speaker knows who the original speaker is. (7) is from Wanano, whose 'diffuse hearsay' marker *-yu'ti* indicates that the original source is inaccessible by the speaker and the source referent is unidentifiable, whereas the 'quotative hearsay *yu'ka* implies "a particular referent as the original source of the information" (Stenzel 2008: 411).

(7) Wanano (Eastern Tucanoan, Brazil, Colombia)

a. *ti-ro* *wʉ'ʉ-pʉ* *wa'a-**yu'ti***
ANPH-SG house-LOC go-**HS.DIFF**
(They say that) 'He went home.'

b. *ti-ro* *wʉ'ʉ-pʉ* *wa'a-**yu'ka***
ANPH-SG house-LOC go-**HS.QUOT**
(Someone told me that) 'He went home.' (Stenzel 2008: 410)

Evidentials that fit the concept of second-hand information were found in 43 languages, but there is some variation regarding the distinctions between reportatives and quotatives. In 12 languages the reportatives have quotative-like uses with a specified original source. These are indicated with an asterisk in Table 9. For example, the 'reportative' of Shipibo-Konibo indicates that the information was obtained "from an identified or an anonymous source" (Valenzuela 2003: 37). There is little information about the two suffixes from Kwakiutl, so they are classified as reportatives with quotative-like usage as well.

Six languages have a specialized quotative in addition to a reportative; these are indicated with double asterisks in Table 9. Kalmyk's quotative, though, is a classificatory choice of this study. Skribnik and Seesing (2014) analyse only one second-hand category for Kalmyk that is expressed with a number of different constructions. The constructions do not have separate names, but all are labelled 'reported'. One of the constructions, *-ž ginä*, is used without reference to the exact original speaker, and I consider it reportative. Another construction, *-sn bilä*, indicates information obtained from the witness, and the original source is often mentioned in the context (see Skribnik and Seesing 2014: 162–163). Since *-sn bilä* connects reported information to an identified source, I consider it quotative.

There are 19 different terms for second-hand categories, given in Table 9 and classified into eight types. Modified terms like 'narrative quotative' and 'reported second hand' are separated into the term types OTHER QUOTE- and "Other report". The type MISCELLANEOUS includes terms like 'hearsay-reportive' and 'quotative hearsay', combinations that did not fit just one term type. The terms in types QUOTATIVE and OTHER QUOTE- occur 19 times, as do the terms in types REPORT and OTHER REPORT, meaning that the verbs *quote* and *report* are equally frequent sources for the terms.

4.9 Terms for general knowledge

The terms for general knowledge have connotations of shared knowledge or factuality. In Ladakhi, the 'historical' marker indicates universal or historical truths and general statements (Koshal 1979: 196–197). Zeisler (2017: 281) describes the same marker with slightly different ortography and calls it 'inferential/generic future', a marker for generic knowledge. In Wutun the 'factual' marker *re* indicates common knowledge (Sandman 2016: 210). In Mamaindê, the 'general knowledge' marker *-nĩnta* refers to information that "any adult native member of the community would know", like habitually recurring events, as in (8).

Table 9: Terms for reportative evidentiality.

Term type	Term	Evidential	Language	Source
QUOTATIVE	quotative	*djé*	Akha	Thurgood (1986: 221)
		**ch'iṉīī*	**Western Apache	de Reuse (2003: 82, 87–88)
		**yée*	**Cora	Casad (1992: 151, 161–162)
		mañ	Forest Enets	Siegl (2013: 301)
		**dʑà*	**Ersu	Zhang (2014: 136–137)
		-guuq	West Greenlandic	Fortescue (2003: 295)
		unnia	West Greenlandic	Fortescue (2003: 296)
		**joax*	*Ingush	Nichols (2011: 279)
		-do	Kashaya	Oswalt (1961: 241, 1986: 40)
		wa:t	Makah	Jacobsen (1986: 16)
		-ta[1]	Nambikuara	Lowe (1999: 275)
		ʔupu	Patwin	Whistler (1986: 63–65)
		**-ʔum*	**Patwin	Whistler (1986: 63–65)
		-do	Southern Pomo	Walker (2013: 322)
		**-do*	*Southeastern Pomo	Moshinsky (1974: 70)
		älla	Chechen	Nichols (1994: 38, 61)
OTHER QUOTE-	indirect quotation	*djé*	Akha	Hansson (2003: 251)
	narrative quotative	*nu'u*	Cora	Casad (1992: 151, 161–162)
	nonindicative quotation	*-čˇa*	Makah	Jacobsen (1986: 18)
REPORT	reported	*-jo* + *-py*	Desano	Kaye (1970: 29, 32–33)
		=norua	Duna	San Roque and Loughnane (2012: 125)
		**dʑɛ̌*	*Ersu	Zhang (2014: 136–137)
		**-(ha) mone*	*Jarawara	Dixon (2003: 177–178)
		-ž ginä	Kalmyk	Skribnik and Seesing (2014: 161–162)
		***-sn bilä*	**Kalmyk	Skribnik and Seesing (2014: 162–163)
		-maka	Mỹky	Monserrat and Dixon (2003: 240)
		**=li*	*Oksapmin	Loughnane (2009: 404–405)
		**-pida-ka*	*Tariana	Aikhenvald (2003: 136, 140–141, 2004: 177)
	reportative	*-βa*	Bora	Thiesen and Weber (2012: 307–308)
		**=mah*	*Hup	Epps (2005: 634, 2008: 654–655)
		(')ish	Maricopa	Gordon (1986: 86)
		-rəxamiə	Tundra Nenets	Nikolaeva (2014: 96, 97)

Table 9: (continued)

Term type	Term	Evidential	Language	Source
		**-ronki*	*Shipibo-Konibo	Valenzuela (2003: 37–38)
		-ti	Tsafiki	Dickinson (2002: 103–104)
		-shi	Wanka Quechua	Floyd (1993: 196–201, 204–205)
OTHER REPORT	reported speech	*=(e)pia*	Ipili	San Roque and Loughnane (2012: 134)
	reported second hand	*-satau*	Mamaindê	Eberhard (2009: 460)
	reported third hand	*-sĩn*	Mamaindê	Eberhard (2009: 462)
HEARSAY	hearsay	*tɕìwǎ*	Dulong	LaPolla (2003a: 679)
		**joax*	*Ingush	Nichols (2011: 279)
		katyi'	Mosetén	Sakel (2004: 339–340)
		-·le	Eastern Pomo	McLendon (1975: 99, 1996: 536, 2003: 105–106)
		**-i*	*Qiang	LaPolla (2003b: 204–205)
		-í	Shilluk	Miller and Gilley (2007: 193–194)
		-ti	Tsafiki	Dickinson (2000: 408)
		-ke·	Wintu	Pitkin (1984: 131), Schlichter (1986: 49)
	diffuse hearsay	*-yu'ti*	Wanano	Stenzel (2008: 410–411)
HEAR	heard from another	*=pakae*	Fasu	San Roque and Loughnane (2012: 143)
	*hearing, he said	**=wabu*	*Edolo	San Roque and Loughnane (2012: 149)
NARRATE	narration	*-ta^{1}hẽ^{1}*	Nambikuara	Kroeker (2001: 62–63)
	narrative	*-bi*	Forest Enets	Künnap (2002: 145)
MISCELLANEOUS	hearsay-reportive	*hawe*	Ainu	Shibatani (1990: 84)
	**quotative hearsay	***-yu'ka*	**Wanano	Stanzel (2008: 410–411)
	*knowledge through language	**sasaw si*	*Aymara	Hardman (1986: 115–116, 119–120)
	*secondhand	**-yigo*	*Tuyuca	Barnes (1984: 261)
NO TERM	*'it is said'	**-^{ɛ}l(a)*	*Kwakiutl	Boas (1911: 491, 496)
	*'as I told you before'	**-Emsk^{u}*	*Kwakiutl	Boas (1911: 491, 496)
	'quotative'	*ċə*	Musqueam	Suttles (2004: 373)
	QUOT	*nu'u*	Cora	Casad (1984: 179)
	**QUOT	***yée*	**Cora	Casad (1984: 179)

Table 10: Terms for general knowledge.

Term	Evidential	Language	Source
common knowledge	*-dg ginä*	Kalmyk	Skribnik and Seesing (2014: 163)
factual	*re*	Wutun	Sandman (2016: 208–210)
general knowledge	*-nĩnta*	Mamaindê	Eberhard (2009: 463)
historical	*-ə-nog*	Ladakhi	Koshal (1979: 196–197)
inferential/generic future	*-(a)-nok*	Ladakhi	Zeisler (2017: 281)

(8) Mamaindê (Nambiquaran, Brazil)
waʔnĩn-soʔka *janãn-tu* *sun-jeʔ-∅-**ĩnta**-wa*
shaman-NCL.HUM jaguar-FNS kill-EMPH-SUBJ3-**G.KN**-DECL
'The shaman killed a jaguar (everyone knows this because that is what we always do)' (Eberhard 2009: 463)

Evidentials for general knowledge were found in four languages, and each description employs a different term, listed in Table 10. The terms 'common knowledge' and 'general knowledge' reflect how the information is based on something that is already accepted as knowledge. Two other terms, 'historical' and 'factual', refer to facts as information source. According to Zeisler (2017: 281), the Ladakhi marker *-(a)-nok* indicates future as well, and is connected to inferential markers, as reflected in the term 'inferential/generic future'.

4.10 Terms for ego evidentiality

The terms for ego evidentiality have connotations of participation or subjectivity, such as 'ego', 'performative', or 'participatory'. Sandman (2016: 208–210) describes the speaker's own actions and awareness as the information source in Wutun. The ego categories are used in first person statements and second person questions in Tibetan, Oksapmin, and Wutun (Garrett 2001: 5, 104–105, 116–117; Loughnane 2009: 249, 252; Sandman 2016). The examples in (9) illustrate the usage in Wutun: first person statements (9a) and second person questions (9c) have the ego form, while the non-ego form in second person statements (9b) is a sensory-inferential evidential (Sandman 2016: 207):

(9) Wutun (Sinitic, China)
a. *ngu* *huan* *xhe-di-**yek***
1SG food drink-PROGR-**EGO**
'I am eating (I know it because I am doing it).'

b. *ni* *huan* *xhe-di-**li***
2SG food drink-PROGR-**SEN.INF**
'You are eating (as I see/infer).'

c. *ni* *ma-ge* *nian-di-**yek***
2SG what-REF read-PROGR-**EGO**
'What are you reading?' (addressee's personal involvement) (Sandman 2016: 207)

The other descriptions do not mention use in questions, but the markers in Kashaya, Southern Pomo, Fasu, and Foe all indicate that the speaker's knowledge is based on her/his own performance or conscious participation (Oswalt 1961: 246, 1986: 34; Rule 1977: 71; San Roque and Loughnane 2012: 142–143; Walker 2013: 323). Classifying the ego evidentials as direct, for instance, would not necessarily be appropriate regarding the evidential systems, since these languages have other markers for sensory sources. In Oksapmin, for instance, the 'personal-factual' (ego) is correct with first person subjects, while the 'visual-sensory' (direct) is ungrammatical (Loughnane 2009: 254). In Ladakhi the 'reportive' or egophoric 'set 1' *-yod* is used for reports based on definite knowledge (Koshal 193–194, 197), or for authoritative knowledge and the speaker's own controlled actions (Zeisler 2018: 80–81). The authoritative knowledge is different from external direct knowledge acquired through sensory perception (Zeisler 2017: 264, 2018: 74), hence the ego evidentials are not considered direct evidentials in this study.

The egophoric markers in Ladakhi contrast with other markers that indicate direct knowledge from external, sensory sources.

Markers of ego evidentiality were found in eight languages. There are seven different terms (including two alternative terms for Foe), given in Table 11. The terms are grouped into the types EGO, PERFORMATIVE, and MISCELLANEOUS; the marker in Fasu is listed under OTHER CATEGORY because it is labelled as a tense. The terms 'ego' and 'performative' are both used in two descriptions and are specific for certain research traditions: 'ego' is used with Sino-Tibetan languages and 'performative' with Pomoan languages. The descriptions of Foe and Oksapmin, languages spoken in Papua New Guinea, use the term '(personal-)factual'. The terms 'ego' and 'personal-factual' imply subjective viewpoint, while 'performative' and 'participatory' imply participation. The terms used in the descriptions of Ladakhi are more unusual: 'reportive' (Koshal 1979) is probably intended to mean 'neutrally reported i.e. presented (by the speaker)', rather than verbal report from other people (see Zeisler 2017: 301), and 'set 1' (Zeisler 2018) reflects a division between egophoric-evidential markers and evidentials indicating external sources like sense perception, collectively called 'set 2' markers.

Table 11: Terms for ego evidentiality.

Term type	Term	Evidential	Language	Source
EGO	ego	*-yod*	Tibetan	Garrett (2001: 5, 104–105, 116–117)
		-yek	Wutun	Sandman (2016: 208–210)
PERFORMATIVE	performative	*-ela*	Kashaya	Oswalt (1961: 246–247, 1986: 34)
		-l:a	Southern Pomo	Walker (2013: 323)
MISCELLANEOUS	factual	*-ge*	Foe	Rule (1977: 71)
	participatory	*-ge*	Foe	Rule (1977: 71)
	personal-factual	*-p*	Oksapmin	Loughnane (2009: 248–249, 254–255)
	reportive	*-yod*	Ladakhi	Koshal (1979: 193–194, 197)
	set 1	*yod*	Ladakhi	Zeisler (2018: 74, 80–81)
OTHER CATEGORY	past tense	*-sua*	Fasu	San Roque and Loughnane (2012: 142–143)

4.11 Interim summary

The previous subsections studied the synonymy of terms for evidential categories, i.e. terms used for categories corresponding to the same comparative concepts. There are many synonymous terms, but also noticeable tendencies in what kind of words are chosen to label the evidential categories. For some categories there are quite clear term preferences, e.g. 'visual', 'nonvisual', and *infer*-derived terms for visual, nonvisual sensory, and inferential evidentials, respectively. Second-hand information, too, has well established terms, such as 'quotative', 'hearsay', and *report*-derived terms. Direct and assumptive evidentials do not have clearly preferred terms, but there are semantic conventions for the terms: connotations of witnessing and sensory experience for direct evidentials, and mental processes for assumptives. The language sample had too few indirect, general knowledge, and ego evidentials to draw decisive conclusions on their terminology. This is due in part to the nature of the survey, in part to the relative rarity of the categories: the initial language sampling aimed to avoid ambiguously indirect categories, and general knowledge and ego evidentials are both comparatively rare. Sometimes the same terms are used for different evidentials, which I discuss in the following section. Later, Section 6 reflects more on the usage of terms and considers how recognition of categories and their semantic properties can affect terminological choices.

5 Term polysemy

A term is polysemous if it refers to different but related concepts (Haarala 1981: 40). If the concepts are not related, the term is considered homonymous. This section discusses the polysemy and homonymy of the terms, which are illustrated in Figure 1. The terms that were found to be used for more than one comparative concept are on the left side, and arrows connect them to the comparative concepts on the right side. The figure shows how certain terms have been employed for various concepts, e.g. the term 'direct', which has been used for two categories, visual and direct. Note that reportative and quotative are kept as separate concepts to highlight the terminological overlap between them.

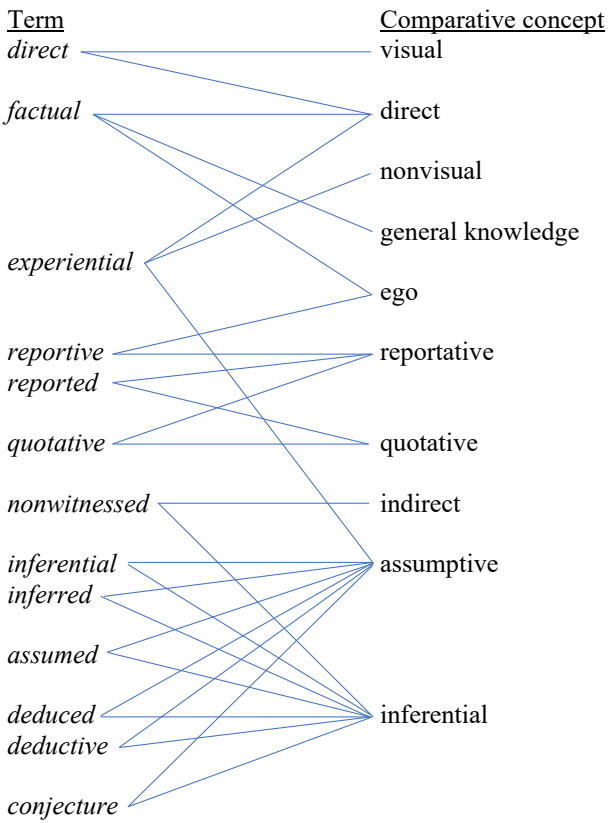


Figure 1: Polysemy and homonymy of evidential terms.

Figure 1 shows that the terms with the widest range of uses are 'experiential' and 'factual'. The term 'experiential' has been used for direct (Matses), nonvisual sensory (Ladakhi), and assumptive (Wintu) evidentials. The term 'factual' has been employed for visual (Kashaya, Southern Pomo), general knowledge (Wutun), and ego evidentiality (Foe, also 'personal-factual' for Oksapmin). In addition to the terms given in Figure 1, some terms are almost polysemous because they consist of words that are used in various contexts. For example, the word 'sensory' is used in the terms for visual, direct, and nonvisual categories: 'direct sensory experience' (visual, Tsafiki), 'sensory experience' (direct, Mosetén), and 'sensory' (nonvisual, Duna). The word 'non-eyewitness' is used in the terms for nonvisual and indirect categories, 'non-eyewitness experiential' (nonvisual, Western Apache) and 'non-eyewitness' (indirect, Jarawara).

The polysemous terms presented in Figure 1 and mentioned above are mainly used for categories that are semantically close, which means that the terms are polysemous rather than homonymous. One term, however, is most likely homonymous: the term 'reportive' that is used for reportative and ego categories. These categories have little in common semantically – except both being evidential categories – and in Koshal's (1979) description of Ladakhi, the term 'reportive' is not used in the usual sense of verbal report (see Zeisler 2017: 301).

The polysemy of terms involves visual, nonvisual sensory, direct, and ego categories, inferentials and assumptives, as well as reportatives and quotatives. Inferentials and assumptives both involve inference, so the terms are created from the same sources. Therefore, both have terms belonging to the INFER and DEDUCE term types, and they share some other terms that refer to mental processes, like 'conjecture'. The overlap of the terms decreases the distinctiveness of the terms, as the type of inference is not clear from the term alone. Because assumption is also related to previous experiences, it shares the term 'experiential' with ego and direct evidentiality. Visual, nonvisual, and direct evidentiality involve sensory perception; hence the term 'direct' for visual and direct, and 'experiential' for nonvisual sensory and direct evidentiality. Additionally, the direct category of Oksapmin is termed 'visual-sensory' (Section 4.3), although otherwise the term 'visual' is used only for visual categories.

When it comes to visual, nonvisual, direct, and ego evidentiality, the comparative concepts show overlap as well. In Plungian's (2010: 37) classification, they all belong to personal/direct access (see Section 3, and Table 1 in Section 2). They indicate personally acquired information, via direct perception or participation, but visual evidentiality is dedicated to visual perception, nonvisual evidentiality to other sensory perception, and ego evidentiality to participation. Additionally, there is conceptual similarity with general knowledge as well, although this does not necessarily result in polysemous terms – except 'factual' in Figure 1 – since there are

only few separate categories of general knowledge. General knowledge is accumulated knowledge acquired throughout one's life, involving both perception and participation. According to Kittilä (2019: 1288–1290), general knowledge can be coded with ego, visual, or direct evidentials, and Aikhenvald (2004: 190–192) lists speaker's responsibility and participation as well as generally known facts as possible meanings of visual and direct evidentials. Mamaindê, for instance, has separate categories for general knowledge and visual evidentiality (Eberhard 2009), whereas Oksapmin codes ego evidentiality and general knowledge with 'personal-factual' and direct evidentiality with 'visual-sensory' (Loughnane 2009).

Lastly, reportatives and quotatives both mark second-hand information, so again the terms are formed from similar sources, as shown by the terms 'reported' and especially 'quotative'. Aikhenvald (2004: 177 fn.) remarks that 'quotative' is traditionally used for reportative evidentiality in descriptions of American languages, so research traditions explain some of the overlap. Furthermore, languages do not always distinguish between reportative and quotative, since reportatives can have quotative-like usage. Specialized quotatives also seem to be rarer: in Aikhenvald's (2004, 2018) classification of evidential systems, only three systems have separate reportatives and quotatives,[4] so a distinct term for quotative is rarely needed.

Consequently, blurred hierarchies and distinctions between the categories might explain why the same term is applied to different categories. The division between reportatives and quotatives is often vague, as few languages distinguish between them. Visual, direct, and nonvisual sensory evidentials all indicate sensory perception but differ in the exclusion or inclusion of some senses, and ideally the terms should reflect that sensory range. If the marker only expresses visual perception, a term such as 'direct' might be too broad. On the contrary, if a category covers various nonvisual senses, 'auditive' might be a misleadingly narrow term. While inference and assumption are conceptually distinct and formally distinguished in many languages, it appears that the distinction is not clear-cut enough to inspire completely different terms, as some terms are used almost interchangeably (see Figure 1).

6 Discussion

Section 4 investigated how evidential categories have been defined and what terms have been used for them in linguistic descriptions. Languages code various information sources that functionally correspond to each other and to comparative

4 A B5 system has reported, quotative, and 'everything else' categories, whereas a C3 system has categories for direct, inferred, reported, and quotative evidentiality, and a C6 system has inferred, reported quotative and 'everything else' (Aikhenvald 2004: 50, 57, 2018: 15).

concepts. Since the language-particular categories display differing semantic properties, the terminology is varied. Section 5 discussed instances when the same term is employed for different categories, creating term polysemy.

While the terminology used in linguistic descriptions is diverse, the terms discussed in this investigation mostly fit the criteria for good terms (see Section 3). The terms might not be short, but they describe the evidential categories well, are distinctive at least within one grammar, and fit within the system of the language they are used for. The terms are also suitable for derivations and combinations, as shown by terms like 'visual', 'nonvisual', and 'physical inferential'. Derivations and combinations make the terms longer, but also more precise, and thus help to describe the relations between categories. For example, 'nonvisual' explicitly indicates an opposition to 'visual' while 'auditive' does not. As seen in Sections 4 and 5, the evidential terminology exhibits both synonymy and polysemy, as there are different terms for similar categories, and similar terms for different categories. Different uses of the same term may decrease its transparency and distinctiveness so that the information source is not always clear from the term itself.

Haspelmath (2010) notes that both comparative concepts and descriptive categories need terms. In typological studies on evidentiality (e.g. Aikhenvald 2004; Hengeveld and Hattnher 2015; Plungian 2010; San Roque and Loughnane 2012; Willett 1988), the main distinctions into comparative concepts are similar – visual and other sensory evidentiality, inference-based evidentiality, and reported evidentiality – even though further distinctions differ. The terms for comparative concepts seem quite stable, especially 'visual' and 'inferential/inference' (see summary in Hengeveld and Hattnher 2015: 495). The terms for descriptive categories are more varied, which is expected since there are more descriptive categories than comparative concepts and more researchers creating new terms. The descriptive categories can have further distinctions under the same information source, like 'visible evidence' and 'previous evidence' in Foe, which are both inferentials. Sometimes the distinctions can be more fine-grained than what is relevant for comparative concepts, or they may combine information sources in ways not easily captured by comparative concepts, such as the 'sensory-inferential' evidential in Wutun. Thus, borrowing the term from the comparative concept might not be ideal and a new term is needed.

As shown in Section 4, the number of synonyms appears to be greatest for nonvisual, inferential, assumptive, and ego evidentiality. Regarding ego evidentiality, the terminological variation is explained to some extent by different research traditions when terms have been created from different sources (e.g. 'factual' versus 'performative'). Regarding the other categories, the variation is probably connected to different semantic aspects of the categories – note that even with the synonyms, the reportatives have consistent terminology as all three major

term types are widely used, and reportatives are semantically uniform across languages (Aikhenvald 2004: 176). The comparative concept of nonvisual sensory has two components: sensory input, but not through vision. This contrast shows in the definitions and terms give for nonvisual categories, where some emphasize the lack of vision and some sensory perception; some of these in turn focus on auditory perception. Inferential and assumptive evidentiality, likewise, can be construed in two parts: inference and the basis for inference (either evidence or some other knowledge). Additionally, one needs pre-existing knowledge to make inferences, and inference can involve assessments of probability, which can make inference and assumption similar to general knowledge or epistemic modality. These semantic aspects can lead to very different term choices.

Synonymous terms reflect different semantic properties of evidential categories, but what does the range of terms tell us about evidentiality? Firstly, for a long time there was no unified idea of evidentiality, as shown in the historical surveys by Aikhenvald (2004) and Plungian (2010), which results in variable terminology. Our knowledge of evidentiality and evidential categories is still increasing, as shown by the rather recent addition of general knowledge to evidentiality, with five different terms in four descriptions. As general knowledge can be covered by other evidentials and a specialized category for it seems rare (see Kittilä 2019), a separate term is only rarely needed and there are fewer precedents for term choices, so the term choices are shifting.

Secondly, evidentials may have other meanings besides information source, which may blur the basic functions of the markers and thus complicate the description. For example, the 'conjecture' marker in Wanka Quechua has many functions involving inference, assessments of likelihood and psycho-emotional effects (Floyd 1993: 146–151). The connection between evidentials and epistemic modals is well known, but interaction with other epistemic categories is also possible. Widmer (2020) discusses how egophoricity and evidentiality manifest together or independently in different languages. Evans et al. (2018: 150–158) discuss evidentials that indicate from whose perspective the evidence is considered, and connect it to engagement, the coding of how knowledge is accessible to and shared between the speaker and addressee. Furthermore, evidentials are not always easy to extract in elicitation, and they do not necessarily occur in all genres (see Mithun 2020). All this can affect the analysis of evidentials and complicate the choice of a suitable term.

The study of other phenomena related to evidentiality has an effect on our understanding of evidential categories. Mirativity and its relation to evidentiality has received much discussion (e.g. DeLancey 2001, 2012; Hill 2012). Languages can have mirative markers independent of evidentiality or as a part of the same paradigm, or mirativity can be an additional 'overtone' to evidentials (DeLancey 2001: 370). Unsurprisingly, mirativity has found its way into the terminology of evidentials when a

category has mirative functions as well. In Washo, the *mirative* marker expresses inference as source of evidence but conveys surprise as well (Jacobsen 1964: 606, 630). Western Apache has a particle which de Reuse (2003) dubs 'non-mirative inferential' (see Table 8) to indicate disassociation from mirativity.[5]

Another example is ego evidentiality, which is considered an information source in this study. While it is not always regarded as such (Aikhenvald 2018: 24), there are languages where participation or involvement is opposed to clearly evidential categories, such as Oksapmin (Loughnane 2009; see also Sun's [2018] examples from Taku). Egophoricity as a phenomenon has received several different interpretations, e.g. as a type of evidentiality or person reference (see San Roque et al. 2018: 48–65). According to Widmer (2020: 272–274, 282), egophoricity and evidentiality can overlap in different ways and in some cases the egophoric markers may be analysed as evidentials, although the evidential approach is more problematic for non-egophoric markers. Over time, writers have used different terms for categories identified here as ego evidentials (Section 4.10; see also San Roque et al. [2018: 6–8] for terminology), which in this case shows that the understanding of egophoricity and its relationship to evidentiality is developing.

The goal of this study was to examine whether the same terms are used for similar evidential categories, and to explore how the term choices reflect the semantic properties of the evidentials. Different terms convey different ideas about the semantics of evidentials, as noted in Section 4.1, and they may describe various nuances of the descriptive categories. Terms such as 'direct' (for visual and direct evidentials) and 'auditive' (for nonvisual) describe the different sensory range covered by the evidentials. The term 'deduced' could imply a different mental process form inference, and even a connection to deductive inference as known in philosophy, if wanted. Modified terms can further describe the information source, like 'logical inferential' (Eastern Pomo; McLendon 2003) and 'physical inferential' (Western Apache; de Reuse 2003). The distinctiveness is obscured by term synonymy and differing usage: if at some point terms like 'inferential', 'deductive', or 'conjecture' are meant to distinguish between inferentials and assumptive, the distinction is lost when other writers use it differently.

7 Conclusions and suggestions

As shown in this survey, the terminology for evidentials is varied, which may be inconvenient for research. Even when linguistic categories are considered distinct,

5 In fact, Western Apache has another marker called 'mirative/inferential' that was left out of this study because it is primarily mirative (de Reuse 2003: 81, 83).

there are similarities that could be reflected in the terminology. Consistent terminology highlights the similarities and reduces ambiguity. On the other hand, the differences of the categories should be acknowledged in terminology too, since the terms should describe the concepts, in this case the categories of a particular language. There should be a balance between describing similarities and differences: terms should be close enough to identify similarity, but different enough to do justice to different properties. The challenge in terminology for evidentials is that evidentials can have many semantic properties, and the interaction with other linguistic categories can affect the functions of evidentials. There are many aspects to consider when choosing a term to describe an evidential.

To avoid term synonymy, one solution might be to borrow terms from typological surveys, like Aikhenvald (2004) or Plungian (2010). On the other hand, the generalizations of comparative concepts do not always fit language-particular evidential systems, so the terms might be less suitable (see Section 6). Additionally, typologies have terminological variation as well, so they do not always provide a clear terminological model: for example, Hengeveld and Hattnher (2015) use 'inference' for what Aikhenvald (2004, 2018) calls 'assumption' and San Roque and Loughnane (2012) call 'reasoning'. It would be good to include reference to typological surveys, for clarity, if the terminology is based on them. If the terms used in typological surveys are not suitable, or if it is important to follow specific research tradition, references to comparative concepts of typological surveys could be informative for readers from different backgrounds and help to explain a possibly unfamiliar term.

Since descriptive categories and comparative concepts do not fully correspond to each other, neither do the terms. Earlier uses of the terms, too, may affect the interpretations. For example, in the Americanist tradition 'quotative' has been used for reportative evidentiality and as a label for quotation markers that are not evidentials (see Boye 2012: 32), but in the typology of evidentiality it is used for secondhand information obtained from an identified source. On the other hand, applying terms like 'performative' or 'factual' to evidentials (Oswalt 1961, 1986; Rule 1977; Sandman 2016; Walker 2013) may obscure the evidential nature of the markers, since these terms are otherwise used in the study of speech acts and modality.

Haspelmath (2010) notes that it is practical to use the same terms for both comparative concepts and descriptive categories – since typologists cannot change the terms used in linguistic descriptions, they could pay attention to the term choices for comparative concepts. For example, San Roque and Loughnane (2012) explicitly state which terms are theirs and which are from the original grammar. This practice helps to understand the original description, and in this case also made it possible for me to study terms from sources that were not directly available. Visser (2015: 294–295) also explains how her terminology corresponds to the terms used in her source materials. Overall, differentiating between the

terminology of the typology and the descriptions helps the reader understand the typological classification and makes it more transparent.

It would be interesting to see more awareness of the terms in linguistic descriptions and typological studies, since terms can create associations and affect interpretations. Also studies of other kinds of terms would be interesting: is the terminology for number, for instance, be more uniform, and how would the terminology for modals compare with the terminology for evidentials? Comments on terminology might also elucidate the semantics of the categories: for example, if the chosen term is 'deduced' rather than 'inferred', does it convey something of the nature of inference? Focussing on how linguistic categories are labelled can give us new insights into their semantics and what are considered their central meanings by linguists.

Abbreviations

ANPH	anaphoric
AUG	augmentative
COMPL	completive
DECL	declarative
EGO	ego
EMPH	emphatic
EV	evidential
FNS	final nominal suffix
FP	far past
G.KN	general knowledge
HS.DIFF	diffuse hearsay
HS.QUOT	quotative hearsay
INDIR	indirect
IPFV	imperfect, imperfective
LOC	locative
M	masculine
MIR	mirative
NCL.HUM	noun class: human
NMLZ	nominalizer
NVIS	nonvisual
OBJ	object
PST	past
PFV	perfect, perfective
PL	plural
POSS	possessive
PREVIOUS	before time of speaking
PROGR	progressive
REF	referential
SEN.INF	sensory-inferential

SG	singular
SUBJ	subject
VCL	verb class marker
VIS	visual
YESTP	yesterday past

Appendix: List of languages

Africa: 1

Shilluk (Western Nilotic)

America, North: 14

Apache, Western (Athabaskan)
Greenlandic, Western (= Kalaallisut) (Eskimo-Aleut)
Cora (Southern Uto-Aztecan)
Kashaya (= Southwestern Pomo) (Pomoan)
Kwakiutl (Northern Wakashan)
Makah (Southern Wakashan)
Maricopa (Yuman)
Musqueam (Salishan)
Patwin (Wintuan)
Pomo, Eastern (Pomoan)
Pomo, Southeastern (Pomoan)
Pomo, Southern (Pomoan)[6]
Washo (isolate)
Wintu (Wintuan)

America, South: 16

Aymara (Aymaran)
Bora (Boran)
Desano (Eastern Tucanoan)
Hup (Nadahup)

6 Despite their misleading names, the Pomoan languages are not dialects of the same language, but different, mutually unintelligible languages (Mithun 1999: 473).

Jarawara (Arawan)
Quechua, Wanka (Quechuan)
Mamaindê (Northern Nambiquaran)
Matses (Panoan)
Mosetén (isolate)
Mỹky (isolate)
Nambikuara (Nambiquaran)
Shipibo-Konibo (Panoan)
Tariana (Arawakan)
Tsafiki (Barbacoan)
Tuyuca (Eastern Tucanoan)
Wanano (Eastern Tucanoan)

Eurasia: 13

Ainu (Ainu)
Akha (Sino-Tibetan, Burmo-Qiangic)
Dulong (Sino-Tibetan)
Enets, Forest (Uralic, Samoyedic)
Ersu (Sino-Tibetan, Burmo-Qiangic)
Ingush (Nakh-Daghestan)
Kalmyk (Mongolic)
Ladakhi (Sino-Tibetan, Bodish)
Nenets, Tundra (Uralic, Samoyedic)
Qiang (Sino-Tibetan, Burmo-Qiangic)
Tibetan (standard) (Sino-Tibetan, Bodish)
Chechen (Nakh-Daghestan)
Wutun (Sino-Tibetan, Sinitic)

Papua New Guinea: 7

Duna (isolate)
Edolo (Bosavi)
Fasu (isolate)
Foe (East Kutubu)
Huli (Nuclear Trans New Guinea)
Ipili (Nuclear Trans New Guinea)
Oksapmin (Nuclear Trans New Guinea)

References

Aikhenvald, Alexandra Y. 2003. Evidentiality in Tariana. In Alexandra Y. Aikhenvald & R. M. W. Dixon (eds.), *Studies in evidentiality* (Typological Studies in Language 54), 131–164. Amsterdam: John Benjamins.

Aikhenvald, Alexandra Y. 2004. *Evidentiality*. Oxford: Oxford University Press.

Aikhenvald, Alexandra Y. 2018. Evidentiality: The framework. In Alexandra Aikhenvald (ed.), *The Oxford handbook of evidentiality*, 1–44. Oxford: Oxford University Press.

Barnes, Janet. 1984. Evidentials in the Tuyuca verb. *International Journal of American Linguistics* 50(3). 255–271.

Boas, Franz. 1911. Kwakiutl. In Franz Boas (ed.), *Handbook of American Indian languages. Part 1* (Smithsonian Institution. Bureau of American Ethnology Bulletin 40), 423–558. Washington: Government Printing Office.

Boye, Kasper. 2012. *Epistemic meaning: A crosslinguistic and functional-cognitive study*. Berlin: De Gruyter Mouton.

Boye, Kasper. 2018. Evidentiality: The notion and the term. In Alexandra Y. Aikhenvald (ed.), *The Oxford handbook of evidentiality*, 261–272. Oxford: Oxford University Press.

Brugman, Claudia M. & Monica Macaulay. 2015. Characterizing evidentiality. *Linguistic Typology* 19(2). 201–237.

Casad, Eugene. 1984. Cora. In Ronald W. Langacker (ed.), *Studies in Uto-Aztecan grammar*, vol. 4, *Southern Uto-Aztecan grammatical sketches* (Summer Institute of Linguistics: Publications in Linguistics 56, 4), 151–459. Dallas: Summer Institute of Linguistics & University of Texas at Austin.

Casad, Eugene H. 1992. Cognition, history and Cora *yee*. *Cognitive Linguistics* 3(2). 151–186.

Cornillie, Bert. 2007. The continuum between lexical and grammatical evidentiality: A functional analysis of Spanish *parecer*. *Rivista di Linguistica* 19(1). 109–128.

DeLancey, Scott. 2001. The mirative and evidentiality. *Journal of Pragmatics* 33(3). 369–382.

DeLancey, Scott. 2012. Still mirative after all these years. *Linguistic Typology* 16(3). 529–564.

de Reuse, Willem J. 2003. Evidentiality in Western Apache (Athabaskan). In Alexandra Y. Aikhenvald & R. M. W. Dixon (eds.), *Studies in evidentiality* (Typological Studies in Language 54), 79–100. Amsterdam: John Benjamins.

Dickinson, Connie. 2000. Mirativity in Tsafiki. *Studies in Language* 24(2). 379–421.

Dickinson, Connie. 2002. *Complex predicates in Tsafiki*. Eugene: University of Oregon dissertation.

Dixon, R. M. W. 2003. Evidentiality in Jarawara. In Alexandra Y. Aikhenvald & R. M. W. Dixon (eds.), *Studies in evidentiality* (Typological Studies in Language 54), 165–187. Amsterdam: John Benjamins.

Eberhard, David Mark. 2009. *Mamaindè grammar: A Northern Nambikwara language and its cultural context*. Amsterdam: Vrije Universiteit dissertation.

Epps, Patience. 2005. Areal diffusion and the development of evidentiality: Evidence from Hup. *Studies in Language* 29(3). 617–650.

Epps, Patience. 2008. *A grammar of Hup* (Mouton Grammar Library 43). Berlin: Mouton de Gruyter.

Evans, Nicholas, Henrik Bergqvist & Lila San Roque. 2018. The grammar of engagement II: Typology and diachrony. *Language and Cognition* 10(2). 141–170.

Fleck, David William. 2003. *A grammar of Matses*. Houston, TX: Rice University dissertation.

Floyd, Rick. 1993. *The structure of Wanka Quechua evidential categories*. San Diego: University of California dissertation.

Fortescue, Michael. 2003. Evidentiality in West Greenlandic. A case of scattered coding. In Alexandra Y. Aikhenvald & R. M. W. Dixon (eds.), *Studies in evidentiality* (Typological Studies in Language 54), 291–306. Amsterdam: John Benjamins.
Garrett, John. 2001. *Evidentiality and assertion in Tibetan*. Los Angeles: University of California dissertation.
Gordon, Lynn. 1986. The development of evidentials in Maricopa. In Chafe Wallace & Johanna Nichols (eds.), *Evidentiality: The linguistic coding of epistemology*, 75–88. Norwood, NJ: Ablex.
Haarala, Risto. 1981. *Sanastotyön opas* [Guide to terminological work]. Helsinki: Kotimaisten kielten tutkimuskeskus.
Hansson, Inga-Lill. 2003. Akha. In Thurgood Graham & Randy J. LaPolla (eds.), *The Sino-Tibetan languages*, 236–251. London: Routledge.
Hardman, Martha James. 1986. Data-source marking in the Jaqi languages. In Chafe Wallace & Johanna Nichols (eds.), *Evidentiality: The linguistic coding of epistemology*, 113–136. Norwood, NJ: Ablex.
Haspelmath, Martin. 2010. Comparative concepts and descriptive categories in cross-linguistic studies. *Language* 86(3). 663–687.
Hengeveld, Kees & Marize Mattos Dall'Aglio Hattnher. 2015. Four types of evidentiality in the native languages of Brazil. *Linguistics* 53(3). 479–524.
Hill, Nathan W. 2012. "Mirativity" does not exist: *ḥdug* in "Lhasa" Tibetan and other suspects. *Linguistic Typology* 16(3). 389–433.
Jacobsen, William Horton, Jr. 1964. *A grammar of Washo language*. Berkeley: University of California dissertation.
Jacobsen, William H., Jr. 1986. The heterogeneity of evidentials in Makah. In Chafe Wallace & Johanna Nichols (eds.), *Evidentiality: The linguistic coding of epistemology*, 3–28. Norwood, NJ: Ablex.
Kaye, Jonathan Derek. 1970. *The Desano verb: Problems in semantics, syntax and phonology*. New York: Columbia University dissertation.
Kelly, Barbara & Aimée Lahaussois. 2019. Establishing linguistic schools through reading descriptive grammars: A pilot study using Himalayan grammars. Paper presented at the Colloque de la Société d'histoire et épistémologie des sciences du language, 24–26 January 2019, Paris, France.
Kelly, Barbarba & Aimée Lahaussois. 2021. Chains of influence in Himalayan grammars: Models and interrelations shaping descriptions of TB languages of Nepal. *Linguistics* 59(1). 207–245.
Kittilä, Seppo. 2019. General knowledge as an evidential category. *Linguistics* 57(6). 1271–1304.
Koshal, Sanyukta. 1979. *Ladakhi grammar*. Delhi: Motilal Banarsidass.
Kroeker, Menno. 2001. A descriptive grammar of Nambikuara. *International Journal of American Linguistics* 67(1). 1–87.
Künnap, Ago. 2002. On the Enets evidential suffixes. *Linguistica Uralica* 38(2). 145–153.
LaPolla, Randy J. 2003a. Dulong. In Thurgood Graham & Randy J. LaPolla (eds.), *The Sino-Tibetan languages*, 674–684. London: Routledge.
LaPolla, Randy J. 2003b. *A grammar of Qiang* (Mouton Grammar Library 31). Berlin: Mouton de Gruyter.
Loughnane, Robyn. 2009. *A grammar of Oksapmin*. Melbourne: University of Melbourne dissertation.
Lowe, Ivan. 1999. Nambiquara. In R. M. W. Dixon & Alexandra Y. Aikhenvald (eds.), *The Amazonian languages*, 269–291. Cambridge: Cambridge University Press.

McLendon, Sally. 1975. *A grammar of Eastern Pomo* (University of California Publications in Linguistics 74). Berkeley: University of California Press.
McLendon, Sally. 1996. Sketch of Eastern Pomo, a Pomoan language. In Ives Goddard (ed.), *Handbook of North American indians*, vol. 17, 507–550. Washington: Smithsonian Institution.
McLendon, Sally. 2003. Evidentials in Eastern Pomo with a comparative survey of the category in other Pomoan languages. In Alexandra Y. Aikhenvald & R. M. W. Dixon (eds.), *Studies in evidentiality* (Typological Studies in Language 54), 101–130. Amsterdam: John Benjamins.
Miller, Cynthia L. & Leoma G. Gilley. 2007. Evidentiality and mirativity in Shilluk. In Doris L. Payne & Mechthild Reh (eds.), *Advances in Nilo-Saharan linguistics: Proceedings of the 8th International Nilo-Saharan Linguistics Colloquium, University of Hamburg, August 22–25, 2001*, 191–206. Cologne: Rüdiger Köppe.
Mithun, Marianne. 1999. *The languages of native North America*. Cambridge: Cambridge University Press.
Mithun, Marianne. 2020. Context and consciousness: Documenting evidentials. *Folia Linguistica* 54(2). 317–342.
Monserrat, Ruth & R. M. W. Dixon. 2003. Evidentiality in Mỹky. In Alexandra Y. Aikhenvald & R. M. W. Dixon (eds.), *Studies in evidentiality* (Typological Studies in Language 54), 237–241. Amsterdam: John Benjamins.
Moshinsky, Julius. 1974. *A grammar of Southeastern Pomo* (University of California Publications in Linguistics 72). Berkeley: University of California Press.
Nichols, Johanna. 1994. Chechen. In Rieks Smeets (ed.), *The indigenous languages of the Caucasus 4*, 1–77. Delmar, NY: Caravan Books.
Nichols, Johanna. 2011. *Ingush grammar* (University of California Publications in Linguistics 143). Berkeley: University of California Press.
Nikolaeva, Irina. 2014. *A grammar of Tundra Nenets* (Mouton Grammar Library 65). Berlin: de Gruyter Mouton.
Nuopponen, Anita & Nina Pilke. 2010. *Ordning och reda: Terminologilära i teori och praktik* [Order and clarity: Terminology in theory and practice]. Stockholm: Norstedts.
Oswalt, Robert Lewis. 1961. *A Kashaya grammar (Southwestern Pomo)*. California: University of California dissertation.
Oswalt, Robert L. 1986. The evidential system of Kashaya. In Chafe Wallace & Johanna Nichols (eds.), *Evidentiality: The linguistic coding of epistemology*, 29–45. Norwood, NJ: Ablex.
Pitkin, Harvey. 1984. *Wintu grammar* (University of California Publications in Linguistics 94). Berkeley: University of California Press.
Plungian, Vladimir A. 2010. Types of verbal evidentiality marking: An overview. In Gabriele Diewald & Elena Smirnova (eds.), *Linguistic realization of evidentiality in European languages* (Empirical Approaches to Language Typology 49), 15–58. Berlin: De Gruyter Mouton.
Rule, William M. 1977. *A comparative study of the Foe, Huli and Pole languages of Papua New Guinea* (Oceania Linguistic Monographs 20). Sydney: University of Sydney.
Sakel, Jeanette. 2004. *A grammar of Mosetén* (Mouton Grammar Library 33). Berlin: Mouton de Gruyter.
Sandman, Erika. 2016. *A grammar of Wutun*. Helsinki: University of Helsinki dissertation.
San Roque, Lila & Robyn Loughnane. 2012. The New Guinea Highlands evidentiality area. *Linguistic Typology* 16(1). 111–167.
San Roque, Lila, Simeon Floyd & Elisabeth Norcliffe. 2018. Introduction. In Simeon Floyd, Elisabeth Norcliffe & Lila San Roque (eds.), *Egophoricity* (Typological Studies in Language 118), 1–77. Amsterdam: John Benjamins.

Schlichter, Alice. 1986. The origin and deictic nature of Wintu evidentials. In Chafe Wallace & Johanna Nichols (eds.), *Evidentiality: The linguistic coding of epistemology*, 46–59. Norwood, NJ: Ablex.

Shibatani, Masayoshi. 1990. *The languages of Japan*. Cambridge: Cambridge University Press.

Siegl, Florian. 2013. *Materials on Forest Enets, an indigenous language of Northern Siberia* (Suomalais-ugrilaisen seuran toimituksia/Mémoires de la Société finno-ougrienne 267). Helsinki: Société finno-ougrienne.

Skribnik, Elena & Olga Seesing. 2014. Evidentiality in Kalmyk. In Alexandra Y. Aikhenvald & R. M. W. Dixon (eds.), *The grammar of knowledge: A cross-linguistic typology*, 148–170. Oxford: Oxford University Press.

Stenzel, Kristine. 2008. Evidentials and clause modality in Wanano. *Studies in Language* 32(2). 405–445.

Sun, Jackson T.-S. 2018. Evidentials and person. In Alexandra Y. Aikhenvald (ed.), *The Oxford handbook of evidentiality*, 47–64. Oxford: Oxford University Press.

Suttles, Wayne. 2004. *Musqueam reference grammar*. Vancouver: UBCPress.

Thiesen, Wesley & David Weber. 2012. *A grammar of Bora with special attention to tone* (SIL International Publications in Linguistics 148). Dallas, TX: SIL International.

Thurgood, Graham. 1986. The nature and origins of the Akha evidentials system. In Chafe Wallace & Johanna Nichols (eds.), *Evidentiality: The linguistic coding of epistemology in language*, 214–222. Norwood, NJ: Ablex.

Tournadre, Nicolas. 1994. Personne et médiatifs en tibétain. *Faits de langues* 3. 149–158.

Tournadre, Nicholas & Randy J. LaPolla. 2014. Towards a new approach to evidentiality: Issues and directions for research. *Linguistics of the Tibeto-Burman Area* 37(2). 240–263.

Valenzuela, Pilar M. 2003. Evidentiality in Shipibo-Konibo, with a comparative overview of the category in Panoan. In Alexandra Y. Aikhenvald & R. M. W. Dixon (eds.), *Studies in evidentiality* (Typological Studies in Language 54), 33–61. Amsterdam: John Benjamins.

Visser, Eline. 2015. Tensed evidentials: A typological study. *Linguistic Typology* 19(2). 279–325.

Walker, Neil Alexander. 2013. *A grammar of Southern Pomo: An indigenous language of California*. Santa Barbara: University of California dissertation.

Whistler, Kenneth W. 1986. Evidentials in Patwin. In Chafe Wallace & Johanna Nichols (eds.), *Evidentiality: The linguistic coding of epistemology*, 60–74. Norwood, NJ: Ablex.

Widmer, Manuel. 2020. Same same but different: On the relationship between egophoricity and evidentiality. In Seppo Kittilä & Henrik Bergqvist (eds.), *Evidentiality, egophoricity and engagement* (Studies in Diversity Linguistics 30), 263–287. Berlin: Language Science Press.

Willett, Thomas. 1988. A cross-linguistic survey of the grammaticization of evidentiality. *Studies in Language* 12(1). 51–97.

Zeisler, Bettina. 2017. The emergence of the Ladakhi inferential and experiential markers from a marker for admirativity (non-commitment): The case of *ḥdug* and *snaŋ*. *Journal of South Asian Languages and Linguistics* 4(2). 259–307.

Zeisler, Bettina. 2018. Don't believe in a paradigm that you haven't manipulated yourself! – Evidentiality, speaker attitude, and admirativity in Ladakhi (extended version). *Himalayan Linguistics* 17(1). 67–130.

Zhang, Sihong. 2014. The expression of knowledge in Ersu. In Alexandra Y. Aikhenvald & R. M. W. Dixon (eds.), *The grammar of knowledge: A cross-linguistic typology*, 132–147. Oxford: Oxford University Press.