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The pragmatic differences between grammatical and lexical evidentiality: A corpus-based study of Tibetan and English

ABSTRACT

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The paper examines to what extent expressing information sources with a fully grammaticalized evidential system or with lexical means may have a different pragmatic impact in conversation. A contrastive corpus of Tibetan (TSC) and English (CSC/LAC) allows me to investigate several dimensions: frequency, semantic schematicity, optionality, economy, and information hierarchy. The data from the contrastive corpus indicate that Tibetan evidentials are on average 6.7 times more frequent than English evidentials. Tibetan evidentials are also functionally more schematic, since English evidentials usually contain more semantic features. This compels English speakers to be more specific when referring to their information sources. Grammatical evidential systems may be less optional than lexical systems, but the degree of optionality differs depending on the linguistic level. The morpho-syntactic obligatoriness of many Tibetan evidentials may indeed be compensated by the availability of evidentially neutral forms in the same paradigm. However, evidentiality seems to be pragmatically less optional in Tibetan than in English. Tibetan evidentials are also more economical on a morpho-phonetic, syntactic, and cognitive level. Finally, all these parameters influence the informational status of evidentials. Because they are more frequent, schematic, obligatory, and economical, Tibetan evidentials appear more backgrounded.

1. Introduction¹

Research on evidentiality is rapidly expanding in two main directions. One line of study traditionally focuses on languages with highly grammaticalized evidential paradigms, while the other examines languages which mainly express information sources lexically. These two perspectives have been prolific in the past two decades. Numerous monographs and edited volumes have given us a detailed cross-linguistic documentation of languages with complex

¹ *Glossing abbreviations:* ADJ, adjective; ADV, adverb; AUX, auxiliary; C, complementizer; CIS, cislocative; COMP, comparative; CON, conjunction; COP, copula; CPL, completive; DAT, dative; DEM, demonstrative; DIR, direct perception; DUR, durative; EGO, egophoric; EPI, epistemic; ERG, ergative; FACT, factual; GEN, genitive; H, honorific; HAB, habitual; HSAY, hearsay; INCPL, incompletive; INDF, indefinite; INF, inferential; INT, interrogative; LOC, locative; LV, light verb; NEG, negative; NMLZ, nominalizer; NP, noun phrase; PF, perfective; PHA, phatic; p.p., past participle; PRO, pronoun; S, sentence; V, verb; VP, verb phrase

Other abbreviations: COCA, Corpus of Contemporary American English; CSC, Cambridge Student Corpus; OED, Oxford English Dictionary; L1, first language; LAC, Lhasa American Corpus; pmw, per million words; *n*, number; N.I.C.E., Negation Inversion Code Emphasis; P.R.C., People's Republic of China; TSC, Tibet Student Corpus; U.K., United Kingdom

grammatical systems encoding evidentiality (Aikhenvald & Dixon, 2003; Aikhenvald, 2004; ed., 2018; 2021; Gawne & Hill, eds., 2017). A comparable amount of work has been published on the (semi-)lexical expression of information sources in various language families, notably Romance, Germanic, and Slavic languages (Diewald & Smirnova, eds., 2010; Marín-Arrese et al., eds., 2017; Foolen et al., eds., 2018; Wiemer & Marín-Arrese, eds., 2022). However, these two branches of study rarely meet, and this paper aims to connect work in classical typology and more pragmatic approaches based on highly investigated languages. This study will be based on a contrastive corpus of two languages with radically different evidential systems, namely Tibetan and English, in their standard, contemporary forms.

Although all Tibetic languages present grammaticalized evidentials, my analysis will focus on standard spoken Tibetan, which is particularly relevant when working on evidentiality for several reasons. It is a ‘complex evidential language’ (Tournadre & LaPolla, 2014), as it possesses numerous fully grammaticalized forms encoding information sources, such as the inflected copulas *yod*, *'dug*, the verbal suffixes *-song*, *-bzhag*, or the enclitics *-za*, *-ze*, etc. (DeLancey, 1985; Tournadre, 1996: 220-238; 2008; 2017; Garrett, 2001: 22-207. Author, 2014: 112-144). Moreover, Tibetan grammar includes evidential forms that encode the three main evidential categories: direct perception, inference, and hearsay. Finally, among the complex evidential languages, Tibetan probably has the greatest amount of synchronic and diachronic data available. Several scholars have offered in-depth linguistic descriptions of the language, a variety of corpora have been collected, and written Tibetan extends from the 8th to the 21st century, offering a unique opportunity to investigate the grammaticalization of evidentiality in detail (Saxena 1997; Hill, 2013; Gawne, 2017; Oisel, 2017; Zeisler, 2018).

Conversely, English is often presented as a textbook example of languages lacking grammatical evidentiality (Aikhenvald, 2004: 10; Whitt, 2011). Although this claim must be qualified (Author, 2022), the English evidential system is indeed overwhelmingly more lexical than grammatical. English is an ideal candidate for a contrastive analysis, since probably no language has been described with as much depth and detail in synchrony and diachrony. Moreover, the mass of new data that has been accumulating in the past decades makes the analysis of subtle pragmatic phenomena more evidence-based.

The research on grammatical and lexical evidentiality has recently seen an unprecedented development leading to a better cross-linguistic understanding of the notion on several linguistic levels. However, the pragmatic differences between expressing evidentiality in a language which possesses a grammatical paradigm for it and a language with very limited grammatical evidentiality deserve more attention. With detailed corpus data, this article contributes to filling

this gap by investigating the implications of radically different evidential systems for a speaker's discursive choices. The paper is organized as follows. Section 2 offers a definition of evidentiality, and presents some of the current debates on its morpho-syntax and semantics. Section 3 introduces the corpora that were collected specifically to contrast Tibetan and English evidential systems. Section 4 presents how evidentiality manifests itself in the two languages. It illustrates the criteria that linguistic forms have to meet to be considered evidentials. Section 5 discusses the main findings, and examines how Tibetan and English evidentiality are pragmatically different. In section 6, I will formulate my conclusion.

2. A definition of evidentiality

The dominant definition of evidentiality is probably the one adopted in Aikhenvald (2004; ed., 2018), i.e. 'the grammatical marking of information sources'. However, alternative definitions have been proposed by several linguists (Squartini, 2001; Tournadre & LaPolla, 2014; Author, 2014: 31-34; Boye, 2018), and many points are still debated.

First, 'information source' may not be the best term to describe what evidentials encode. 'Source' usually refers to the specific work or person that supplies information (e.g., definition in the OED), while evidentials possess a more abstract meaning. They refer rather to the speakers' types of access to the information they are sharing, by specifying if a statement relies on direct perception, inference, or hearsay.² Although I do not see 'information sources' as the most appropriate label, I will still use this term, because it is relatively concise and largely dominant in the literature. It should be taken as technical terminology referring to the type of channel through which the information was accessed by a speaker.

Secondly, several scholars argue that evidentiality should not be limited to grammatical morphemes but should be seen as a semantic domain encoded by various forms that may be located at any point along the lexicon-grammar continuum (Squartini, 2007; Cornillie, 2007; Author, 2014: 33; Wiemer & Marin-Arrese, 2022). I would argue that it is indeed heuristically more relevant to adopt the latter definition. Firstly, although Aikhenvald rightfully points out the striking differences between languages with complex evidential paradigms and those which mainly refer to information sources through their lexicons, drawing a firm line between what is lexical and what is grammatical is problematic. The literature on grammaticalization has

² These three main evidential categories can be further divided into other subtypes. For example, direct perception can be visual or involve other senses; an inference can be based on sensory cues or on logical reasoning; hearsay can refer to a private conversation or a widespread rumour, etc.

discussed many competing criteria, and has shown how grammatical forms emerge from the lexicon in a step-by-step fashion (Lehmann, 1995 [1982]; Traugott & Trousdale, eds., 2010; Narrog & Heine, eds., 2011). Secondly, if one can talk about the lexical expression of time or modality, I do not see why one should not refer to the lexical expression of evidentiality. In order to investigate how evidentiality may differ when it is mainly rendered by grammatical or lexical forms, I need to define it as a semantic notion. My definition of evidentiality is thus morphologically open, but semantically strict: the expression of the mode of access to the main information stated in a proposition.

Several scholars have used the notion of evidentiality to cover a wide range of phenomena, such as epistemic modality (i.e., the probabilistic evaluation of the information), subjectivity (i.e., the presentation of the information as the speaker's sole responsibility), or (ad)mirativity (i.e., the unexpectedness of the information) (Chafe, 1986; Friedman, 1986; Palmer 1986; Infantidou, 2001; Nuyts, 2001; Whitt, 2011). In line with my narrow definition, however, I only count as an evidential a form that encodes a type of information source explicitly. This semantic feature must be inherent (i.e., not due to a mere implicature), and must have scope over the main predication, which excludes statements that may seem evidential but do not have a propositional scope, such as 'I saw it' (see the criteria presented in Anderson, 1986).

I will now present how I collected a corpus for Tibetan and English before illustrating these definitional criteria in the two languages under study (4.1 and 4.2).

3. Corpus collection and methodology

In order to conduct an in-depth contrastive study, the first indispensable step for me was to collect a corpus of comparable data that is adapted to my research objectives. There are many corpora available in spoken English, but very few in spoken Tibetan. Collecting a corpus of random conversations would have led to limited results since evidentials are relatively infrequent in English, and I needed a great number and variety of these markers to get quantitatively significant results. I thus collected the Tibet Student Corpus (henceforth TSC) at Tibet University (Lhasa, P.R.C.), and the Cambridge Student Corpus (henceforth CSC) at Cambridge University (U.K.) in 2010-2011 as part of my PhD (Author, 2014). Because the CSC contained far fewer evidentials than the TSC, I collected additional data to complement the CSC by recording two pairs of L1 speakers of American English studying at Tibet University in 2011. I named this corpus the Lhasa American Corpus (henceforth LAC). The TSC is made up of conversations in Standard Tibetan involving 4 pairs of L1 speakers. It

contains 4 hours and 8 minutes of recording and approximately 26,000 words. The CSC and LAC involve 11 pairs of L1 speakers of either British or American English. They together last 4 hours and 33 minutes, and contain 39,680 words.

I used the exact same methodology with the aim of eliciting as many varied evidentials as possible in semi-guided conversations. I asked pairs of L1 speakers to ask each other questions related to various types of information sources. The questions dealt with the news, dreams, recent and distant memories, events that happened when the participants were infants or before they were born, etc. I also resorted to three behavioural tasks that proved useful to elicit markers of direct perception, inference, and hearsay: identifying the subject of mysterious pictures, recognizing indistinct sounds, and reporting the content of a comic strip (for further information, see Author 2014: 76-83). The Tibetan and English corpora were annotated by listing every occurrence of evidential markers and classifying them according to their evidential categories (direct perception, inference, hearsay, and subcategories), as well as their morpho-syntactic characteristics (parts of speech, positions, and functions within the sentence).

4. Evidentiality in Tibetan and English

4.1. Evidentiality in Tibetan

Among the fully grammaticalized evidentials available in Lhasa Tibetan, inflectional copulas and verbal suffixes can encode direct perception and inference, while hearsay evidentiality is rendered by enclitics (Tournadre, 2017; Author, 2014: 112-144). Examples (1), (2), and (3) illustrate the expression of the three main evidential categories with the direct perception suffix *-song*, the inferential suffix *-bzhag*, and the hearsay enclitic *-za*:

(1)

bu.mo-s rta cig bzhon-song -nga
 daughter-ERG horse INDF ride-DIR;CPL -PHA

‘My daughter rode a horse, y’know.’ (TSC)

(≈ I saw my daughter ride a horse)

(2)

me.mda brgyab-bzhag
 gun LV-INF;PF

‘Someone’s fired a gun.’ (TSC)

(≈ I've heard a gunshot, and I can infer that someone's fired a gun)

(3)

chos. 'khor.brgyad dgon.pa taa.la'i.bla.ma sku.phreng lnga.pa-s zhengs-pa.red =za
Chökorkyä monastery Dalai.Lama incarnation fifth-ERG build-FACT;CPL =HSAY

'(They say) it is the 5th Dalai Lama who built Chökorkyä monastery.' (TSC)

I also counted 'egophoric' forms as evidentials. Egophoricity is essentially a typical trait of Tibetic semantics, and refers to forms that are associated with the speaker and his or her sphere (Tournadre, 1992; Tournadre & Suzuki, in press: 319-324). In practice, they can only be used when the speaker taps into his or her direct experience, so I consider them to be a subcategory of direct perception. The following two examples illustrate this point:

(4)

kha.par nang-la tshur blug-pa.yin
phone in-DAT CIS pour-EGO;CPL

'I downloaded them on my phone.' (TSC)

(5)

a.ni rjes-la nga skye-pa.red
and then-DAT I be.born-FACT;CPL

'And then I was born.' (TSC)

In (4), the speaker is referring to what she did yesterday, and her statement relies on her memory of the past events she has experienced. In (5), the speaker talks about his birth. He cannot access this type of information directly, which makes the use of an egophoric marker ungrammatical. In this case, only a factual marker or a factual marker associated with a hearsay enclitic is possible. This shows that egophoricity is incompatible with an indirect access to information, and justifies its categorization as a subtype of direct evidentiality.

Apart from fully grammatical evidentials, Tibetan can also refer to information sources by using lexical tools, such as perception verbs (*mthong* 'see', *nyan* 'hear', etc.), verbs of speaking (*zer* 'say', *bshad* 'tell', *lab* 'say', *gsung* 'say', etc.), or other constructions (*mdog.kha.po* 'seem', *bzo. 'dras* 'look like', etc.). However, the evidential system of Tibetan is far more grammatical than lexical. The TSC contains 1,918 occurrences of evidential forms, and 1,435 of them are fully grammatical morphemes (verbal inflections and enclitics). Information sources are thus rendered with fully grammatical forms more than 75% of the time in the TSC.

4.2. *Evidentiality in English*

In Author (2022), I argue that the evidential system of English shows patent signs of grammaticalization. Several criteria can help us locate a form on the lexicon-grammar continuum, but there is an overall consensus that forms such as inflections and clitics are grammatical whereas basic verbs or nouns are lexical. In English, the category of auxiliaries is closed since only its members display what is commonly called the NICE properties (Huddleston 1976). Auxiliaries are consequently considered grammatical. Forms such as *must* or *should* can encode inferential evidentiality, so I argue that they are fully grammatical evidentials. Apart from auxiliaries, other English evidentials may show partial signs of grammaticalization, such as the semi-auxiliary *seem* or the parenthetical *I guess*. However, they are not fully grammatical, and for this reason I treat them as (semi-)lexical evidentials. The most common evidentials in the CSC belong to several classes:

- auxiliaries: *must*
- semi-auxiliaries: *seem to, have to...*
- perception verbs: *see, feel, look...*
- cognition verbs: *guess, presume...*
- perception copulas: *look, sound...*
- verbs of speaking: *say, be like...*
- adverbs: *apparently, presumably...*

I applied the same strict criteria to identify evidentials in Tibetan and in English. I thus didn't count as an evidential any form that does not encode a type of information source per se, but expresses another neighbouring semantic domain instead, such as epistemic modality:

- (6) He had a freaking and awesome regent who **may** or **may** not have been his son. (LAC)

The auxiliary *may* differs from *must* because the latter always entails an inference in its epistemic use. As in (6), *may* can simply refer to speculations that are not necessarily due to the speaker's inferential access to information. Consequently, I do not consider *may* to be an evidential because it encodes an epistemic possibility and not a type of information source.

I also excluded certain cognition verbs because they do not refer to information sources but give a subjective tone to a statement:

- (7) I eat it sometimes but **I don't think** it's good for you at all. (LAC)

The phrase ‘I don’t think’ does not reveal whether the speaker bases her statement on direct perception, inference or hearsay, but suggests that she is not telling universal truths but rather sharing a personal opinion.

Phrases that did not express the speaker’s information sources but that of another person were also excluded:

- (8) But she was driving on there one night and **she sort of saw** a motorcyclist come up behind her and overtake her like boom and... (CSC)

A construction such as *she saw + bare infinitive clause* does not indicate how the speaker got to know what she is stating, so it cannot be counted as an evidential, while *I saw + bare infinitive clause* may be.

Finally, I only counted as evidentials forms that have scope over some propositional content, which excludes phrases such as (9):

- (9) **I heard** him through the wall. (CSC)

Even though *I heard + NP* is related to the speaker’s access to information, it is not an evidential specification on a propositional content but a simple report of a perceptual event.

The only fully grammatical evidentials that can be found in the CSC/LAC are 7 occurrences of *must* out of a total of 441 evidential forms. The expression of evidentiality in these corpora is thus almost entirely lexical or semi-lexical, since information sources are rendered by (semi-)lexical forms 98.5% of the time. This suggests that English barely uses fully grammaticalized evidentials.

5. Pragmatic consequences of two different evidential systems

5.1. Frequency

One of the most notable differences between the TSC and the CSC/LAC is that Tibetan uses explicit markers of information sources far more frequently than English. One of the reasons for this contrast is that evidentiality is integrated in the tense-aspect-mood inflections of Tibetan verbs while English speakers have to use specific lexical forms to specify their information sources. As Bybee (2003) has observed, grammaticalizing forms see their frequency of use increase dramatically, which further explains the high frequency of fully grammaticalized Tibetan evidentials.

The data from the TSC and CSC/LAC reveal substantial differences depending on which evidential category is considered. The TSC contains 1,114 evidentials that encode the speaker’s direct perception of the state of affairs, while there are only 63 such instances in the CSC/LAC. If the raw frequencies of these forms are normalized, it appears that direct perception is explicitly marked 42,846 times per million words (henceforth ‘pmw’) in Tibetan, and 1,579 pmw in English. There are 515 inferential markers in the TSC, and 293 in the CSC/LAC. This suggests that inferential evidentiality is expressed 19,808 pmw in Tibetan, and 7,298 pmw in English. Finally, there are 289 occurrences of hearsay markers in TSC, and only 85 in the CSC/LAC. This may indicate that Tibetan speakers resort to hearsay evidentials 11,115 pmw, while English speakers use them 2,132 pmw on average. Table 1 and figure 1 synthesize these results:

Table 1
Evidential categories and frequency of evidentials in Tibetan (TSC) and English (CSC/LAC)

	Tibetan (TSC) (pmw)	English (CSC/LAC) (pmw)	Frequency difference (<i>n</i> times more frequent in Tibetan)
Direct perception	42,846	1,579	27.1
Inference	19,808	7,298	2.7
Hearsay	11,115	2,132	5.2

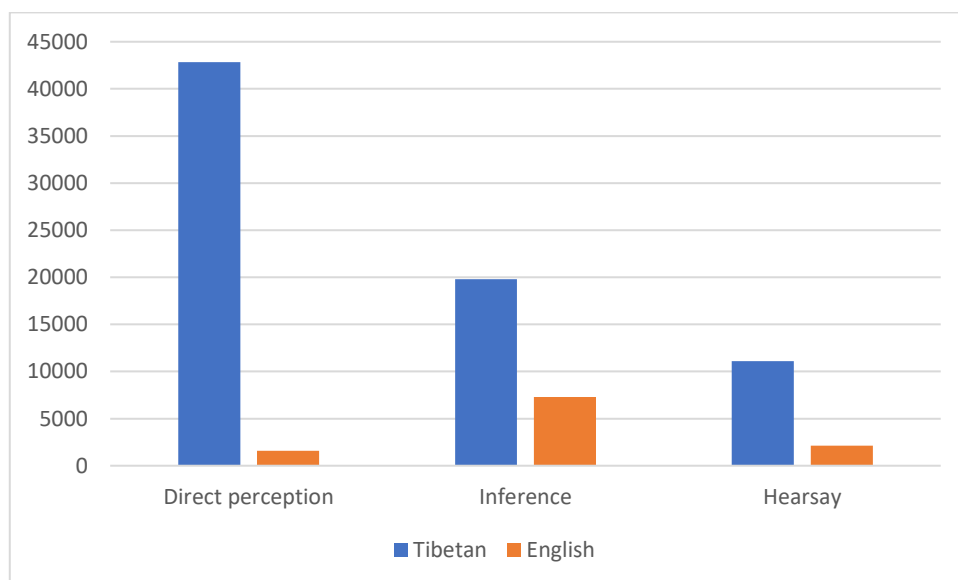


Fig. 1. Frequency of evidentials in Tibetan (TSC) and English (CSC/LAC) (per million words)

Altogether, the data from these corpora suggest that evidentiality is expressed 73,769 pmw in Tibetan, and 11,009 pmw in English in the same contexts. Tibetan speakers use an evidential once every 14 words in the TSC, and English speakers once every 91 words in the CSC/LAC. This suggests that evidentials are used approximately 6.7 times more frequently in Tibetan than in English on average and under the same circumstances. From the perspective of speech time, there are 464 evidentials per hour in the TSC (i.e. once every 8 seconds), and 97 per hour in the CSC/LAC (i.e. once every 37 seconds).³ Table 2 sums up these results:

Table 2
Overall frequency of evidentials in Tibetan (TSC) and English (CSC/LAC)

	Tibetan (TSC)	English (CSC/LAC)
Per million words	73,769	11,009
Per hour	464	97

The data in the TSC and CSC/LAC show a dramatic contrast between the frequency of evidentials in Tibetan and in English. However, any generalization from this data must come with two caveats.

Firstly, the frequencies were estimated from corpora that were collected with the aim of eliciting evidentials, and consequently, the number of occurrences is certainly higher in these corpora than in random conversation. To assess this difference, one can, for example, compare the frequency of evidentials, such as *apparently* or *I guess*, in the CSC/LAC and in the spoken subsection of the COCA. The frequencies of these markers are presented in table 3:

Table 3
Frequency of *apparently* and *I guess* in the CSC/LAC and in the COCA (pmw)

	CSC/LAC	COCA (spoken subsection)
<i>Apparently</i>	426	98
<i>I guess</i>	551	185

³ The average frequency per hour is given as a mere indication, since the average frequency per million words is scientifically more accurate.

These results confirm that evidentials must indeed be more frequent in the CSC/LAC than in spoken English in general. However, it is not possible to check this trend for spoken Tibetan because large corpora of conversation are lacking.

Secondly, the data collected should not lead us to conclude that the number of evidentials in discourse parallels the cognitive processing of information sources when an utterance is interpreted. The context often allows a hearer to infer the source of the information underlying a claim. For example, when Tibetan speakers specified how their parents had met, they used many hearsay markers, which are thus functionally redundant, since the type of information source is quite obvious. Even though evidentials are less frequent in English, linguistic usage does not necessarily equate conceptual representation, since even using an evidential once can imply that a whole passage is based on the same information source.

Despite these caveats, the striking contrast between the frequency of evidentials in the TSC and the CSC/LAC confirms that the evidential systems of English and Tibetan are substantially different. It is no surprise that the degree of grammaticalization of the evidential domain impacts the frequency of its marking in a language, but this is the first study that I know of which can present quantitative data based on comparable corpora. The frequency of evidential marking in turn impacts the other dimensions that I will investigate.

5.2. *Semantic schematicity*

Even though English possesses numerous lexical and (semi-)lexical forms to refer to information sources, these tools are not the exact semantic equivalents of the most grammaticalized Tibetan evidentials. English evidentials tend to display more specific semantic features than Tibetan evidentials, which usually have a broader semantic spectrum, and thus fulfil a more schematic function.

This tendency corresponds to a general contrast between the generic meaning of grammatical forms and the more fine-grained semantics of the lexicon (Slobin, 1997; Talmy, 2000). Grammatical forms can only refer to domains that are highly abstract, such as time, definiteness, or evidentiality, while very specific meanings, such as ‘computer’, ‘shoe’, or ‘jealousy’ are rendered with lexical words, and never with grammatical means. As linguistic forms grammaticalize, they typically desemanticize, and gradually cover a semantic space that is compatible with a broad variety of contexts (Sweetser, 1988; Traugott, 1989; Heine, 1993: 89). For example, the English auxiliary *will* saw its boulogmatic meaning bleach to denote

futurity, and similarly, the Tibetan morpheme *song* underwent a process of desemanticization from a lexical verb of motion to an inflection marking direct evidentiality (Oisel, 2017).

Tibetan speakers do not have to provide as many details as English speakers when they specify their information sources, because the evidential system of their language is more grammatical. For example, there is no convenient English translation of the Tibetan direct perception morpheme *-song*:

(10)

'gyig.shog nang. nas nya 'gul.skyod brgyab-**song**

plastic bag in from fish move LV-**DIR**;CPL

'The fish moved from inside the plastic bag.' (TSC)

By using *-song*, the speaker indicates that he was there when the event took place, and that he remembers that the fish moved. However, he does not specify whether he actually saw, felt, or heard the fish move. The Tibetan direct perception suffix *-song* is indeed appropriate with any of the senses.

An inflection such as *-song* is usually left untranslated in English, but various perception verbs are available to express direct perception. However, using one of them will actually specify which sensory channel was involved. Examples (11) and (12) illustrate this point:

(11) A couple of days before that, **I saw** my mother put on deodorant. (CSC)

(12) **I even heard** some people say, 'oh if- if you're pro-choice but with a cut-off point, then it's essentially pro-, like, well, it's pro-life but in disguise'. (CSC)

English does possess other tools to encode evidentiality, but these other forms will also tend to be more informative than fully grammaticalized evidential morphemes. For example, several phrases can denote that a statement relies on hearsay in English, such as *they say*, *I was told*, *I've heard*, or *apparently*. At first sight, each of these forms may seem to be an appropriate translation of Tibetan *-za*:

(13)

dbyin.ji sbyang na yag.po yod.red =**za**

English learn if good FACT;COP =**HSAY**

'(They say / I was told / I've heard / apparently) It's a good idea to learn English.' (TSC)

However, each of the above potential translation of *-za* will contain more semantic features than the original. The Tibetan evidential only specifies that the speaker has learned about the content of the proposition verbally. 'Hearsay' evidentiality refers a broad category: the speaker

may have been told about the situation, heard about it on the radio, or read it somewhere, etc. In English, however, each potential translation will be semantically more specific. For example, *they say* specifies that more than one person has told the speaker. To avoid saying anything on who reported the information, one could use the passive form *I was told*, but it would still specify that the speaker has learned about it in a conversation. It could not refer to something overheard, or broadcast in the media. Using *I've heard* would typically denote that the speaker has acquired this information orally, and not from a written text. In addition, *I've heard* in English is mainly used when the source is vague, and would sound evasive if the speaker has a specific situation of communication in mind. Finally, *apparently* may sound like a generic alternative, but it entails that the speaker considers the information credible, whereas *-za* does not indicate whether the speaker believes it or not. It indeed sounds awkward to confirm or contradict a statement that is under the scope of *apparently* while it is possible with *-za*:

(14) **Apparently** it's a good idea to learn English...

?? and that's true / but that's not true.

(15)

dbyin.ji sbyang na yag.po yod.red =za
 English learn if good FACT;COP =HSAY

a.ni dngos.gnas red / yin.na.yang dngos.gnas ma.red
 and true FACT;COP but true FACT;COP;NEG

‘(I’ve heard/read) it’s a good idea to learn English, and that’s true / but that’s not true.’

Table 4 sums up the semantic features included in the forms *they say*, *I was told*, *I've heard*, and *apparently*. The parenthesis indicates that the given semantic feature might be absent in specific contexts.

Table 4
 The semantic features of *they say*, *I was told*, *I've heard*, and *apparently*

Evidential	Semantic features
<i>They say</i>	+ hearsay, + multiple authors, (+ oral)
<i>I was told</i>	+ hearsay, + conversation, + oral
<i>I've heard</i>	+ hearsay, + oral, (+ vague source)
<i>Apparently</i>	+ hearsay, + partial commitment

The different set of evidentials available in the two languages results in different discursive options. Overall, lexical evidential systems constrain speakers to specify more elements about the situation in which the information was acquired, because highly bleached evidential morphemes are not available. English speakers can thus either avoid specifying information sources or be more specific than Tibetan speakers.

5.3. *Optionality*

Optionality is another salient feature that is often mentioned to distinguish lexical and grammatical forms (Lehmann 1995[1982]: 123-128). From a diachronic perspective, a decrease in optionality, i.e. ‘obligatorification’, is a central mechanism of grammaticalization, or at least a frequent by-product (Heine & Kuteva 2007: 34). For example, as the Latin verb *habere* grammaticalized into a future tense inflection in Romance languages, it became an undeletable element attached to the verb stem and was incorporated into the conjugation paradigm. Similarly, Tibetan evidential suffixes *-gi. 'dug/-song/-bzhag* grammaticalized from optional coordinated or subordinating verbs, and are now only deletable in very specific contexts. Obligatoriness used to be presented as a defining component of grammatical evidentiality (Aikhenvald 2007), but it is now generally accepted that many evidential inflections and clitics can be optional (Aikhenvald, ed., 2018: 10). Assessing optionality is more problematic than it seems, and will mainly depend on contexts. It is necessary to distinguish several linguistic levels: syntax, semantics, and pragmatics.

According to Crystal (2003 [1980]: 329), an optional element is one ‘that can be removed from a structure without that structure becoming ungrammatical’. It is indeed ungrammatical to delete the inflection of a verb in a main clause in Tibetan:

(16)

yag.po drag-bzhag

well recover-**INF;PF**

‘She’s recovered well.’ (TSC)

(17)

* *yag.po drag*

well recover

The English translation of (16) does not include any evidential, but if the speaker wishes to specify that the statement is based on an inference like in the Tibetan sentence, whatever means the speaker could resort to will typically be deletable, as shown in (18) and (19).

(18) **I can see that** she's recovered well.

(19) She's recovered well.

However, syntactic optionality is not the only level to take into account when assessing how optional an evidential system is. Because evidentiality is a semantic domain, one should also investigate whether evidentials are semantically optional. The 'deletability test' indicates whether a morphological paradigm is obligatory, but does not tell us whether all members of a paradigm necessarily express a given notion. Although Tibetan evidential suffixes cannot be deleted, they are semantically replaceable by evidentially neutral forms available in the same paradigm. Factual markers do not specify how speakers accessed the information they are sharing, but still appear in the same paradigm as evidentials. Example (20) is perfectly acceptable regardless of the speaker's information source:

(20)

yag.po drag-yod.red

well recover-FACT;INCPL

'She's recovered well.'

(≈ 'I saw her recover', 'I can figure out she's recovered', **OR** 'I've heard she's recovered')

Because evidential forms can be replaced by factual forms, it cannot be claimed that Tibetan speakers are obliged to refer to their information sources in every sentence they produce. Evidentiality is, for example, less obligatory than number in English. When using a countable noun in a sentence, one has to specify if it is singular or plural, because no neutral inflection is available in English. Because Tibetan possesses factual forms in the same paradigm as evidentials, evidentiality may be considered semantically optional in Tibetan.

A third dimension makes the picture even more complex: pragmatic obligatoriness. It may usually be possible to avoid mentioning information sources, but it is pragmatically awkward to never use any evidential, and this is more the case in Tibetan than in English. A certain pragmatic constraint inciting the use of evidentials despite the availability of factual markers might explain their high frequency. To illustrate this pragmatic dimension, one can compare how English and Tibetan speakers refer to their information sources in a similar context. For example, one question that was asked for the collection of the corpora was about the

consultants' early childhood: 'could you tell a story that happened to you when you were less than 3 years old?'. For those events that happened at a very early age, consultants relied mainly on what their families told them. All the Tibetan consultants (8/8) specified their information sources by using hearsay evidentials, while only one English consultant (1/8) mentioned that she based her statement on what she was told. The following example is a passage from the TSC where a Tibetan speaker talks about her early childhood and uses six hearsay markers:

(21)

<i>nga</i>	<i>chung.chung</i>	<i>skabs.dus</i>	<i>tshub.po</i>	<i>zhe.drag</i>	<i>yod.red</i>	=za	<i>bu</i>	=las	<i>tshub.po</i>	
I	little	when	unruly	very	FACT;COP	=HSAY	boy	=COMP	unruly	
<i>yod.red</i>	=ze	<i>skad.grags</i>	<i>yod.red</i>	<i>zhogs.pas</i>	<i>snga.po</i>	<i>nas</i>	<i>lang</i>	=nas	<i>ka.la-'i</i>	
FACT;COP	=HSAY	famous	FACT;COP	morning	early	from	get.up	=CONJ	sink-GEN	
<i>sgang-la</i>	<i>chu-'i</i>	<i>nang-la</i>	<i>rtsed.mo</i>	<i>rtse</i>	<i>a.ni</i>	<i>thog.ka-'i</i>	<i>sgang</i>	<i>nas</i>	<i>mchong</i>	
on-LOC	water-GEN	in-LOC	game	play	and	roof-GEN	on	from	jump	
<i>tshub.po</i>	<i>byed-kyi.red</i>	<i>tshub.po</i>	<i>zhe.drags</i>	<i>yod.red</i>	=za	<i>pa-lags</i>	<i>a.ma-lags-gis</i>			
unruly	LV-HAB	unruly	very	FACT;COP	=HSAY	Dad-H	Mum-H-ERG			
<i>khang.pa-r</i>	<i>bcug</i>	<i>bzhag</i>	<i>na</i>	<i>sge'u.khung</i>	<i>nang.nas</i>	<i>mar</i>	<i>thag.pa</i>	<i>btang</i>	=byas	<i>mar</i>
house-LOC	leave	DUR	if	window	from	down	rope	LV	=CONJ	down
<i>bab</i>	<i>de.'dras</i>	<i>byed-kyi.red</i>	=za	<i>chung.chung</i>	<i>skabs.dus</i>	<i>tshub.po</i>	<i>zhe.drags</i>			
descend	so	do-HAB	=HSAY	little	when	unruly	very			
<i>yod.red</i>	=ze	<i>a.ni</i>	<i>bu</i>	=las	<i>tshub.po</i>	<i>yod.red</i>	=ze			
FACT;COP	=HSAY	and	boy	=COMP	unruly	FACT;COP	=HSAY			

'When I was little, I was very unruly... Compared to boys, I was unruly. That was famous. I would get up in the early morning, and play with the water in the sink. I would jump from the roof... I was always doing stupid things... I was very unruly. If my dad and my mum left me at home, I would hang a rope out of the window, and climb down... I would do that... When I was young, I was very unruly... And even compared to boys, I was unruly...' (TSC)

Example (21) can be compared to (22), where an English speaker talks about his early childhood, but does not use any evidential.

- (22) My parents and me err went to Disneyland Florida when I was about one and a half... two. And err I, y'know, they thought I would be, like, interested in meeting all the characters and, y'know, going on the, like, baby rides whatever... and I was just there, like, playing with, like, the gates and the doors, like, anything, like, mechanical or, y'know, actually, like, fiddling around with all the, like, weird metal knobs and things and, like, just lying on the beach and annoying the children who were building sandcastles or, like, yeah, destroying people's sandcastles, so I was like two... yeah... then I decided I could speak American as well, which is possibly the most embarrassing part. My parents still mock me for that one.
(CSC)

Although stating that grammatical evidential systems are obligatory and lexical ones are optional is an oversimplification, the contrastive data from the TSC and the CSC/LAC thus suggest that English speakers can avoid the use of evidentials more easily, particularly from a pragmatic perspective.

5.4. *Economy*

Another salient feature characterizing grammatical evidentials is their apparent simplicity of use from a morpho-phonetic, syntactic, as well as cognitive perspective. Extensive psycholinguistic experiments are still needed to reach firm conclusions, but an overall comparison of the two systems suggests that expressing information sources requires less time and effort in Tibetan than in English for L1 speakers.

Tibetan evidentials often consist of one morpheme made up of one syllable, such as *'dug*, *-gis*, *-song*, *-bzhang*, *-za*, etc. Tibetan also possesses heavier morphemes, such as *-gi*. *'dug* (allomorph of *-gis*), or *yod.pa*. *'dra*, but its evidentials are, on average, undeniably more concise than most of the tools English uses to specify information sources: *apparently*, *I imagine*, *it looks like*, etc. To encode evidentiality, the average number of syllables necessary is 1.3 in the TSC (2,504 syllables for 1,918 evidentials) and 3.2 in the CSC/LAC (1,422 syllables for 441 evidentials). Expressing information sources thus seems to require 2.5 as many syllables on average in English as in Tibetan.

This tendency can be explained by a process of erosion generally associated with grammaticalization (Heine & Reh, 1984: 17-25). Grammaticalized forms tend to reduce phonetically, and diachronic data on Tibetan evidentials confirm this tendency. For example, the direct perception suffix *-gi*. *'dug* most probably comes from the construction *V + gin + 'dug* in Middle Tibetan, and is often reduced into *-gis* (/gi?/) in contemporary Lhasa Tibetan:

(23)

phug.pa-'i nang kun g.yeng-gin.'dug -pa -la
cave-GEN in all look.around-INCPL -NMLZ -CONJ

'He was looking around the cave.' (Tsangnyön Heruka, *The Life of Milarepa (mi la'i nam thar)*, 15th c.)

(24)

lhag.pa bgyab-kyi.'dug -gas
wind LV-DIR;INCPL -INT

'Is that the wind blowing?' (TSC)

(25)

mi cig ri.mo bris-gis
man INDF drawing draw-DIR;INCPL

'A man is drawing.' (TSC)

Another example of diachronic erosion in Tibetan is the direct perception suffix *-song*, which is frequently pronounced /s/ and comes from Old Tibetan *te-song*:

(26)

brag-gi ser.ga zhig nas ngur.pa gnyis 'phur te song -ba mthong nas
rock-GEN cleft INDF from duck two fly CONJ go -NMLZ see CONJ

'They saw two ducks flying away from a cleft in the rock.' (*Tibetan Rāmāyaṇa*, 8th c., ITJ 737-1: 219)

(27)

dkyil.'khor-gyi mthar spungs-song
mandala-GEN edge pile-CPL

'They piled them all around the mandala.' (Tsangnyön Heruka, *The Life of Milarepa*, 15th c.)

(28)

bstan.'dzin.don.grub-kyis kha.par slebs-s
Tänzin.Töndrub-ERG phone arrive-DIR;CPL

'I received a call from Tänzün Töndrub.' (CSC)

Stacking two Tibetan evidentials is an even more telling case of morpho-phonetic economy. As hearsay evidentials appear in another paradigm than verb inflections, they can be combined with a direct or inferential morpheme. The combined morphemes *'dug-ze*, pronounced as only one syllable (/duʔs/), indicate that the speaker knows about the situation from someone who was him/herself a direct witness. The meaning can only be rendered in English with a long, convoluted expression:

(29)

bu de yag.po 'dug =ze
child DEM nice DIR;COP =HSAY

‘That boy is nice.’ (TSC)

≈ **I’ve heard from someone who knows him that** he is a nice boy.’

From a syntactic perspective, Tibetan evidentiality is also more economical than the English evidential system. Expressing information sources in English often requires constructions that make the sentence syntactically more complex, such as auxiliation or subordination. One can thus compare the syntactic structure of a sentence in Tibetan (Fig. 2) with the structure of an English translation that would maintain the evidential specification of the source language (Fig. 3):

(30)

yag.po drag-bzhag
well recover-INFR;PF

‘She has recovered well.’ (TSC)

≈ **I see that** she has recovered well.

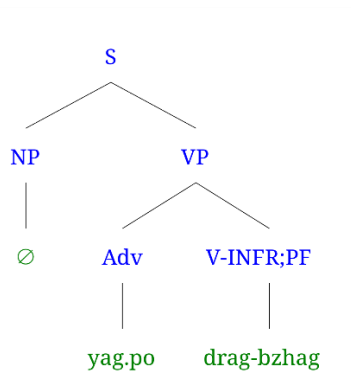


Fig. 2. A syntactic representation of *yag.po drag-bzhag*

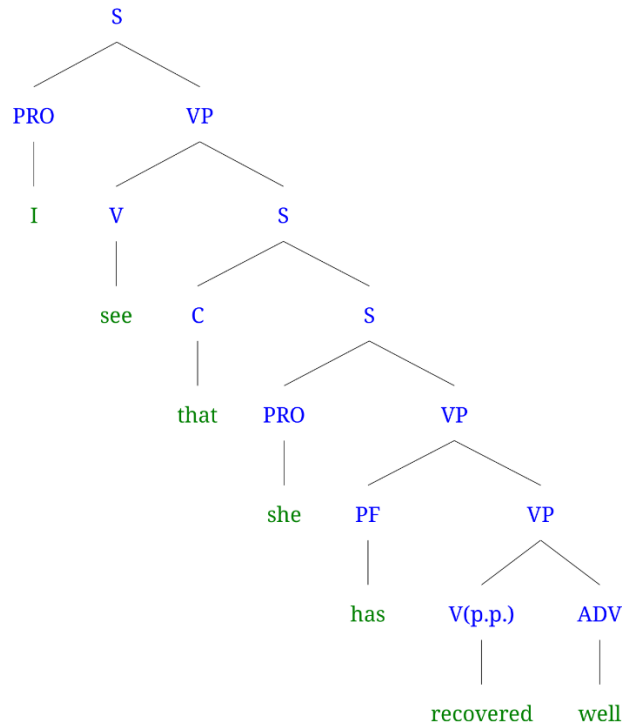


Fig. 3. A syntactic representation of *I see that she has recovered well*

Conversely, one can compare the syntax of an English evidential construction (Fig. 4) and its closest translation into Tibetan (Fig. 5):

(31) It **must** be better. (CSC)

(32)

yag.pa yin.gyi.red

better **INF;EPI;COP**

‘It must be better.’

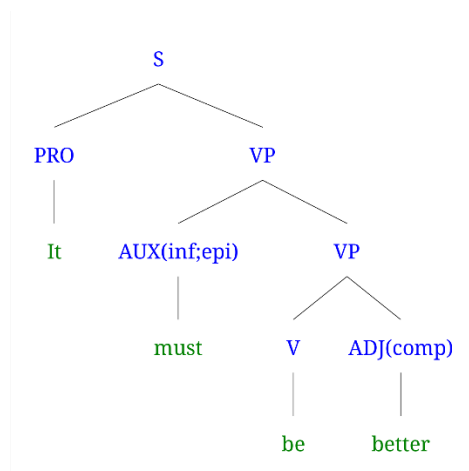


Fig. 4. A syntactic representation of *it must be better*

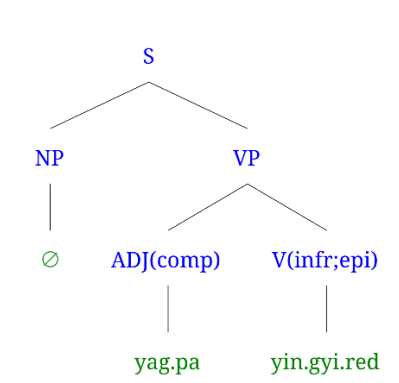


Fig. 5. A syntactic representation of *yag.pa yin.gyi.red*

Thirdly, as several psycholinguistic studies have shown, lower frequency items usually take more time to be retrieved than higher frequency items (Balota & Chumbley, 1985; Jescheniak & Levelt, 1994; Kittredge et al., 2008). Because English resorts to numerous lexical items of various frequencies to specify information sources, it probably requires more effort for English L1 speakers to produce evidentials than for Tibetan L1 speakers, who use highly frequent forms more automatically.

In the TSC, the most frequent evidentials for each evidential category are *'dug* for direct perception, *bzo. 'dras* for inference, and *-ze* for hearsay. Their estimated frequencies are 15,962 pmw, 10,653 pmw, and 4,538 pmw, respectively. In the CSC/LAC, the most frequent evidentials for each evidential category are *I remember + V-ing* for direct perception, *look (like)* for inference, and *say* for hearsay. Their estimated frequencies are 502 pmw, 2,984 pmw, and 630 pmw, respectively. Overall, the data from the corpora suggest that English speakers encode evidentiality by choosing from a set of markers that have an average frequency of 4,098 pmw, while the average frequency of English evidentials is 345 pmw. When expressing evidentiality, Tibetan speakers thus draw from an inventory of forms that are on average 12 times more frequent than those available in English if one extrapolates from the data in the TSC and CSC/LAC.

To sum up, even though linguistic complexity is notoriously difficult to assess, since many parameters have to be taken into account, comparative data from the TSC and CSC/LAC confirm that Tibetan evidentials are on average less phonetically heavy, syntactically convoluted, and sporadic than English evidentials. This suggests that encoding information sources is significantly more economical in Tibetan than in English.

5.5. Information hierarchy

Boye & Harder (2012) argue that the determining factor characterizing the grammatical status of a form is its discursive secondariness. Tibetan evidentials are indeed typically more backgrounded than English evidentials in the information hierarchy of a sentence. The following tests corroborate this tendency.

First, it is pragmatically infelicitous for an evidential inflection to be the nuclear stress of a tone unit, as in (33):

(33)

'*di lab-song*

DEM say-**DIR**;CPL

'He said that.' (TSC)

Except for metalinguistic emphasis, the nuclear stress is unlikely to fall on the evidential suffix *-song* in (33), but should fall on either '*di* or *lab*. Most evidential equivalents in English are focusable. In (34), the underlined syllable is a potential nuclear stress.

(34) I heard him say that.

Then, if a Tibetan sentence that includes an evidential is negative, the proposition is negated, and not the information source, as in (35):

(35)

'*di lab-ma.song*

DEM say-**DIR**;CPL;**NEG**

'He didn't say that'

≈ I can testify that he didn't say that.

≠ I didn't hear him say that (but he might have said it).

Finally, a question that follows an utterance containing a grammatical evidential will not pertain to the information source but to the content of the proposition. One can compare (36) and (37):

(36)

A: '*di lab-song*

DEM say-**DIR**;CPL

B: *ga.'dra*

how

A: 'He said that.'

B: 'How?'

- (37) A: 'I heard him say that.'
B: 'How?'

In (36), *ga.'dra* asks about the manner in which the statement was made, not about the speaker's information source. Conversely, in (37), *how* will most likely inquire about details on the speaker's information source.

The differences between grammatical and lexical evidentiality that were pointed out in 5.1, 5.2, 5.3, and 5.4 also participate in the backgrounded status of Tibetan evidentiality. Firstly, because evidentials are far more frequent in Tibetan than in English, they also tend to be less noticeable. As argued in Haiman (1994) and Bybee (2003), the routinized use of a linguistic form leads to a process of habituation, which makes it lose its salience. Just like an organism ceases to respond to repeated stimuli, the systematic use of evidentials in Tibetan probably weakens the attention the hearer will pay to them, whereas rarer, lexical forms tend to be more foregrounded. Secondly, we saw that English evidentials usually contain more details on the situation in which the speaker acquired the information. Because lexical evidentials tend to possess more semantic features, they also probably stand out more sharply than fully grammaticalized evidentials, whose semantic contributions are more generic and vague. Thirdly, Tibetan evidentials are generally less optional than English evidentials. According to Grice's maxim of quantity (Grice, 1975), using an optional linguistic element implies that it is necessary for the conversation. This reinforces the foregroundedness of English evidentials since their greater optionality suggests that their contribution to the sentence is quite essential whereas obligatory evidentials can more easily go unnoticed. Finally, the morpho-phonetic profile of English evidentials also contribute to their sharper discursive salience. It seems fair to assume that stressed multisyllabic words or multi-word constructions are on average more noticeable than eroded grammatical morphemes.

The informational contrast between Tibetan and English evidentials reflects a general difference between a grammatical and a lexical rendering of a notion. Similar phenomena may be observed when comparing languages with a fully grammaticalized gender system and those which mainly resort to lexical items to express it. For example, because gender is less grammaticalized in English than in Spanish, saying 'a **female** cat' probably lays more emphasis on gender than simply using 'una gata'. Because extra lexical words are usually avoided unless they are essential to the message, it is probably more difficult to refer to gender in English without drawing attention to it, while gender is informationally unmarked in Spanish as it is a

pervasive grammatical constraint. Likewise, the grammars of Tibetan and English do not offer the same discursive possibilities for speakers who wish to specify their information sources. Using an evidential in Tibetan is the norm whereas using an evidential in English must be justified, and will consequently be more noticeable.

6. Conclusion

In this paper, I have investigated how languages with complex evidential paradigms and languages which mainly encode information sources lexically differ in their usage. This corpus-based analysis of Tibetan and English has revealed substantial pragmatic contrasts in the use of evidentials in conversation. The first striking difference is the frequency of evidentials, which occur 6.7 times more frequently in Tibetan. The evidential systems of Tibetan and English do not impose the same constraints on the speaker's discursive choices. Tibetan evidentials may be less optional than English evidentials, but expressing information sources in English requires the use of forms that are less generic, economical, and backgrounded.

Further research is necessary to reach firmer conclusions. The collection and annotation of larger corpora in Tibetan will allow us to measure the frequency and diversity of its evidential system more precisely, and would then make its comparison with the English system more accurate. Collecting corpora of conversations in languages with other evidential systems will also help us understand how typological differences may impact pragmatics. Lastly, the results of my corpus-based investigation would greatly benefit from psycholinguistic experiments. Exploring frequency, semantic schematicity, optionality, economy and information hierarchy with various behavioural tasks will certainly provide us with valuable data for a better account of the interaction between evidentiality and cognition.

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