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***Evidentiality as a grammaticalization passenger: An investigation of evidential developments in Tibetic languages and beyond***

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**Abstract**

This article investigates the grammaticalization patterns of evidentiality from a cross-linguistic perspective with a focus on Lhasa Tibetan. It documents the history of the evidential morphemes *'dug*, *-song*, *-bzhang*, and *=ze* from Old Literary Tibetan to modern spoken Lhasa Tibetan. Our analyses show that these morphemes started grammaticalizing before encoding evidentiality. We argue that, through pragmatic strengthening, evidentiality tends to infiltrate forms which have already grammaticalized to express other semantic domains. These patterns of grammaticalization are confirmed by diachronic and reconstructed data from genetically unrelated languages. Evidentiality thus tends to be a 'grammaticalization passenger' (i.e. a conventionalized meaning which used to be merely implied from the recurrent contexts of a grammaticalized form) rather than a 'grammaticalization target' (i.e. a functional domain which triggers grammaticalization). This may explain why evidentiality is less often grammaticalized than other notions, such as time or modality, in the world's languages.

**Keywords**

Evidentiality; grammaticalization; Tibetan; diachrony; cross-linguistic

## 1 Introduction

Although evidentiality, that is the linguistic expression of information sources, is a notion that has drawn a lot of attention recently, little is known about the diachronic development of evidential morphemes. One of the reasons for the limited research on the topic is that evidentiality seems to primarily concern ‘exotic’ languages which are not as well documented as Indo-European languages, and whose historical traces are usually either sparse or non-existent. The partial grammaticalization of evidentiality seems to be a common phenomenon, but relatively few languages possess highly grammaticalized multi-term paradigms to express information sources. A few studies have addressed the origins of evidentials cross-linguistically (Aikhenvald 2011, Friedman 2018), but a detailed account of the patterns of language change involved in the development of a fully grammatical evidential system is still lacking. The motivations behind the grammaticalization of evidentiality and the reasons why this semantic domain is not as universally grammaticalized as other domains, such as time, aspect, number, spatial deixis or modality, are still obscure. Tibetic languages offer a unique opportunity to delve into these questions, since they present a highly complex evidential system of verb inflections and enclitics as well as a very long historical record. We aim to document the step-by-step processes that led to the emergence of such a system by investigating the grammaticalization of some of the most frequent evidential morphemes of Lhasa Tibetan, namely *’dug* and *-song* for direct perception, *-bzhaḡ* for inference, and *=ze* for hearsay. We will conduct both qualitative analyses of their contexts and quantitative analyses of their frequencies from Old Literary Tibetan to modern Lhasa Tibetan. This in-depth description of the diachrony of Lhasa evidentials will be compared to the data available on the origins of evidentials in other Tibetic languages as well as unrelated languages. Our study aims to shed light on some of the parameters influencing the developments of evidential systems in the world’s languages, as well as refine our understanding of linguistic universals and grammaticalization theory.

## 2 Evidentiality and its grammaticalization

### 2.1 Grammaticalization and its function

Grammaticalization is generally defined as the development of grammatical forms from lexical forms, as well as the further advancement of grammatical forms towards the end of the lexicon-grammar continuum (Kuryłowicz 1975 [1965]). This definition is largely

uncontroversial, but in order to assess whether a form is grammaticalizing, one still has to determine on what criteria linguistic items may be located on any point between the lexical and grammatical poles of the continuum. To this end, most linguists refer to the six parameters proposed by Lehmann (1995 [1982]: 16):

- i. *Integrity* (grammatical forms tend to have less phonological and semantic substance, as well as offer fewer morpho-syntactic possibilities);
- ii. *Paradigmaticity* (grammatical forms belong to closed classes of items organized in tight paradigms);
- iii. *Paradigmatic variability* (grammatical forms are more obligatory);
- iv. *Structural scope* (grammatical forms typically have a more restricted syntactic scope);
- v. *Bondedness* (grammatical forms tend to contract into one morpheme, or coalesce with their hosts);
- vi. *Syntagmatic variability* (the positions of grammatical forms are usually fixed).

Several decades of grammaticalization studies have confirmed that, with very rare exceptions, grammatical forms emerge from the lexicon through a cluster of interconnected mechanisms. A finite number of lexical forms that may serve as sources for grammaticalization targets have been identified cross-linguistically. These lexical items must be discursively frequent, and typically refer to rather concrete entities and concepts that are largely universal to human experience (Heine et al. 1991), such as body parts, common actions, or basic movements. A comprehensive description of all the processes that lead a lexical word or phrase to gradually take a grammatical function remains a long-term objective of a productive research field, but four mechanisms seem predominant if one adopts a global approach (Heine et al. 1991):

- i. *Extension* (a grammaticalizing form sees its frequency increase as it becomes compatible with new contexts);
- ii. *Desemanticization* (as a form grammaticalizes, its meaning becomes more generic and abstract);
- iii. *Decategorialization* (a grammaticalizing form loses morpho-syntactic properties that are typical of lexical classes of words);
- iv. *Erosion* (a grammaticalizing form tends to lose phonetic substance).

Some scholars may argue that other processes of change are noticeable when describing grammaticalization (Bybee 2003; Norde 2012; Boye & Harder 2012), but we have chosen to

focus on the four central types of development mentioned above for our investigation of grammaticalized evidentials.

The number of notions that can be expressed with grammatical means is very limited. Notions such as time, definiteness or causality often grammaticalize, but linguists have never encountered any language that uses grammatical forms to refer to domains such as colours, anatomy, or art (see Slobin 1997, Talmy 2000). Mélaç (2018) argues that three properties characterize a grammaticalization target domain: its recurrence (i.e. the need to express this notion must frequently emerge in discourse), its schematicity (i.e. it must be abstract, and thus compatible with a wide range of contexts), and its secondariness (i.e. it must modify an entity that is discursively more foregrounded). Evidentiality is a notion that indeed possesses these three characteristics, and thus qualifies as a semantic domain that can be encoded by grammar. Kuteva *et al.* (2019) offer an encyclopaedic work documenting the recurrent pathways of grammaticalization in the world's languages. These cross-linguistically relevant pathways confirm the universality of grammaticalization theory, as well as its transcultural cognitive foundation, since languages that have never been in contact and belonging to vastly different cultures may develop grammatical items with the same functions and from the same lexical sources. This suggests that grammaticalization serves a shared function in communication despite the diversity of human societies.

Several works have explored what motivates grammaticalization, and point at various principles, among which economy plays a significant role. The existence of function words and inflections in our linguistic repertoire seems to allow us to produce complex messages quickly and with less effort (see Zipf 1949). For example, Mélaç (2014: 371–411) compares the evidential systems of Tibetan and English, and concludes that the highly grammaticalized Tibetan system is more economical in expressing information sources for three main reasons. It first allows speakers to specify their information sources with less morpho-phonological weight by using a lower number of morphemes and phonemes. It then makes it possible to encode evidentiality with less sophisticated syntactic structures by using simple inflections, while English evidentiality often resorts to subordinating clauses (e.g. 'I've heard that...') or raising-verb constructions (e.g. 'He seems to be...'). Finally, the Tibetan system includes highly frequent forms encoding generic evidential domains, while English resorts to a myriad of relatively infrequent forms, which typically require more effort to be retrieved. Economy thus sheds light on the motivation behind grammaticalization, which emerges naturally as a global phenomenon generation after generation due to the speakers' needs to optimize their

communication. However, this principle of least effort does not explain why a notion such as evidentiality appears far more grammaticalized in some languages than in others.

Hopper (1991) argues for further principles, such as layering, divergence, and persistence, which reveal that grammaticalization pathways are far from being isolated, straight roads. These principles are crucial to our understanding of the development of grammatical evidentiality as our historical data expose it, and may help us lift the veil on the reasons behind such grammatical diversity. Layering refers to a common phenomenon that concerns any broad functional domain. Within a domain, such as time, several waves of markers tend to grammaticalize, each time adding new layers without necessarily discarding the older ones. Several grammatical forms with the same basic functions may then coexist, and their semantic differences are usually subtle and unstable. In English, for example, the future can be expressed by several forms which started grammaticalizing at different historical stages of the language. The auxiliary *will* competes with the declining auxiliary *shall* and the expanding semi-auxiliary construction *be going to*. The functions of these forms overlap in many contexts, and the nuances that motivate their uses are evolving. Secondly, the principle of divergence also concerns many grammaticalizing forms. As a form grammaticalizes, it sees its use diverge from its lexical source, but the latter may remain as an autonomous element. In English, the indefinite article *a* comes from the numeral *one* (Old English *an*). These two forms now coexist without modern speakers suspecting their common origins, and the same can be said of Tibetan numeral *gcig* from which the indefinite clitic *cig* (allomorphs: *zhig*, *shig*) developed. We will also see that the inferential perfect inflection -*bzhag* of Lhasa Tibetan comes from the lexical verb *bzhag* ‘to place’, which has remained in use since Old Tibetan. Other lexical sources for evidentials have fallen out of use, such as the verb *song* ‘to go’, which transformed into the direct perception perfective -*song* in Lhasa Tibetan whereas some other dialects have maintained this lexical form (cf. Bielmeier et al. 2018: 207ff., s.v. ‘gro). Lastly, persistence is another principle that will be central to our understanding of evidential developments. As a form undergoes grammaticalization, some traces of its original lexical meaning tend to persist. This partial adherence to its initial function (also called ‘lexical retention’, Bybee & Pagliuca 1987: 112, Ziegeler 1997) may constrain its grammatical uses. For example, although English *be going to* has grammaticalized to express the future, and is now compatible with contexts where no movement is involved, it has retained some of its meaning since it typically cannot be used if the process leading to the future event is not already under way. If the phone has just rung, it sounds more natural to say, ‘I’ll get it’ than ‘I’m going to get it’. We will see that the semantic

## 2.2 The grammaticalization of evidentiality in the World's languages

content word → grammatical word → clitic → inflectional affix

(1) *Paraît qu' c'=est joli la vie d'=Juliette.*  
 HSAY DEM=COP.3SG.PRS.IND pretty DEF life GEN=Juliette

<sup>1</sup> This is a title of a novel by Justine Davoine (2010).

its scope is based on hearsay. It has contracted into a single item, and its hearsay function is limited to the indicative present inflection. Finally, its position is more fixed than its lexical source, since *parait qu'* obligatorily appears sentence-initially.

Several Romance languages can also encode evidentiality through a special use of their verb inflections. This is the case in French where the conditional mood may express hearsay (Dendale 1993), or in Italian, whose so-called ‘future’ tense inflection can also denote inferential evidentiality (Mari 2010), as in (2).

- (2) *Avrà avuto 11 o 12 anni.*  
 have.3SG.INFR have.M.SG.PPRT 11 or 12 years  
 ‘I guess she was 11 or 12 years old.’ (Standard Italian)<sup>2</sup>

The tense in (2) is traditionally called the *futuro anteriore* (‘anterior future’), and can be used either as a perfect future or as an inferential past. In this example, the speaker infers the age of a person he met in the metro by using the *futuro anteriore* even though he will not be able to check this information at any time in the future, which shows that this tense has an independent evidential function.

Isolating languages are reputed to possess a very limited system of inflections and bound morphemes. It is sometimes argued that many of the principles of grammaticalization do not apply to this type of languages (Ansaldi *et al.* 2018). However, the words of isolating languages can usually be classified into syntactic categories. These languages usually possess classes of verb-like items with a limited number of members sharing common distributional properties and encoding domains that are typically grammatical, such as aspect or modality. These forms are comparable to auxiliaries, and since they belong to a closed class of items, they are generally considered more grammatical than simple lexical verbs. As shown by (3), Vietnamese can resort to one of its auxiliaries to encode the speaker’s inferential access to information, thus confirming that evidentiality tends to grammaticalize even in isolating languages.

- (3) *Anh ta phải mất tự chủ lắm thì mới làm thế*  
 3SG.M INFR lose control really CONR R.PRF do DEM  
 ‘He **must** have really lost control to have done that!’ (Standard Vietnamese)<sup>3</sup>

<sup>2</sup> From the Italian architecture magazine Domus (<https://www.domusweb.it/it/architettura/2010/04/22/urban-think-tank-vuelame-a-mi-barrio.html>, 6/10/2022)



The grammaticalization of evidentiality is thus a surprisingly widespread phenomenon, since the close examination of languages that used to be presented as lacking grammatical evidentiality often reveals that they have actually developed several (semi-)grammatical evidentials. The evidential systems of these languages, however, differ from multi-term paradigms of inflections dedicated to the expression of information sources, such as the Lhasa Tibetan evidential system. In Lhasa Tibetan, a simple sentence such as ‘he gave the money’ will be rendered differently depending on the speaker’s type of access to the information:<sup>4</sup>

- (4) *dngul de sprad-song*  
 money DEM give-PFV.DPERC  
 ‘He gave the money.’ [seeing the action] (LhasTib; TSC)

- (5) *dngul de sprad-bzhag*  
 money DEM give-PRF.INFR  
 ‘He gave the money.’ [inferring the action by perceiving its result] (LhasTib; constructed)

- (6) *dngul de sprad-pa red=ze*  
 money DEM give-PFV.FACT=HSAY  
 ‘He gave the money.’ [knowing about the action by hearing about it] (LhasTib; constructed)

In (4), the use of the verb suffix *-song* specifies that the speaker has seen his friend giving the money. If the speaker did not see what happened but can infer this state of affairs, for example by noticing that a box that contained banknotes is now empty, the correct suffix would be *-bzhag*, as in (5). Finally, if the speaker only knows about the state of affairs from what he was told, the main verb will be associated with the factual perfective suffix *-pa red* and the hearsay enclitic *=ze*, as in (6). These three Tibetan sentences have the same basic English translation, thus confirming that the grammars of the two languages are fundamentally different with regard to evidentiality.

Although the partial grammaticalization of evidentiality prevails in the world’s languages, few languages have developed a highly grammaticalized system of inflections and

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<sup>3</sup> Our thanks to Minh K. Nguyen for providing this example (p.c. December 2021).

<sup>4</sup> Italics are used for transliteration. The Old Literary Tibetan reversed *gi gu* is not accounted for in the transliteration. The so-called Wylie transliteration (1959) is used for all the Tibetic languages. All passages have been translated by the authors.

clitics like most Tibetic languages. The latter offer a unique opportunity to provide diachronic data attesting all the stages of the complete grammaticalization of evidentiality, while most multi-term evidential systems belong to languages with little historical records. The traditional societies in the Amazonian basin or Papua New Guinea, for example, started writing their languages down only recently, while Tibetan possesses a vast diachronic corpus spanning from the 8<sup>th</sup> to the 21<sup>st</sup> century, allowing us to conduct an in-depth investigation of its evolution. By comparing the data documented in Tibetan with what has been attested or reconstructed for other ‘complex evidential languages’, we will argue that the reason why complex evidential paradigms are rare may be that specific mechanisms are necessary for evidentials to reach a fully grammatical status. For a highly grammaticalized evidential system to emerge, evidential forms usually need to be led by another prominent grammatical notion, such as time, aspect, or modality, suggesting that evidentiality is a ‘grammaticalization passenger’ rather than a ‘grammaticalization target’.

### **3 Methodology and corpus**

#### **3.1 Languages under study**

‘Old Literary Tibetan’ (OldLitTib) is the language of documents composed roughly within the period of the Tibetan Empire (ca. 600–850s, Bialek 2021) after the script invention in the 630s or 640s. OldLitTib should be distinguished, on the one hand, from Middle Literary Tibetan (MidLitTib) and, on the other hand, from Old Tibetan (OldTib). The latter was a spoken language dated approximately to 640s–800 (Bialek 2018). From the second half of the 7th century, spoken and written languages developed parallel to each other, although the former continued to influence the latter.

Middle Literary Tibetan (often dubbed Classical Tibetan) is a standardized version of OldLitTib that received some influence from historical spoken varieties (Middle Tibetan) as time passed. MidLitTib was in use in Tibet since approximately the first half of the 10<sup>th</sup> century. Until the early 20<sup>th</sup> century, it served all purposes, from administrative, to medical, and religious (Bialek 2022: 9ff).

As for contemporary Tibetan, we will focus on the spoken Lhasa variety of Central Tibetan (henceforth Lhasa Tibetan; LhasTib). This variety, or one very close to it, is often considered ‘standard Tibetan’ (also called *spyi skad* ‘common Tibetan’), as it serves as a

*lingua franca* within Central Tibet and the Tibetan diaspora. It is usually the only spoken Tibetic language taught in Tibetan schools in exile and in universities around the world.

The term ‘Tibetic languages’ refers to the group of languages derived from Old Tibetan which are nowadays spoken in six Asian countries (for a comprehensive survey, see Tournadre & Suzuki 2022). They include 45 groups of dialects (or ‘languages’) spoken throughout Tibet as well as 31 groups of dialects (or ‘languages’) spoken in the Himalayas and Karakoram (outside Tibet). Many of these languages allow only little or no mutual intelligibility.

### 3.2 Corpora and sources

The survey of Old Literary Tibetan is based on the OTDO corpus, which contains 246 texts (approx. 205,000 syllables; as of 01.09.2022) from Central Tibet and Central Asian colonies of the Tibetan Empire. Passages quoted from OldLitTib have been transliterated on the basis of scans made available on the IDP and Gallica.

As the main source for Middle Literary Tibetan, we will use *Mi la ras pa'i rnam thar*, a biography of Mi-la Ras-pa (roughly 1040–1123) authored by Gtsang-smyon Heruka (1452–1507) (henceforth Heruka’s *Life of Milarepa* (ML)), a tantric master from Central Tibet. The work (approx. 72,000 syllables) is well-known for its lively language that reflects a spoken variety of 15<sup>th</sup>-century Central Tibet. Since its main narrative consists of a life story of Mi-la Ras-pa as personally related to his closest disciple Ras-chung-pa, its language shares many traits with the spoken vernacular and therefore abounds in evidential or pre-evidential constructions of the time. In addition, *Dbas bzhed* (Dbas) ‘Testament of the Dba’ family’ and *Rgyal rabs gsal ba'i me long* (GLR) ‘The Mirror illuminating the Royal Genealogies’ were examined for the relevant constructions. Dba’ is an anonymous work and the earliest extant post-imperial history of Buddhism at the time of *btsan po* Khri Srong-lde-brtsan.<sup>5</sup> Its oldest version goes back to the 11<sup>th</sup> or 12<sup>th</sup> century (Doney 2020: v). GLR was composed in 1368 by Bsod-nams Rgyal-mtshan (1312–1375), and recounts the history of Buddhist teachings in Tibet.

Our Lhasa Tibetan examples were extracted from the Tibet Student Corpus (henceforth TSC), collected by Eric Mélaç at Tibet University (Lhasa) in 2010–2011. This corpus is made up of 4 hours and 8 minutes of conversations in Lhasa Tibetan involving 4

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<sup>5</sup> *Btsan po* was the official title of the rulers of the Tibetan Empire. It is derived from the verb *btsa* ‘to bear, bring forth’ (denominal from *tsha* ‘offspring’); its literal meaning can be rendered as “born-he” (Bialek forthcoming a).

pairs of native speakers. It is fully transcribed, and contains approx. 26,000 words (approx. 40,000 syllables). For other spoken Tibetic languages, the information provided comes from the authors' first-hand data collected during various fieldworks, as well as from secondary sources. Other information on Tibetic languages is compiled in Tournadre & Suzuki (2022).

Finally, the cross-linguistic data on the grammaticalization of evidentials in other, genetically unrelated languages mainly come from secondary sources, notably the *Oxford Handbook of Evidentiality* (Aikhenvald, ed., 2018) and the *World's Lexicon of Grammaticalization* (Kuteva *et al.*, eds., 2019).

## 4 Grammaticalization patterns of main evidential categories

Because of space constraints and data availability, we will focus on the grammaticalization of some of the most frequent evidential forms from Old Literary Tibetan to Lhasa Tibetan: direct perception *'dug* and *-song*, inferential *-bzhang*, and hearsay *=ze*. We will show that these patterns of grammaticalization are also frequently attested in other Tibetic languages (from various lexical sources) and in several other languages from different families.

### 4.1 Direct perception

#### 4.1.1 Lhasa Tibetan *'dug*

The verb *'dug* is frequently attested in OldLitTib, both as a lexical verb meaning 'to sit, to stay' and as a partial synonym of *yod*, especially in its locative meaning.<sup>6</sup> The verb *yod* has a more diffuse, abstract function than *'dug*, since the former frequently encodes existence or possession. Despite some functional overlap, the semantic difference between *'dug* and *yod* is well illustrated in the Sino-Tibetan Treaty, a text composed in Central Tibet in 822, where *'dug* is used to provide the location of China (7), while *yod* fulfils various functions.

- (7) *shar phyogs=na*      *rgya*      *'dug=pa*  
 east direction=INESS    China    EXIST=NMZ

'China that **is** in the east' (OldLitTib; Sino-Tibetan Treaty E 18)

In OldLitTib, the meaning of *'dug* is thus more concrete than *yod*. It expresses spatial deixis without any clear evidential extension yet, since the location of China was a piece of

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<sup>6</sup> For previous studies on the diachrony of the verb, see Hongladarom (1994), Hill (2013), and Zeisler (2017, 2018).

information related to the general knowledge of the learned people of the time.<sup>7</sup> The same usage is confirmed in the tomb inscription of Khri Lde-srong-brtsan (ll. 24, 29, 39), a text composed in 815, or shortly thereafter. In many contexts, *'dug* does not imply direct perception at that stage of the language, as shown by (8):

- (8) *mtsho ched po='i nang=na / chu srin rgyal ba' 'dug=na / gnam=las*  
 ocean great=GEN inside=INESS sea monster victorious EXIST=CONR sky=DEL

*{lce} phab=ste // chu srin rgyal ba chu='i*  
 thunderbolt throw.PFV=CONR sea monster victorious water=GEN

*nang=du bsad=do*  
 inside=TERM kill.PFV=FNL

‘If **there were** a victorious sea monster in a great ocean, having thrown a thunderbolt [down] from the sky, [one] would kill the victorious sea monster in the waters.’  
 (OldLitTib; PT 1287: 517–8)

The person who utters the sentence in (8) has not seen the sea monster, but simply imagines its existence. However, other sentences display early bridging contexts compatible with a direct perception, as in (9):

- (9) *cho myi bya='i bu mo=zhig yur=ba byed=pa='i gan=du*  
 family man bird=GEN girl=INDF sleep=NMZ do.IMPV=NMZ=GEN where=TERM

*song=na / bu khu ljo=na 'dug=pa=zhig / myig bya myig=dang*  
 go.PFV=CONR child sucking bag=INESS lie=NMZ=INDF eye bird eye=COM

*mtshungs 'og=nas 'gebs=pa gchig 'dug=nas*  
 be like bottom=EL close.IMPV=NMZ one EXIST=INESS

<sup>7</sup> Despite its 318 occurrences in the OTDO corpus (11.04.2022), *yod* is construed with a locative argument in *=na* only in 11 cases (3.5 %), whereas *'dug* is attested 145 times, and takes a locative argument in 37 cases (25.5 %).

‘When [Ngar-la-skyes] went towards the one who was lulling a girl from the man-bird family, **there was** a child, that was lying in a woollen sucking-bag, one who was closing [its] eyes, that were like bird’s eyes, from below.’ (OldLitTib; PT 1287: 43–4)<sup>8</sup>

The morpheme *’dug* in (9) expresses the existence of the child, and appears in a context where the main character perceives his presence as he approaches the scene.

In MidLitTib, *’dug* has extended its semantic space and taken over many of the functions of *yod*, since both verbs can be used with a locative, possessive, existential, essential, or qualificational meaning. However, locative or essential *’dug*, as well as essential or qualificational *yod* are marginal in our corpus (*’dug* LOC 3.6%, ESS 9%; *yod* QUAL 1.4%, ESS 1.4% in ML). At that stage, *’dug* is further grammaticalized, and is rarely attested as a fully lexical verb, but mainly as a copula, an existential verb, or an auxiliary in various analytical verb constructions. Although existential-copular *’dug* and the imperfective construction *V=gin ’dug* may still appear in contexts that do not imply direct perception, its evidential meaning is emerging in many passages of Heruka’s *Life of Milarepa* (see also Oisel 2013: 77–8). In (10), Mi-la Ras-pa is looking for a great master named Mar-pa. He meets his son, who tells him that his father is ploughing, using the imperfective construction *V=gin yod*.

- (10) *de ring pha jo khru slog=gin yod*  
 today venerable father plough.IMPV=DUR COP

‘Today, [my] venerable father **is ploughing**.’ (MidLitTib; ML trslr. *apud* de Jong 1959: 55, ll. 6–7)

The imperfective construction *V=gin yod* in (10) does not imply a direct perception. Mi-la Ras-pa then actually sees Mar-pa, and the narrator adopts Mi-la Ras-pa’s point of view by using the imperfective construction *V=cing ’dug* (11).<sup>9</sup> The latter construction contrasts with *V=gin yod* as it implies a direct perception of the event.

- (11) *ban dhe [...] spyen yangs=la zil che ba=cig khru slog=cing ’dug*  
 monk eye.HON wide=DAT splendour great=INDF plough.IMPV=DUR COP

‘A monk with wide-set eyes and great splendour was ploughing.’ (MidLitTib; ML trslr. *apud* de Jong 1959: 55, ll. 9–10)

<sup>8</sup> The first *’dug* in this example, as well as in ex. (32) below, in PT 1287: 159, and ML p. 24, l. 7 & p. 35, l. 20, contradicts Hill’s assumption that the meaning ‘to sit’ is idiosyncratic to the *Mdzangs blun* (2013: 9).

<sup>9</sup> In MidLitTib, *V=cing ’dug* seems to be synonymous to *V=gin ’dug*, which later eroded into *V-gi ’dug*.

The story of the morpheme *'dug* would not be complete without mentioning that *V 'dug* frequently appears in MidLitTib as a construction expressing a resultative perfect. *V 'dug* is also an inferential perfect in several modern Tibetic languages, and is a suppletive form for inferential *-bzhaḡ* in negative and interrogative clauses in LhasTib. *V 'dug* was first used as a simple resultative perfect and ended up integrating the implicature of inferring an event from the direct perception of its result. In (12), the bodhisattva-monkey visits a place where he left his monkey-children, and sees that their number has increased. This example illustrates a bridging context where a resultative perfect implies an inference, since the main character did not see the monkey-children multiply, but only the resultant state.<sup>10</sup>

- (12) *spre'u byang chub sems dpa' bltar phyin=pas /*  
 monkey bodhisattva see.DPASS:TERM go=NMZ:CONR

*las=kyi dbang=gis spreḡ phrug lnga brgyar 'phel 'dug=go*  
 deed=GEN force=ERG monkey child five hundred:TERM increase PRF=FNL

‘Because the *bodhisattva*-monkey went to inspect [them], perforce of [their previous] actions the [number of] monkey-children **had increased** to five hundred.’ (MidLitTib; GLR 23r4–5)

In LhasTib, the contrast between *yod* and *'dug* is sharper than in MidLitTib, since *yod* has a strict egophoric meaning in LhasTib, that is, it encodes an integrated self-knowledge, while *'dug* is only compatible with a state of affairs directly perceived by the speaker. (13) and (14) show the contrast between the existential verbs *yod* and *'dug*.

- (13) *lha sa=yar nga lta stang yag po zhe po cig yod*  
 Lhasa= DAT 1SG opinion good really **EXIST.EGO**  
 ‘I have a really good opinion of Lhasa.’ (LhasTib; TSC)

- (14) *de='i nang=la mi gcig 'dug*  
 DEM=GEN inside=LOC man one **EXIST.DPERC**  
 ‘There is a man inside.’ [based on what the speaker can see] (LhasTib; TSC)

<sup>10</sup> See 4.2.1 for the development of inferential *V=bzhaḡ* in parallel of *V 'dug*.

(15) and (16) illustrate a similar semantic difference between the imperfective suffixes *-gi yod* and *-gi 'dug*.

- (15) *spyi spyod rlang 'khor bsdad=byas yong-gi yod-ba*  
 public bus stay=CONR come-IMPV.EGO-PHAT  
 ‘I was arriving on the public bus, y’know.’ [based on the speaker’s knowledge of his own actions] (LhasTib; TSC)

- (16) *lhag pa brgyab-gi 'dug-gas*  
 wind LV-IMPV.DPERC-INT  
 ‘Is that the wind blowing?’ [anticipating that the addressee’s answer will be based on the sound he has heard] (LhasTib; TSC)

To sum up, there are early signs of the grammaticalization of the lexical verb *'dug* into the existential verb or copula *'dug* in OldLitTib, resultative perfect *'dug*, and the imperfective suffix *-gi 'dug* in MidLitTib. These forms are fully grammaticalized direct perception evidentials in contemporary Lhasa Tibetan. The verb *'dug* has evolved into an evidential marker by entering into a contrastive relationship with the verb *yod*. The diachronic data on Tibetan shed light on the four typical mechanisms of grammaticalization, that is extension, desemanticization, decategorialization, and erosion.

As far as extension is concerned, a comparison of the OTDO corpus, Heruka’s *Life of Milarepa*, and the TSC reveal a clear increase in the use of *'dug* at each stage of the language, as shown by table 1.<sup>11</sup>

*Table 1: Diachronic frequency of 'dug estimated per 10,000 syllables*

OTDO corpus (OldLitTib)	<i>The Life of Milarepa</i> (MidLitTib)	TSC (LhasTib)
7	60	150

We have also shown that *'dug* saw its meaning evolve from OldLitTib to LhasTib, illustrating a typical process of desemanticization. From a lexical verb meaning ‘to sit, to stay’, it is now used as an existential-copular verb or an imperfective suffix encoding direct

<sup>11</sup> Table 1 presents the normalized frequency of *'dug* for all its functions in OldLitTib and MidLitTib, and only for its direct perception meaning in LhasTib. In negative and interrogative clauses, *'dug* may appear in *V-'dug* as an inferential perfect and in *red 'dug* as a conclusive copula, but these uses have been excluded to measure the frequency of direct perception *'dug* in the TSC.



perception. As it became a competitor to the verb *yod*, it first retained its more concrete meaning associated with spatial deixis. The spatial feature of *'dug* then bleached while an implicature of direct perception conventionalized, due to an underlying correlation between evaluating the spatial location of an entity and perceiving it directly. Table 2 synthesizes the semantic evolution of *'dug* and *-gi 'dug*. The brackets indicate a rarely attested use.

Table 2: Semantic evolution of *'dug* and *-gi 'dug*

OldLitTib	MidLitTib	LhasTib
<i>'dug</i>	<i>'dug</i>	<i>'dug</i>
-lexical 'to sit, to stay'	(-lexical 'to sit, to stay')	-direct perception possessive
-locative	-possessive	-direct perception existential
(-existential)	-existential	-direct perception qualificational
(-qualificational)	-qualificational	-direct perception locative
	(-locative)	
	(-essential)	
	<i>V 'dug</i>	<i>V 'dug</i>
	-inferential perfect	-inferential perfect (only in negative and interrogative clauses)
	<i>V=gin 'dug</i>	<i>V-gi 'dug</i>
	-imperfective	-direct perception imperfective

As it was used as a copula, *'dug* already belonged to a closed class of linguistic forms in OldLitTib, which can be seen as an early sign of its decategorialization. It also appears in several analytical constructions, such as the cleft construction *V=par 'dug*, which shows that the first steps of its decategorialization occurred before it acquired an evidential meaning. However, it retained many of the syntactic properties of lexical verbs in MidLitTib. Several properties distinguish lexical verbs from more decategorialized morphemes in LhasTib. Lexical verbs may be followed by inflectional suffixes while copulas, suffixes and enclitics typically cannot: *bsdad-gi 'dug* (stay-PFV.DPERC 'he is staying') vs *\*'dug-gi 'dug*. Lexical verbs may also precede connectors while more grammaticalized forms usually cannot: *bsdad=nas* (stay=CONR 'after staying') vs *\*'dug=nas*. In LhasTib, the existential-copular verb *'dug* has lost most of its lexical properties, and the construction *V=gin 'dug* has now turned into an inflectional suffix bound to a main verb, which shows its very advanced decategorialization, notably from MidLitTib to LhasTib.

Finally, the existential-copular *'dug* [du?] may show little signs of morpho-phonetic erosion if one compares it to its OldLitTib form *\*[<sup>N</sup>dug]*, but *V=gin 'dug* has clearly eroded between Middle and Lhasa Tibetan. It is now pronounced [gidu?], and is frequently even reduced to [gi?], while Early Old Tibetan pronunciation would have been *\*[gindug]*.

#### 4.1.2 Lhasa Tibetan *song*

In OldLitTib, the morpheme *song* was the suppletive perfective form of the lexical verb 'gro 'to go'. (17) illustrates this use, which is also common in MidLitTib and several other Tibetic languages.

- (17) *brgyags thog[s]=shig=ces mchi=nas song=ngo*  
provisions raise.SPASS=IMP=RSF say=CONR **go.PFV**=FNL  
“‘Give [me] [some] provisions!’ After saying this, he left.’ (OldLitTib; PT 1287: 42)

At that stage of the language, there were already several examples of *song* connected to a verb of motion in the construction  $V_{\text{motion}}=\text{ste } \textit{song}$ . This illustrates the first step of its grammaticalization, since both verbs entering the construction refer to the same event, and *song* is used as an auxiliary encoding translocativity, i.e. a motion away from the speaker (or from the main character, if the narrator adopts his/her point of view). (18) illustrates this construction:

- (18) *rbeg ga rbeg shi rma bye'u gchig=du 'phrul=nas 'phur=te song*  
Rbeg ga Rbeg shi peacock chick INDF=TERM change=CONR fly=CONR **go.PFV**  
‘Rbeg-ga Rbeg-shi changed himself into a peacock chick, [and] **went off flying**.’  
(OldLitTib; ITJ 732: 10–1)

The verb *song* in (18) is translocative, which is a semantic feature within the domain of spatial deixis. A speaker can refer to an event moving away from him/her (or another deictic landmark) without witnessing it, for example if one has heard or inferred that someone is leaving town. However, the observation of the event by the speaker is a very frequent context, and the conventionalization of this implicature as an inherent meaning must have given rise to the direct perception function of *song* (see Oisel 2013: 140–2; 2017). This semantic shift is observable in MidLitTib. In Heruka’s *Life of Milarepa*, we find *song* postposed to a verb of motion, but this time without any connector, as in (19):

- (19) *ban dhe de log song=ba=dang*  
monk DEM turn go=NMZ=CONR  
‘The monk came back.’ (MidLitTib; ML trslr. *apud* de Jong 1959: 55, l. 21)

The partial grammaticalization of *song* is noticeable by its use with *log*, a cislocative verb meaning ‘to return’, thus indicating that the translocative meaning of *song* was already bleached. In the same work, there are examples of *song* directly following a main verb that is incompatible with motion, as in (20). It reveals that the shift from the translocative motion to the direct evidential meaning of *song* had already started.

- (20) *mdang nga='i yon bdag dga' mo de=yang shi song=bas*  
 night 1SG=GEN patron good DEM=ADD **die.PFV** **PFV.DPERC=NMZ:CONR**

*'khor ba 'di=la yid=cig skyo ba yin*  
 cycle of existence DEM=ALL mind=INDF grief COP

‘Since my beloved patron died last night, my mind is grieved about this cycle of existence.’  
 (MidLitTib; ML trslr. *apud* de Jong 1959: 51, ll. 14–5)

(20) is a clear bridging context for the grammaticalization of *song* as a direct perception evidential. At that stage, the auxiliary *song* entered a functional paradigm of various perfective constructions, such as *V=pa yin* or *V(=par) gyur* (Bialek 2022: 192, 195). Compare (21), from the same work:

- (21) *da kho rang shi=ba=yin=nam skad ci=yang mi='dug*  
 now he self **die.PFV=NMZ=PFV=CNJ** word what=ADD NEG=EXIST

‘Now, he died or else no words are heard [of him].’ (Lit. [...] there are no words whatsoever)  
 (MidLitTib; ML trslr. *apud* de Jong 1959: 110, ll. 21–2)

The speaker in (20) was present at the deathbed, and thus witnessed the passing away of the patron. (21) is told by an incidental person who does not have any direct knowledge of what might have happened to the son, and therefore speculates that he has died already.

The verb *song* thus grammaticalized as a new perfective form, which is a clear case of ‘paradigm layering’. We may hypothesize that it has not grammaticalized in order to encode evidentiality, but the perfective aspect.<sup>12</sup> Just like for *'dug*, the evidential feature associated

<sup>12</sup> The construction *V=ste song* might have originally been introduced for the verbs of motion that did not have separate perfective forms; the standard perfective construction *V=pa yin* required a perfective form of the main verb and was therefore not available for many verbs of motion.

with *song* is probably the result of lexical persistence and pragmatic strengthening. The verb *song* kept its frequent translocative meaning from OldLitTib into many of its uses in MidLitTib. This meaning then bleached, but the recurrent implicature of speaker’s perception conventionalized, thus resulting in a perfective direct perception marker.

In LhasTib, *-song* is a fully grammaticalized evidential. The lexical verb *song* is no longer used, and because *-song* is now a suffix, it typically cannot be followed by inflections or connectors. Its use has generalized to virtually all classes of verbs, and the motion meaning is definitely lost, as in (22):

- (22) *nub phyogs=kyi dug log ’di par dar khyab chen po byung-song-nga*  
 west=GEN clothes here popular become-PFV.DPERC-PHAT  
 ‘Western clothes have become very popular here, right?’ (LhasTib; TSC)

To sum up, the grammaticalization of the lexical verb *song* into the direct perception suffix *-song* started in OldLitTib, and was already quite advanced in MidLitTib. This suffix is the result of the typical processes of grammaticalization, that is extension, desemanticization, decategorialization, and erosion.

As far as extension is concerned, the data from the OTDO corpus, Heruka’s *Life of Milarepa*, and the TSC show a frequency increase at each stage of the language, as shown by Table 3:

Table 3: Diachronic frequency of *song* estimated per 10,000 syllables

OTDO corpus (OldLitTib)	<i>The Life of Milarepa</i> (MidLitTib)	TSC (LhasTib)
7	25	28

The increase between MidLitTib and LhasTib is not particularly high, but one should remember that, as the suffix *-song* expanded during that period, the lexical verb *song* fell out of use in LhasTib.

The semantic evolution of *song* from OldLitTib to LhasTib is symptomatic of a process of gradual desemanticization, associated with pragmatic strengthening. We saw that the lexical verb *song* entered a coordinated construction where its semantics bleached in favour of the expression of translocative motion. In MidLitTib, *song* can be found directly following a main verb with a perfective meaning, and typically in a context of direct

perception, which is an implicature it retained from its translocative meaning. In LhasTib, the motion meaning has definitely bleached, and the direct perception implicature has become an inherent semantic feature. Table 4 offers a synthesis of this semantic evolution.

Table 4: Semantic evolution of *song*

OldLitTib	MidLitTib	LhasTibet
<i>V=ste song</i>	<i>V song</i>	<i>V-song</i>
-perfective translocative	-perfective translocative	-perfective direct perception
	or	
	-perfective (direct perception)	

The decategorialization of *song* started in MidLitTib when it was allowed to follow a main verb without any connector. However, it retained some of the properties of a lexical verb, such as the possibility to be followed by a nominalizer. In LhasTib, it is now an inflectional suffix which is tightly bound to the verb, and has lost all its lexical properties.

Finally, the emergence of the evidential suffix *-song* (LhasTib [s(õŋ)]) is the result of erosion since it comes from the periphrastic construction *V=ste song*. In colloquial LhasTib, *-song* is also sometimes simply pronounced [s].

#### 4.1.3 In other languages

In other Tibetic languages, different morphemes may have a similar function as *'dug*; these are *gda'* (in Hor and several northern Kham dialects), and *snang* (in Phänpo, as well as several dialects in Khams, Ladakh, and Baltistan) (Tournadre & Suzuki 2022). The morpheme *gda'* is an honorific equivalent of *'dug* in OldLitTib, so the grammaticalization pathways of these forms seem comparable. The morpheme *snang*, however, has a different origin, since it translates as ‘to emit light, to appear’ in OldLitTib. One can hypothesize that it became an existential-copular verb in several Tibetic languages before developing a similar function as *'dug* through contact grammaticalization (see Ebihara 2017).

In several Tibetic languages, the suffix *-thal* is used as a functional equivalent of LhasTib *-song* (notably in Hor, Khams, Amdo, and Sharkhok) (Tournadre & Suzuki 2022). The verb *thal* is a rarer form that could be used, in some contexts, as a synonym of *song* in OldLitTib and MidLitTib. It probably became one of the main verbs meaning ‘to go’ at certain historical stages in some Eastern Tibetic languages. It then grammaticalized into a direct perception suffix in parallel with *song*, probably through contact between the Central and Eastern languages of Tibet.

From a cross-linguistic perspective, the grammaticalization of evidentials from spatial deictic markers is widely attested (Aikhenvald 2004: 275–6). Various Benue-Congo languages have developed evidentials from demonstratives (Blass 1989, Botne 1995) with the same logic of deictic location implying the speaker’s direct perception of the state of affairs. Lakondê, a Nambikwarane language, also possesses two deictic markers, namely the distal *-te-* and the proximal *-ta-*, which specify that the speaker has directly seen the referent of the noun these demonstratives determine (Telles & Wetzels 2006: 248–9, Eberhard 2018). The grammaticalization of a verb meaning ‘to sit’ into a copula was the first step in the development of *’dug* as an evidential. This pathway is also attested in genetically unrelated languages, as in Spanish *ser* ‘to be’ which results from the merging of Latin *sēdēre* ‘to sit’ and *esse* ‘to be’. The verb *ale* in Imonda, a Papuan language, and *duti* in Sango, a creole based on the Northern Ngbandi language, are copulas that grammaticalized from a verb meaning ‘to sit’ (Seiler 1985: 158, Thornell 1997: 122; cited in Kuteva et al., 2019: 404). In English, we could argue that the verb *to sit* has also acquired a semi-bleached locative meaning as in ‘The saucepan **sits** in the cupboard’. This verb, which would simply be translated by a copula in many languages (such as French *être*, ‘to be’), possesses a locative meaning and usually implies that the speaker has directly seen the state of affairs. One can thus see how a locative copula which has grammaticalized from a verb meaning ‘to sit’ can easily conventionalize a direct perception implicature.

As we have argued, the verb *song* ‘to go’ also grammaticalized into a direct perception marker because of its spatial deictic component. In Dulong, a Tibeto-Burman language, the verb *jǐ* ‘to go’ also developed into a direct perception suffix (LaPolla 2003: 679). In Turkish, the indirect evidential suffix *-miş* is in a contrastive distribution with the forms *-yor* and *-Dir*, which usually imply that the speaker has witnessed the state of affairs. The latter suffixes originate from agglutinated verbs of motion and state respectively, ‘to go’ and ‘to stand’, which is in keeping with the correlation between spatial deixis and direct evidentiality (Lewis [1967] 1985: 96, 108; cited in Friedman 2018). Finally, the choice between the future forms *will* and *be going to* in English also partly depends on evidentiality. The more recently grammaticalized construction *be going to* is favoured when the speaker has direct evidence of the future state of affairs, as shown by (23):

(23) ‘Look! It’s **going to** rain!’ (\*will)

The association between *be going to* and speaker's perception is probably linked to the lexical persistence of the spatial deixis expressed by *go*. This cross-linguistic data thus illustrate that the grammaticalization of direct perception as was documented in Tibetan rests on a universal correlation between spatial deixis and perception. This conceptual association may remain at the level of an implicature, or may solidify and become an inherent semantic feature.

## 4.2 Inference

### 4.2.1 Lhasa Tibetan *bzhag*

In OldLitTib, *bzhag* (OldLitTib inflections: 'jog, *bzhag*, *gzhag*, *zhogs*) is the perfective form of a relatively frequent lexical verb meaning 'to place' or 'to leave [somewhere]'. There are no patent signs of its grammaticalization at that stage of the language, but it appears frequently in connected clauses:

- (24) *srin tsan dgu bo khas thang nga rgya mo thang=gi mchan=du*  
 demon Tsan dgu bo kha:ERG Thang nga Rgya mo thang=GEN bosom=TERM

*rte'u ro bchug=ste bzhag*  
 foal body put in.PFV=CONR **put.PFV**

'Demon Tsan-dgu-bo-kha, having put a foal into the bosom of Thang-nga Rgya-mo-thang, left [it there].' (OldLitTib; PT 1285: r127)

In (24), *bzhag* has indeed a lexical meaning, but the actions of placing the foal and leaving it there happen almost simultaneously, and could therefore be conceived of as a single event. One can perceive how, from a construction expressing two actions, the clause in *bzhag* eroded to mark the result of the previous action, that is, that the object stayed where it was left.

This type of construction is also attested in MidLitTib, in contexts where the incipient grammaticalization of *bzhag* is more obvious.

- (25) *mi stong=gis drud bkal=nas 'bal rje khol=la*  
 man thousand=ERG drag.PFV load.PFV=CONR lord and servants of 'Bal=ALL

*gtad=de bzhag=nas nub mo sas*  
 deliver.PFV=CONR **put.PFV=CONR** evening earth:ERG

*g.yogs=te bzthag=na nang par sku stod*  
 cover=CONR **put.PFV**=CONR next morning:TERM body.HON upper part

*yan chad zang nge byung=zhing gda'=bar=gyur*  
 up to plainly occur.PFV=CONR EXIST.HON=NMZ:TERM=PFV

‘One thousand people dragged and placed [the statue] over. [Then they] **handed** it **over** to the lord and servants of ’Bal. Thereafter, when [they] had **covered** [it] with earth in the evening, the next morning the upper body has plainly emerged.’ (MidLitTib; Dbā’ trslr. *apud* Wangdu & Diemberger 2000: 4v)

In (25), the verb *bzthag* is used twice, but does not seem to add much lexical meaning in both cases. Because the statue was delivered, it was left there, and after it was covered with earth, it continued to stay there. Each time, *bzthag* emphasizes the resulting state of the action expressed by the previous predicate. At that stage, *V=ste bzthag* started to enter the perfect aspect paradigm, as a competitor to other forms, such as *V yod* and *V ’dug*. The abductive inferential reading, i.e. inferring what happened from the resultant state of the event, appeared later, most probably due to pragmatic strengthening. If the speaker discovers the statue left half-buried at a certain location, s/he can infer that it was delivered there and covered with earth. In MidLitTib, this inferential process is only implied in some contexts, and this implicature must have conventionalized after the 15<sup>th</sup> century.

It is important to note that *V=ste bzthag* was far from being the most common perfect form in MidLitTib. *V-bzthag* has most probably emerged as a near-synonymous competitor of the perfect construction of *V ’dug* (as described in section 4.1.1), and finally supplanted it in declarative clauses in LhasTib while *V ’dug* is still used in negative and interrogative clauses. In this dialect, *V-bzthag* is indeed used in an assertive statement specifying that the speaker did not witness the state of affairs expressed by the predicate, but can infer its occurrence from observable signs, as in (26).<sup>13</sup>

(26) *ri mo bris-bzthag*  
 picture draw-**PRF.INFR**

‘Someone has drawn a picture.’ (LhasTib; TSC)

<sup>13</sup> Although the speaker specifies s/he accessed the information indirectly, using *-bzthag* is as assertive as a direct perception marker, such as *-song*.



The inferential feature of *-bzhang* can also be observed by its appropriateness when talking about other people’s thoughts and feelings. Lhasa Tibetan resorts to a direct perception marker to refer to one’s own inner life (27), but other people’s affects will be rendered by inferential

*-bzhang* (ex.28), because they cannot be directly perceived by the speaker.

- (27) *de dngos gnas yag po zhe drags ma=red bsam-gyis*  
 DEM really good very NEG=COP think-**IMPFV.DPERC**  
 ‘I don’t think that’s very good, really...’ (LhasTib; TSC)

- (28) *rgan skal ldan ’od ser=lags=gis cig gsung-gi red bsam-bzhang*  
 master Skal ldan ’od ser=HON=ERG something say-FUT think-**PRF.INFR**  
 ‘He thinks Master Skal-ldan ’od-ser is going to say something.’ (LhasTib; TSC)

The grammaticalization of the lexical verb *bzhang* into an inferential suffix is therefore a relatively late phenomenon in the history of Tibetan. Despite early bridging contexts, the four typical processes of grammaticalization, i.e. extension, desemanticization, decategorialization, and erosion really started sometime after the 15<sup>th</sup> century in Central Tibet.

The extension of the form is only noticeable when comparing the TSC to Heruka’s *Life of Milarepa* (table 5).<sup>14</sup>

Table 5: Diachronic frequency of *bzhang* estimated per 10,000 syllables

OTDO corpus (OldLitTib)	<i>The Life of Milarepa</i> (MidLitTib)	TSC (LhasTib)
5	5	71

Data is missing to attest any intermediary steps between a lexical use of *bzhang* and its grammaticalized use as a perfect inferential. However, several attestations in bridging contexts suggest how *bzhang* desemanticized from a verb denoting a concrete action (‘to leave something somewhere’) to a resultative marker, and then acquired an abductive inferential meaning by pragmatic strengthening. The decategorialization of *bzhang* also started sometime after the 15<sup>th</sup> century as it was syntactically a full lexical verb in connected clauses in MidLitTib while it can now be used as a verbal suffix in LhasTib. Finally, the emergence of

<sup>14</sup> The estimated number of *bzhang* per 10,000 syllables in Table 5 includes inferential *-bzhang*, the conclusive copula *red-bzhang* and the lexical verb *bzhang* for LhasTib. If one excludes the two latter categories, the number is 13 per 10,000 syllables.

the

evidential

suffix

*-bzhang* (LhasTib [ɕaʔ]) is the result of erosion since our diachronic analysis indicates that it comes from the periphrastic construction *V=ste bzhang*.

#### 4.2.2 In other languages

Among modern Tibetic languages, the inferential *-bzhang* of LhasTib seems to be an exception. Most languages use the same form for inference and direct perception, the difference being that the former appears in a perfect construction. It thus specifies that the speaker has not witnessed the state of affairs expressed by the predicate, but knows about it by perceiving its resultant state. Languages that resort to *'dug* as a direct perception evidential usually also use *'dug* in a perfect construction as an inferential suffix. This is the case of many languages in Central Tibet, but also in Khams and the western Himalayas (Tournadre & Suzuki 2022). The situation in Central Ladakhi is slightly more complex, because there have been several waves of grammaticalization of the morpheme *'dug*, with different degrees of morpho-phonetic erosion. A construction such as *V-tog* and copulas such as *in-nok* or *in-tsug* all contain some inferential component and are all reductions of *V(=ste) 'dug* (Zeisler 2017). The same phenomenon of erosion must have led to the inferential suffix *-nug* in Dzongkha, as well as *-zug*, which is common in languages from the eastern part of the Tibetan plateau (Amdo, Khams), and from the very western border of the Himalayas (Purik and Balti) (Denwood 2007: 59–60; Zemp 2018: 554–5). Other languages spoken in various locations of the Himalayas and the Tibetan plateau have selected *snang* or *gda'* as an equivalent of *'dug*, and usually possess an inferential suffix based on that morpheme.

Many authors have noticed the link between the perfect aspect and indirect evidentiality, notably inference, but sometimes also hearsay. Many Turkic languages, as well as Bulgarian and Georgian, possess an inferential (or indirect) evidential which has developed from a resultative perfect (Slobin & Aksu 1982, Bybee & Dahl 1989, Izvorski 1997, Aikhenvald 2004: 279–81, Tatevosov 2001, 2007). This extension of perfect forms into indirect evidentiality is also a feature of Bagvalal and Agul, two Nakh-Dagestanian languages (Tatevosov 2007: 378, Maisak & Merdanova 2002: 110). Some Neo-Persian languages, such as Farsi, Tajik and Dari, as well as other Iranian languages, notably the Pamiri languages, have also restricted their perfect forms to unwitnessed states of affairs (Èdel'man 1975: 410, 2000: 220, Pezechki & Tournadre, forthc.). Finally, the verb 'to put' as a source for the perfect(ive) aspect is not only attested in LhasTib, but also in some non-Tibetic languages, such as

Imonda, a Papuan language, or Tamil (Seiler 1985, Lehmann 1989: 209; cited in Kuteva et al., 2019).

### 4.3 Hearsay

#### 4.3.1 Lhasa Tibetan *ze*

In order to give a full account of the grammaticalization of hearsay evidentials in Tibetan, it is necessary to distinguish the following functions:

- a. Lexical verb meaning ‘to say’;
- b. Reported speech final marker (marking the boundary of an embedded reported clause) (see Tournadre & Suzuki 2022);
- c. Quotative evidential (no matrix clause but an explicit reported speaker);
- d. Reported evidential (no matrix clause or explicit reported speaker, but the latter is identifiable by context) (See Aikhenvald 2018);
- e. Hearsay evidential (simply specifying a verbal access to a foregrounded piece of information).

Due to the elliptic character of works written in OldLitTib and MidLitTib, it is often not possible to determine the exact function of a marker in direct speech contexts. In particular, the distinction between reported speech final marker (b), quotative evidential (c), and reported evidential (d) may be difficult to determine.<sup>15</sup> In OldLitTib and MidLitTib, *ces* (allomorphs: *zhes*, *shes*) prevails as the main marker for functions b to d. This marker must have grammaticalized in Proto-Tibetic from the verb  $\sqrt{\text{tee}}$  (MidLitTib inflections: *'che*, *bces*, *bce*, *ches* ‘to assure, to promise’). In addition, MidLitTib knows three other morphemes that serve similar functions, namely *=lo*, *=skad*, and *=grag*. They have grammaticalized from a verb (*grags* ‘to sound, to utter a sound’) or from utterance-nouns (*lo* ‘(annual) report’, *skad* ‘word(s)’), but have not received the same popularity as *ces*, with which *=zer* must have later directly competed in functions b to d. It appears that from among these markers, both *skad* and *zer* have reached the stage of a hearsay evidential in MidLitTib (see 34).<sup>16</sup>

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<sup>15</sup> See Bialek 2022 : 156ff.

<sup>16</sup> For *skad* as a hearsay marker in MidLitTib, see ML, *apud* de Jong 1959: 73, ll. 8–9.

LhasTib possesses two hearsay enclitics, *za* [saʔ] and *ze* [s], which are both derived from the lexical verb *zer* ‘to say’.<sup>17</sup> This lexical verb is frequent in OldLitTib (29) and is still used in spoken Lhasa Tibetan nowadays (30):

- (29) *myi ga[ng] bya gang=la pha yod=na nga='i*  
human every bird every=ALL father POSS=CONR 1SG=GEN

*pha ga re=zhes zer=to*  
father where=RSF say=FNL

‘[He] said, “If every human [and] every bird has a father where is my father?”’ (OldLitTib; PT 1287: 28–9)

- (30) *kha shas=gis yang ngos gnas khong=gis mi skyo bo*  
some=ERG also really 3SG=ERG man poor

*rog pa byed-kyi 'dug=ze zer-gyis*  
help LV-PRF.DPERC=RSF say-PRF.DPERC

‘Some people say that he really helps poor people.’ (LhasTib; TSC)

(29) and (30) illustrate that both OldLitTib and LhasTib use a reported speech final marker (RSF), *ces* (*zhes* in (29)) and *ze* respectively, as a boundary between the reported statement and the reporting clause. It is already possible in OldLitTib to use *ces* without any reporting clause, as in (31):

- (31) *'di skad zer=ba nyes=so=zhes*  
DEM word say=NMZ false=FNL=RSF

‘[Zing-po-rje Stag-skya-bo said], “These spoken words are false.”’ (OldLitTib; PT 1287: 132)

This clause-final particle is manifestly grammatical, which testifies that reported evidentiality had already grammaticalized in OldLitTib. What motivates this use is most probably economy, since it is undoubtedly more economical to report a sentence with a grammaticalized monosyllabic marker than with a subordinating construction. In discourse, it

<sup>17</sup> *Za* and *ze* are quasi-synonymous hearsay markers, and are only distinguished by their degree of backgroundedness (Mélac 2014: 392). In this paper, we focus on *ze*, because its grammaticalization is slightly more advanced.

is very frequent to refer to past conversations and what other people say, as confirmed by the very high frequency of the verb ‘to say’ in the world’s languages, which in turn may explain why grammaticalized reported markers exist in many languages.<sup>18</sup>

The particle *ces* is sometimes deleted in OldLitTib and MidLitTib when the reported sentence is embedded, thus placing the verb *zer* immediately after the embedded sentence:

- (32) *dper=na*                      *rgyal po ra ma na='i*      *btsun mo lha mo si ta*  
for example=INESS      king      Ra ma na=GEN spouse      queen Si ta

*srin po mda' sha gri ba=dang lo du mar 'dug=pa=las*  
demon Mda' sha gri ba=COM year many:TERM stay=NMZ=DEL

*da ltar mdza' khyad=la ltos zer=ba thos=pa=dang*  
now love measure=ALL look.IMP say=NMZ hear=NMZ=CONR

‘I heard **what was said**, “For example, Queen Si-ta, the spouse of King Ra-ma-na, was staying with the demon Mda’-sha-gri-ba for many years; look at the intensity of her love now!”’ (OldLitTib; ITJ 737.1: 416–8)

From this position, *zer* underwent a process of decategorialization in MidLitTib. In some instances, it appears sentence-finally, without any suffix, connector, or final particle, suggesting a loss of its verbal properties and its entrance into the category of quotative/reported clitics.

- (33) *bla ma='i zhal=nas de ka nga zer*  
lama=GEN mouth.HON=EL DEM 1SG **QUOT**

~~‘The Lama said, “This is me.”~~ (MidLitTib; ML trslr. *apud* de Jong 1959: 64, l. 17)

A further grammaticalisation to a hearsay marker can be seen in (34):

- (34) *rnal 'byor pa rang 'gro nus=na khang pa*  
yogin self go.IMPV can=CONR house

*ma gi'i nang=na chos yod=zer ltos=shog=dang zer*

<sup>18</sup> According to the COCA, *say* is, for example, the 4<sup>th</sup> most frequent verb in English.

down:GEN inside=INESS text EXIST=**HSAY** see=IMP=IMP say

‘[A herdsman] said, “Yogin, if you can go there, in the house down there, there are *Dharma* texts, **they say**. Look [at them]!”’ (MidLitTib; ML trslr. *apud* de Jong 1959: 110, ll. 22–3)

(34) contains *zer* as a verb and as a hearsay marker, using the source and the target of the grammaticalization in the same passage. The first *zer* indicates that the information about the texts inside the house is known to the herdsman from hearsay. Earlier in the passage, he explicitly says he had not visited the house, which was considered haunted.

Although the grammaticalization of *zer* is already well advanced in MidLitTib, LhasTib seems to show some further signs of its evolution towards a full hearsay enclitic; its form has eroded to a single consonant [s], and its function expanded to encode the whole semantic space of hearsay evidentiality. As a reported evidential, it can now be used with all types of verbal access to information, including broadcast media and written texts. (35) comes from a TSC task for which the consultants were asked to read a comic strip:

(35) *mi rgod ga ler phebs zer-gyi ’dug=ze*

yeti slowly go.HON say-PRF.DPERC=**REP**

‘(It’s written that) the yeti says goodbye (lit. ‘go slowly’).’ (LhasTib; TSC)

The same enclitic =*ze* is also frequently used as a generic hearsay evidential. In this case, the speaker is not recounting a specific conversation, but providing the addressee with a piece of information that contributes to their interaction while specifying in the background that this information was acquired through verbal means. This use of =*ze* may be motivated by the wish from the speaker to avoid committing him/herself to the truth of the statement. (36) was produced by a consultant of the TSC who was asked about Lhasa:

(36) *gnas tshul=dang ’dra min ’dra lhag-gi red=ze*

event=COM all sort of things happen-GNOM=**HSAY**

‘Events and all sorts of things happen (, people say).’ (LhasTib; TSC)

The grammaticalization of lexical *zer* into hearsay =*ze* was therefore a gradual process stretching from OldLitTib to LhasTib. All the processes of extension, desemanticization, decategorialization, and erosion can be observed along the way.

As far as extension is concerned, data from a sample of Old Tibetan texts, Heruka's *Life of Milarepa*, and the TSC clearly point at a gradual increase of frequency for *zer* (and later =*za*/=*ze*), as shown by Table 6:<sup>19</sup>

Table 6: Diachronic frequency of *zer* (and → *za/ze*) estimated per 10,000 syllables

OTDO corpus (OldLitTib)	<i>The Life of Milarepa</i> (MidLitTib)	TSC (LhasTib)
<i>zer</i>	<i>zer</i>	<i>zer</i> = <i>za</i> /= <i>ze</i>
5	38	105

As for desemanticization, we saw that, as the lexical verb *zer* turned into the enclitic =*ze* (and =*za*), its meaning became more abstract, and the latter can no longer refer to the actual act of speaking. Table 7 sums up the semantic evolution of these forms.

Table 7: Semantic evolution of *zer* (and *za/ze*)

OldLitTib	MidLitTib	LhasTib
<i>zer</i>	<i>zer</i>	<i>zer</i> = <i>ze</i> /= <i>za</i>
-verb of speaking	-verb of speaking -quotative evidential -reported evidential -hearsay evidential	-verb of speaking (only <i>zer</i> ) -reported speech final marker (only = <i>ze</i> /= <i>za</i> ) -quotative evidential (only = <i>ze</i> /= <i>za</i> ) -reported evidential (only = <i>ze</i> /= <i>za</i> )  -hearsay evidential (only = <i>ze</i> /= <i>za</i> )

As *zer* turned into =*ze*, its lexical properties declined, such as the possibility to be followed by any suffix, connector, or particle. Its decategorialization was already well advanced in MidLitTib. Finally, the erosion of the lexical verb *zer* is noticeable from MidLitTib to LhasTib. The imperfective form *zer-gyi(n)* 'dug probably turned into *zer-gyis* ([segiʔ]) and =*za* ([saʔ]), while *zer* as a final marker must have given rise to =*ze* ([s]).

### 4.3.2 In other languages

The grammaticalization of hearsay evidentiality from a verb meaning 'to say' is an extremely common scenario. Many Tibetic languages possess markers that cover all or some of the functions of Lhasa =*ze*. In Ladakhi, for example, the enclitic =*lo*, which probably comes from the noun *lo* 'an (annual) report' or the verb *lab* 'to say', is used as a reported and hearsay

<sup>19</sup> =*ze* appears 29 times per 10,000 syllables in the TSC, =*za* 17 times, and the lexical verb *zer* 59 times.

evidential.<sup>20</sup> Rgyalthang Tibetan (Khams language family) possesses the hearsay suffix and enclitic *grag*, which comes from OldLitTib *grags* ‘to sound’, and later ‘to say’. (Tournadre & Suzuki 2022).

Moving away from Tibetic languages, one can find hearsay markers that come from verbs meaning ‘to say’ all around the globe, and we will only give a few examples here. Many varieties of Spanish from the American continent have developed the pervasive hearsay marker *dizque*, which is derived from the verb *decir* ‘to say’ (Kany 1944, Coronel-Molina 2011). Modern Czech *prý* is used as a quotative evidential, and comes from Old Czech *praviti* ‘to say, to talk’ (Vykypl 2010: 139). Georgian also has a number of quotative clitics derived from *tkva* ‘to say’ (Aronson 1982: 211–2). Several Mongolic languages possess quotative and reportative evidentials that have grammaticalized from various verb forms meaning ‘to say’ (Brosig & Skribnik 2018). Finally, Oksapmin, a trans-New Guinean language, has the clitic =*li* that marks hearsay evidentiality (Loughnane 2009: 404–8). This form is also directly related to the verb *li*- ‘to say’.

## 5 Discussion

Forms may follow different paths before becoming grammaticalized evidentials, and this paper does not aim to present all the data available on the topic. We saw that several languages grammaticalize the same evidential categories from the same lexical sources, and that the diachronic data of Tibetan allow us to examine the different stages and exact processes that may lead to a fully grammaticalized evidential. Our analyses suggest that evidentiality is usually not a grammaticalization target *per se*, but more often an incidental passenger coming from the recurrent contexts associated with the initial lexical form. Since information sources are pervasive in thought emergence, and thus in the production and interpretation of utterances, evidential features can easily infiltrate morphemes which have mainly grammaticalized to express time, aspect, modality, deixis, etc.

We must admit that the reasons why evidentiality is far more grammaticalized in some languages than in others remain unclear. However, this unanswered question does not concern only evidentiality, since research has failed, so far, to provide truly satisfying answers for any grammaticizable notion, such as time, aspect, modality, person, definiteness, number, or gender. We may never find a fully functional explanation for the cross-linguistic differences in the degree of grammaticalization of notions. Randomness seems to play a predominant role

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<sup>20</sup> Ladakhi *lo* cannot be used as a reported speech final marker or a quotative evidential.



in language change and the choices made by different linguistic communities, but exploring cross-linguistic data points at several tendencies.

Firstly, grammaticalization may ease communication, but is not a necessity. Although grammaticalization seems to make a language more optimal in certain areas, all linguistic communities are unlikely to develop similar strategies for all the niches of potential language changes. Secondly, grammaticalization is a type of innovation, and any change has to be accepted by a linguistic community to survive. Optimality is not the only criterion that may incite a community to accept and repeat an innovation. Sociolinguists (Labov 2001, 2007) have shown that a multitude of social factors related to the covert or overt prestige of a new form will facilitate or impede its spread, and many of these factors are idiosyncratic and untraceable. Conservatism – either to ensure mutual understanding or to maintain prestigious variants – may limit the so-called ‘optimization’ of a language. Finally, although ease of communication can motivate language change, optimization is an endless pursuit, since speakers need to innovate constantly in order to be more expressive and draw attention (Haspelmath 2000). Overused grammatical forms tend to go unnoticed and end up falling out of use while other forms with similar functions emerge. Universal functional factors may encourage all languages to grammaticalize evidentials, but the reason why evidentiality is more grammaticalized in one language than another may simply be that they are at different stages of a grammaticalization cycle. The Lhasa Tibetan evidential system could well be at its peak, whereas some of the languages expressing information sources through their lexicon might have lost a highly complex system of grammatical evidentiality and may possibly build a new one in the future.

There have been several attempts to explain grammatical differences through culture, but most claims related to this theory are controversial, and most hypotheses are difficult to evaluate. Aikhenvald (2004: 359) suggests that evidentials seem to develop in small communities, where keeping track of information sources is a strong necessity, since ‘everyone keeps an eye on everyone else’ and rumours spread easily (see also Fortescue 2003: 301). However, among the 7,000 languages or so which have been identified, the vast majority are spoken by small communities, and only a small minority possess a highly grammaticalized evidential system. Moreover, Tibetic, Iranian, or Turkic languages are spoken by millions of people, so these linguistic communities should not be considered small. We do not reject the cultural hypothesis entirely, but our experience does not seem to confirm it. We do not hear Tibetan speakers discuss information sources more frequently than speakers of other languages. Similarly, no studies have shown that the manner in which events unfold is

really central to Russian culture or a frequent topic of discussion within this linguistic community, despite the pervasiveness of morphological aspect in their linguistic system. A more subtle cultural hypothesis should not be discarded though. It is probable that the first instances of grammaticalization of a notion create a cognitive sensitivity to this semantic domain, which then attracts new forms. In the same way as languages with postpositions tend to create new postpositions rather than prepositions, languages which start developing an evidential verb inflection will easily reinforce this functional niche when new verb inflections emerge.<sup>21</sup> If one adopts a broad definition of culture that includes subtle semantic preferences, then it could be said that culture plays a role in the development of evidential systems, even though one cannot point out an obvious link between those grammatical preferences and a society's practices or beliefs.

While the exact reasons behind the various degrees of grammaticalization of evidentiality among the world's languages remain a mystery, our paper attempts to provide some answers to an easier, perhaps more sensible, question: 'Why is the advanced grammaticalization of evidentiality rarer than that of other notions, such as time, aspect, or modality?'

Specifying one's information sources is a universal need that may have little to do with specific cultures. This need does not seem to manifest itself in discourse as frequently as other functional domains, such as time or location. The development of evidentials in Lhasa Tibetan suggests that, although the grammaticalization of morphemes encoding evidentiality is relatively common, it does not necessarily mean that these forms grammaticalize because they encode evidentiality. These morphemes cumulate several semantic features, and have usually reached a grammatical status before developing an evidential meaning. For example, *'dug* and *song* seem to have grammaticalized as new time/aspect layers in a pre-existent verb paradigm. Because they retained a property of spatial deixis from their lexical sources, this property happened to transform into a direct perception nuance by pragmatic strengthening. The morpheme *bzhag* started grammaticalizing to encode a resultative perfect, and later added an inferential component through a similar process of lexical persistence and pragmatic strengthening. The development of *ze* is different, but this form also seems to have started grammaticalizing as an economical means to refer to past conversations. It then became a full-

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<sup>21</sup> One may compare the coexistence of several reported speech markers in MidLitTib discussed in 4.3. *zer* grammaticalized as the last one and underwent the full grammaticalization path that was only partially completed by *lo* and *skad*. The latter two might have paved the way for the complete grammaticalization of *zer*. Each marker made some more progress towards grammaticalization but only *zer* has made it to a full-fledged hearsay marker in LhasTib.

fledged evidential when it began being used to specify that the shared information is based on hearsay, but also as a tool for the speaker to avoid any commitment to what is being stated. The highly grammatical evidentials of other languages are also associated with other notional features, especially time, aspect, or modality. This supports the hypothesis that forms might actually grammaticalize in order to encode other notions which are more frequently needed in conversation, and evidentiality is usually an incidental feature due to the contexts into which these forms spread. In languages with less elaborate evidential systems, the grammaticalization of notions such as TAM is also a priority and the difference may simply be that the routes these TAM morphemes take when grammaticalizing did not happen to make them pick up any evidential feature. The difference between those languages might not be their functional targets, but rather the lexical sources for those targets, which are more randomly selected than the universal communicative needs.

## 6 Conclusion

Based on a corpus of Old Literary, Middle Literary, and spoken Lhasa Tibetan, we presented the different steps that led to the grammaticalization of the morphemes *-’dug*, *-song*, *-bzhag*, and *=ze*. These forms encode the main evidential categories, that is direct perception, inference, and hearsay. Before acquiring any evidential feature, these morphemes started grammaticalizing to encode other semantic domains such as spatial deixis, the perfect aspect, or the embedding of reported speech. In the next phase, the contexts of appearance of these forms allowed further extensions into the evidential domain. Similar patterns of development are attested in genetically and typologically distinct languages around the world, which suggests that universal cognitive processes shape these language changes. However, a minority of languages possess fully grammaticalized evidential paradigms, and the exact reasons for such a disparity remain a mystery. We argued that one of the reasons why evidentiality is not as frequently grammaticalized as other domains may be because the need to express information sources may not be as frequent as the need to express other notions such as time. Synchronic data show that evidential forms typically cumulate other semantic features, and diachronic data confirm that evidentiality was not the primary functions of these forms as they started grammaticalizing. We argued that languages with fully grammaticalized evidential forms do not reflect cultures for which information sources are substantially more significant, but acquire evidentials incidentally because of the historical pathways taken by forms that have first grammaticalized to encode more universally grammaticalized notions.

The principles of layering, lexical persistence, and pragmatic strengthening are necessary to account for these processes, and explain why the semantic features of grammatical morphemes may result from either ‘grammaticalization targets’ or ‘grammaticalization passengers’. Although historical data on the complete grammaticalization of evidentiality are sparse because the documentation of such languages is limited, further corpus-based research is needed to expand our understanding of the evolution of evidential systems, and thus shed light on phenomena at the intersection of language and cognition.

## Abbreviations

=	clitic boundaries
-	affix boundaries
:	segmentations in the metalanguage
.	multiple metalanguage elements
()	non-overt categories
/	punctuation mark <i>shad</i>
{ }	text emendation
[ ]	<sup>1</sup> text reconstruction; <sup>2</sup> phonetic representation
√	reconstructed verb root
1SG	first person singular
3SG	third person singular
ADD	additive
ALL	allative
CNJ	conjunction
COM	comitative
CONR	connector
COP	copula
DAT	dative
DEF	definite
DEL	delative
DEM	demonstrative
DPASS	dynamic passive
DPERC	direct perception
DUR	durative
E	east-side inscription
EGO	egophoric
EL	elative
ERG	ergative
ESS	essential
EXIST	existential
FACT	factual

FNL	sentence-final marker
FUT	future
GEN	genitive
GNOM	gnomic
HON	honorific
HSAY	hearsay evidential
IMP	imperative
IMPFV	imperfective
IND	indicative
INDF	indefinite article
INESS	inessive
INFR	inferential
INT	interrogative
ITJ	IOL Tib J
LhasTib	Lhasa Tibetan
LOC	locative
LV	light verb
M	masculine
MidLitTib	Middle Literary Tibetan
NEG	negation
NMZ	nominalizer
OldLitTib	Old Literary Tibetan
PFV	perfective
PHAT	phatic marker
POSS	possessive
PPRT	past participle
PRF	perfect
PSNT	present
PT	Pelliot tibétain
QUAL	qualificational
QUOT	quotative evidential
R	recent

REP	reported evidential
RSF	reported speech final marker
SG	singular
SPASS	stative passive
TERM	terminative
trslr.	transliteration
TSC	Tibet Student Corpus

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