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### ▶ To cite this version:

Katia Chirkova. Evidentiality in Shuhi (Tibeto-Burman). 2024. hal-04859987

## HAL Id: hal-04859987 https://hal.science/hal-04859987v1

Preprint submitted on 8 Jan 2025

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### **Evidentiality in Shuhi (Tibeto-Burman)**

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This paper explores evidential morpho-syntax in Shuhi (a.k.a. Shixing, Xumi, ISO 639-3 sxg), a Tibeto-Burman language of Sichuan, China. Overviews of the essential characteristics of Shuhi include contributions by the renowned linguists Sun Hongkai and Huang Bufan (H. Sun 1983, 2013, H. Sun et al. 2014; Huang & Renzeng Wangmu 1991). In studies of Shuhi, there is a broad agreement that this language has grammaticalized evidentiality expressed by postverbal auxiliaries and enclitics (hereafter collectively referred to as "markers"). Conversely, there is a notable disagreement as to which markers express evidentiality as their primary meaning, and how evidentiality in this language ties in with aspect. As a result, the Shuhi evidentiality system remains insufficiently understood, which restricts the use of available Shuhi data and analyses in comparative synchronic and diachronic work.

Based on the largest and most diverse corpus to date (elararchive.org/dk0189), this paper provides a new analysis of Shuhi high frequency aspect and evidentiality markers. The evidential system which emerges from the analysis possesses a number of unmistakable characteristics of evidential systems found in Tibetic languages, including the hallmark feature of egophoricity. The conspicuous presence of this feature in the Shuhi system points to the likelihood that the Shuhi evidential system has been formed under contact with Tibetic languages. An analysis of the etymological makeup of the Shuhi system further suggests that Shuhi likely had a native evidential system of its own, which lacks evidential marking in first-person contexts and which has possibly been in place before contact with Tibetic languages.

This paper is structured as follows. Section 1 presents the main points of controversy in previous analyses of aspect and evidentiality in Shuhi, and provides a breakdown of the high frequency postverbal markers in the corpus into an aspectual and an evidential sets. Section 2 details the basic structure of a verb phrase in Shuhi, and reviews the core aspectual markers. Section 3 contains comparative analysis of the three markers with evidential meanings in the corpus: /sɪ/, /teyɐ/, and /dzɑ̃/. Section 4 discusses their etymological origins, sketches the historical development of the Shuhi evidential system, and presents a preliminary comparison with evidential systems in neighboring languages. Section 5 summarizes major findings, and discusses avenues for future research.

#### 1. Introduction

Shuhi is a non-Tibetic Tibeto-Burman language of southwestern Sichuan Province in the People's Republic of China. It is spoken by approximately 1,800 people who live on the banks of the river Shuiluo (水洛河) in the similarly named canton (水洛乡) in the Autonomous Tibetan County of Muli (木里藏族自治县, *smi li rang skyong rdzong* in Written Tibetan).

The Shuhi language is remarkable for the highly complex language contact setting in which it is spoken. Its main contact languages include the local variety of Khams Tibetan (locally known as Kami, 嘎米 *Gami*) (ISO 639-3 *khg*) in the upper reaches of the Shuiluo river, and the local variety of Northern Pumi or Prinmi (*pmj*) in the middle and lower reaches. In addition, in those middle and lower reaches, Shuhi is in contact with a Mosuo or Naic variety (*nbt*), and to a lesser extent, a local variety of Naxi (*nxq*). Possibly reflecting these contact influences, Shuhi can be divided into two subvarieties with restricted mutual intelligibility: the subvariety of the upper reaches of the Shuiluo river (or Upper Shuhi) and that of the middle and lower reaches (or Lower Shuhi). The two subvarieties differ mainly in their phonology and lexicon, while being more uniform in grammar. The formal expression of aspect and evidentiality can serve as an illustration of this general rule. A quick look through previous publications readily yields a common set of Shuhi core aspectual and evidentiality markers. This can be observed in Table 1, which lists Lower and Upper Shuhi aspect and evidentiality markers, as provided in the

representative analyses by H. Sun et al. (2014) and Huang & Renzeng Wangmu (1991), respectively.

|                 | Lower Sh  | uhi                                     | Upper Shuhi           |                                    |  |
|-----------------|---|---|-----------------------|------------------------------------|--|
| Category        | H. Sun et al.   | (2014)                                  | Huang &               |                                    |  |
| Person          | 1 or 2 person   | 3 person                                | Renzeng Wangmu (1991) |                                    |  |
| Prospective     | we <sup>55</sup>  | we <sup>55</sup> dz <sub>1</sub> , 35   | g3 <sup>55</sup>      |                                    |  |
| Progressive     | ji <sup>55</sup>  |   | ji <sup>55</sup>      |                                    |  |
| Perfective      | $t \varepsilon \varepsilon^{53} s \gamma^{33} \sim s \gamma^{33}$ | teyε⁵³                                  | sე <sup>33</sup>      | sγ <sup>33</sup> ~ <sup>55</sup>   |  |
| Direct / visual |   |   | process               | result                             |  |
|                 | hε <sup>55</sup> dzaŋ³¹ ∼ dzaɪ                                    | $j^{31} \sim \varepsilon \alpha j^{31}$ | tcæ³³                 | wu <sup>33</sup> dzõ <sup>33</sup> |  |
| Perfect         | tsha55 ha35   | ຮງ <sup>33</sup>                        | tsha33 wu33 sq33      |                                    |  |
| Experiential    | dzε⁵³   |   | dz3 <sup>53</sup>     |                                    |  |

Table 1. Aspect and evidentiality markers in Lower and Upper Shuhi. Tone marking as in the original publications.<sup>1</sup>

The markers shared in both analyses in Table 1 include: (i) /ji/, (ii) /tee/ or /teæ/, (iii) /sq/, (iv) /he<sup>55</sup>dzaŋ<sup>31</sup> ~ dzaŋ ~ eaŋ/ or /wu dzõ/, (5) /dze/ or /dz₃/, as well as the composite expression /tsʰa<sup>55</sup> ha³<sup>55</sup> sŋ³³/ or /tsʰa³³ wu³³ sŋ³³/. Surface dissimilarities between some forms (such as Lower Shuhi /dzaŋ/ vs. Upper Shuhi /dzō/; or Lower Shuhi /he/ or /ha/ vs. Upper Shuhi /wu/) in most cases stem from regular sound and lexical correspondences between the two varieties (see H. Sun 2013: 27–28; Chirkova et al. 2013). Note that Huang & Renzeng Wangmu's form /teæ/ is ambiguous in terms of correspondence to H. Sun's data. In terms of sound correspondences between these two descriptions, it corresponds to /teɛ/ in H. Sun et al.'s work.² However, in terms of the actual description of its meanings and functions, Huang & Renzeng Wangmu's /teæ/ may rather correspond to H. Sun's /teye/ (see section 3 for details).

Table 1 table also reflects the considerable disagreement that exist in previous work on Shuhi at large regarding the analysis of the evidential part of the system. The following issues are most notable:

1. There is a lack of agreement about which markers express evidentiality as their primary meaning, and how evidentiality in this language ties in with aspect. Most disagreement relates to the forms /teɛ/ or /teæ/, /s $\gamma$ /, /teyɐ/, and /dzaŋ/ or /dzõ/.

H. Sun et al. (2014: 124) analyze the forms /tee53 s $^{33}$  ~ s $^{33}$ / and /teye53/ as primarily aspectual (perfective). They note that the addition of these forms to the verb signals that the situation has been carried out, while not emphasizing its end result, or whether the speaker's report of that situation is based on direct (sensory) evidence or personal knowledge. Conversely, Huang & Renzeng Wangmu (1991: 188) analyze /teæ/ as a direct evidential, which signals that the speaker is a direct eyewitness to the reported event.

H. Sun et al. (2014) and Huang & Renzeng Wangmu (1991) agree on the primarily evidential meaning of the composite forms /he $^{55}$ dzaŋ $^{31} \sim$  dzaŋ  $\sim$  eaŋ/ and /wu dzõ/ (direct evidential). However, Xu (2009), who focuses solely on the form /dzaŋ/ in her analysis, argues that /dzaŋ/ is rather a modality marker, which signals an objective construal of the reported situation. She further argues that /dzã/ stands in paradigmatic relationship with /sŋ/, which in turn signals a subjective construal of the reported situation.

¹ Shuhi is a tonal language with two contrastive tones on monosyllabic words: the low tone (e.g. /jè/ 'vegetable oil') and the high tone (/jé/ 'buy'). Content morphemes are specified for lexical tone. Grammatical morphemes (such as the postverbal markers examined in this paper) do not occur in isolation, and their lexical tone cannot be determined. In connected speech, the surface pitch contour of grammatical morphemes depends on the tone of their host lexical word (see in detail Chirkova & Michaud 2009).

 $<sup>^2</sup>$  In Huang & Renzeng Wangmu's transcriptions, /æ/ commonly corresponds to /ɛ/ in H. Sun's transcriptions, as in 'blood': /sæ $^{53}$ / vs. /se $^{55}$ /; 'banner': /tiæ $^{35}$ / vs. /tie $^{35}$ /; 'early': /tsuæ $^{55}$ / vs. /tsue $^{55}$ /.

In sum, the precise meanings and functions of the forms /tcε/ or /tcæ/, /sγ/, /tcye/, /hε/ or /wu/, and /dzαη/ or /dzõ/, whether primarily aspectual or evidential, remain unclear.

2. There is a lack of agreement as to whether some markers correlate with the grammatical person of the subject.

H. Sun et al. (2014) suggest the prospective and perfective markers distinguish between a form that is mostly used with first- and second- person subjects, and a form that is mostly used with a third-person subject. They also argue that the direct marker ( $/h\epsilon^{55}$ dzaŋ³¹  $\sim$  dzaŋ  $\sim$  caŋ/) is mostly used with a third-person subject (H. Sun et al. 2014: 124–125). This observation is not confirmed by other analyses, which moreover provide examples of the use of the marker /sŋ/ with both first- and third-person subjects.³

One likely reason for these disagreements relates to differences in language data underlying the existing analyses. H. Sun, Huang Bufan & Renzeng, and Xu Dan's work is likely primarily based on elicitation of translation equivalents (questionnaires translated from Mandarin Chinese), whereas my earlier work on Shuhi (Chirkova 2009, 2017) mostly relies on a corpus of traditional narratives. As demonstrated in recent studies of evidentiality (see, among others, Tournadre & LaPolla 2014: 259; Kittilä 2020; Suzuki & Sonam Wangmo 2021; Bergqvist & Grzech 2023: 15), strategies in evidential marking and frequencies of co-occurring evidentials and subject persons tend to differ according to genre (narrative/dialogue), modality (spoken/written), and meaning. Furthermore, evidential meanings appear to be best reflected only in natural interactions (conversational data) (e.g. Bergqvist & Kittilä 2020; Grzech 2020, 2021; Sandmann & Grzech 2022; Bergqvist & Grzech 2023). That being the case, the range of data considered in previous publications on Shuhi are clearly insufficient to elucidate all evidential distinctions in this language.

In an effort to advance our understanding of the Shuhi aspectual and evidential systems, the present study reviews the use of high frequency aspect and evidentiality markers on the basis of a corpus of approximately 70 hours of audio and video recordings of different speakers of both main sub-varieties of Shuhi (hereafter "corpus"). My corpus is available in open access in the Endangered Languages Archive (elararchive.org/dk0189). While the corpus broadens the range of contexts considered in previous work on Shuhi, it does not contain many natural interactions. This is counterbalanced to some degree by the presence in the corpus of data elicited with non-verbal stimuli. Elicitations with non-verbal stimuli, that is, staged communicative events prompted by the use of non-linguistic prompts such as pictures and video clips that consultants are asked to describe, conveniently provide sets of contexts in which speakers can report on situations of which they have been a direct witness.<sup>4</sup>

The corpus encompasses all markers in Table 1, except the prospective markers /we<sup>55</sup>/ and /we<sup>55</sup> dz<sub>0</sub><sup>35</sup>/ in H. Sun et al. (2014). The corresponding Lower Shuhi prospective marker in the corpus is / $q\tilde{\alpha}$ /. Table 2 lists the attested core markers in the systems of transcription adopted in

 $t^h i^{53}$   $t_G h \tilde{u}^{33} = s \eta^{33}$   $\eta 3^{55}$   $s \tilde{i}^{55}$   $t i^{55} = s \eta^{33}$  3SG come 1SG wood chop 'He came.' 'I chopped firewood.'

<sup>&</sup>lt;sup>3</sup> Consider the following examples in Huang & Renzeng Wangmu (1991: 188, original glosses):

<sup>&</sup>lt;sup>4</sup> The non-verbal stimuli include (i) picture series ("The circle of dirt", Eisenbeiss, McGregor & Schmidt 1999; "Frog, where are you?", Berman & Slobin 1994; "Jackal and crow", Carroll, Kelly & Gawne 2011; "Information Structure", Skopeteas et al. 2006); and (ii) video clips (The Pear Story, Chafe 1980; the "Cut and Break" clips, Bohnemeyer, Bowerman & Brown 2001; see also Majid & Bowerman 2007; "Staged events", Van Staden et al. 2001; and "Reciprocals", Evans & Nordlinger 2004).

<sup>&</sup>lt;sup>5</sup>/gã/ is likely a fused form containing the prospective marker/g<sub>3</sub>/, as in Upper Shuhi; and the auxiliary /hã/ 'dare'

this study (based on Chirkova & Chen 2013 for Lower Shuhi, and Chirkova et al. 2013 for Upper Shuhi) and in the order of the markers in Table 1.

| Lower Shuhi | gã | ji | ter | S.Į | teye | хv | dzã | dze |
|-------------|----|----|-----|-----|------|----|-----|-----|
| Upper Shuhi | gз | ji | tєз | ĻZ  | tєуз | wu | dz3 | dzз |

Table 2. High frequency aspect and evidentiality markers in Lower and Upper Shuhi

In view of this study's goal to explore the proposal that some markers in Shuhi interact with the category person, the core of the analysis is based on elicitation aiming to produce a complete picture of the paradigms, including all person subjects. Elicitation has been carried out with the help of non-verbal stimuli, conducted separately with three speakers (two Lower Shuhi speakers and one Upper Shuhi speaker). With each speaker, sentences elicited with the use of non-linguistic prompts were further used to conduct systematic elicitation, aimed at exploring the paradigmatic and syntagmatic relationships that exist between the markers. Elicitation with non-verbal stimuli was complemented with translation-based elicitation based on Dahl's (1985) TAM questionnaire so as to enlarge the range of verbs considered for analysis. Data obtained through elicitation were further cross-checked in narratives and traditional stories.

A comparative analysis of the markers in the corpus suggests that  $/xv/\sim/wu/$  relates to the formal marking of the lexical distinction in verbs between (i) those that denote acts performed by knowing agents of their own free will, such as  $/dz\dot{e}/$  'eat',  $/k\tilde{e}/$  'give',  $/dz\dot{e}-te^hw\acute{e}/$  'hang',  $/dz\dot{e}\acute{e}/$  'stand', which will hereafter be referred to as controllable, and (ii) those that denote actions over which the agent has no direct control, such as  $/e\acute{e}/$  'die',  $/tsw\acute{e}/$  'cough',  $/mj\acute{e}-ji/$  'melt', /tse/ 'be afraid', /tse/ 'be full (after eating)', hereafter non-controllable verbs. The distinction is formally marked in reports of past situations by attaching the marker /tse/ 'wu/ to non-controllable verbs (see examples below).

The remaining markers in Table 2 fall into two sets in terms of their meanings and functions, morpho-syntactic distribution, and correlation with the category person. (1) One set, comprising the markers /gã~g3, ji, tev~te3, s1, and dzv~dz3/, expresses aspectual meanings, that is, how an action, event, or state, as denoted by a verb, extends over time (cf. Comrie 1976: 3–5; Dahl 1985: 23–26). Their use is independent or near-independent of time reference so that they may be used both of the past, the present, and the future (both actualized and non-actualized events and situations). They do not exhibit person-sensitive distribution, and may occur in both subordinate and main clauses. (2) The other set, comprising the markers /s1/ and /teyv~tey3/, expresses evidentiality, that is the source and access to information (cf. Willett 1988; Aikhenvald 2004, 2018; Tournadre & LaPolla 2014; San Roque et al. 2018: 2). The use of evidential markers is restricted to verbal reports about past situations. /s1/ and /teyv~tey3/ only occur in the main clause, not in subordinate clauses, and they correlate to some extent with the grammatical person of the subject.

The remaining marker /dzã~dz³/ appears to combine semantic parameters of aspectual and evidential character. It may be used contrastively with the evidential markers /sɪ/ and /teyɐ~tey³/, but it is also commonly used in contexts with no evidential sense. Unlike /sɪ/ and /teyɐ~tey³/, its use is not restricted to verbal reports about past situations, and it is largely insensitive to person. /dzã~dz³/ may occur in both subordinate and main clauses, and both follow or be followed by various other markers, including the evidential marker /sɪ/. The following sections first review the meanings and functions of high frequency aspectual markers, and then focus on the expression of evidential contrasts in Shuhi.

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<sup>&</sup>lt;sup>6</sup> For a comparable lexical distinction in verbs in Tibetic languages, see J. Sun (1993, 2018), Tournadre & Jiatsho (2001: 54), Tournadre (2008).

In view of phonological and lexical differences between the main subvarieties of Shuhi, elicitation-based illustrative examples in the main text are from a Lower Shuhi speaker who is a native of Pingweng village (/pʰèwé/ 平翁村), which is located mid-way between the Upper and Lower Reaches. The speech of this consultant blends characteristics of the two main subvarieties of Shuhi. Examples from traditional narratives derive from both Lower and Upper Shuhi recordings in their respective transcriptions.

### 2. The basic structure of a verb phrase and the high frequency aspectual markers

Shuhi is a weakly agglutinative language with residual inflectional morphology and some productive derivational morphology. The core of a verb phrase is a verbal nucleus, which consists of one or more verbs. The vast majority of verbs have only one stem. The motion verbs 'come' and 'go' exceptionally distinguish between present and past stems in suppletive distribution (e.g. 'go': non-past stem /bi/, past stem /xè/). A handful of high frequency verbs (transitive, controllable) have imperative stems (derived through ablaut, i / v > u).

Shuhi does not have grammaticalized tense marking. The main categories of aspect include imperfective, perfective, completive, progressive, experiential, prospective, and perfect. The expression of aspect falls into two types: lexical-derivational expression (verb stems and Aktionsart prefixes) and periphrastic expression (verbs and postverbal markers).

The basic distinction between perfective and imperfective aspect is expressed by lexical-derivational means. Many Shuhi verbs occur in pairs, consisting of bare (unprefixed) and prefixed counterparts. Bare verb stems as the main predicate in most cases refer to situations conceived as existing continuously or repetitively as time flows, that is, imperfective (cf. Dahl 1985: 78). Consider the verbs  $\frac{dz\dot{e}}{dz'}$  'eat' and  $\frac{k\dot{\epsilon}}{dz'}$  'give' in example (1). In this example sentence, they refer to situations occurring habitually (imperfective extended to habitual).

hĩ tshốpế=mi=la (1) thí tsuánmèn dzέ-hĩ ni special.CN merchant.TIB=PL=LOC 3sg person be.rich-NMLZ.ANM **CONJ** tấ=se=1 hĩ qùkué ĥố lé-zè=se=1 ni xįὲ swindle cheat=SQT=TOP silver CONJ gold PFV-take=SQT=TOP person thótchá-hí=sı kέ ĥố [...] le dzè be.poor-NMLZ=PNT [...] give self also

'He [=Akhu Tönpa] specifically tricked rich people and merchants, [he] was taking their silver and gold, and giving [those] to poor people, but [he] was also taking some for himself [literally, was also eating from them].' (Akhu Tönpa)

Corresponding perfective forms are derived by adding (telicity-inducing) prefixes to bare verb stems. Most verbal prefixes in Shuhi have distinct spatial meanings, e.g. /dzi-/ 'upward', /mjɛ-/ 'downward', (Lower Shuhi) /qhu-/ or (Upper Shuhi) /khu-/ 'inward', /bə-/ 'outward' (hereafter directional prefixes). In their overview of major lexical sources of aspectual markers, Bybee &

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<sup>&</sup>lt;sup>7</sup> The complete list of verbs that have separate imperative stems, as attested in a list of basic vocabulary of ca. 2500 words includes: 1. 'look':  $/e\hat{i}/ > /e\hat{u}/$ ; 2. 'eat':  $/dz\dot{e}/ > /dz\dot{u}/$ ; 3. 'drink':  $/te^h\hat{i}/ > /te^h\hat{u}/$ ; 4. 'speak':  $/p\acute{e}/ > /p\acute{u}/$ ; 5. 'come':  $/l\dot{e}/ > /li\dot{u}/$ ; 6. 'go':  $/x\dot{e}/ > /x\dot{u}/$ ; 7. 'do':  $/b\dot{e}/ > /b\dot{u}/$ ; 8. 'make':  $/te\dot{u}/ > /te\dot{u}/$ .

<sup>&</sup>lt;sup>8</sup> In addition, some verbs only occur in either unprefixed or prefixed form. Examples include /qhué/ 'steal', (Lower Shuhi) /dzè/, Upper Shuhi /dzuè/ 'hit; beat', /kɛ̃/ 'give', /dzì-tɛhyé/ 'hang', /khù-pó/ 'glue, paste', /lé-gué/ 'hide'.

<sup>&</sup>lt;sup>9</sup> Abbreviations used in interlinear glossing follow the Leipzig Glossing Rules (LGR, http://www.eva.mpg.de/lingua/resources/glossing-rules.php). Non-standard abbreviations include: AGT = agentive; ANM = animate; CN = loan from Chinese; CONJ = conjunction; CTR = controllable; EGO = egophoric; KNSP = kinship; PNT = patient; PROS = prospective aspect; SQT = sequential; TIB = loan from Tibetan. Titles in brackets at the end of the free translation line cross-reference the titles of the stories in the Elar Xumi collection.

Dahl (1989: 85–86) and Bybee et al. (1994: 87–88) refer to morphemes originating from such derivational elements as bounders because of the semantic effect that they have, and describe them as one of the possible sources for the development of perfective. The choice of prefix for a particular verb is in most cases heavily dependent on the meaning of the verb (e.g. /hi/ 'hear' > /qhú-hi/ inward-hear, /pv/ 'write' > /mjv-pv/ downward-write). In addition to prefixes with distinct spatial semantics, Shuhi has a lexically more general prefix (Lower Shuhi / $\Delta v$ -/, Upper Shuhi / $\Delta v$ -/, which serves to create perfective counterparts of many basic, high frequency verbs, which are not semantically compatible with directional prefixes. This is the case of the verbs /dzv/ 'eat' in sentence (2).

(2) nì=jí lɔ̈teí lɔ̈teí nɔ̈teí nò lɔ̀-ts̥h¸ì=sé kémέ 2SG=GEN saddle horse 1SG all PFV-sell=SQT afterwards

là-dzá tshɐ=wu=sɹ PFV-eat finish=N-CTR=EGO

'Your saddles and horses, I sold them all, and then used up [= ate up] [what I received in return].' (The Good, the Bad, and the Mountain God)

Periphrastic aspectual constructions make use of the markers /qã, ji, tee, dze/, and /dzã/.

The meanings and functions of  $/g\tilde{a}/$  (prospective), /ji/ (progressive), and /dze/ (experiential) are largely agreed upon in previous work. Their use is illustrated in example sentences (3) and (4).

(3)  $k^h \acute{e} d\acute{a}$   $t^h \acute{i}$   $z\grave{a} = l\acute{a}$   $k^h \acute{u} - t\acute{e} = j\acute{i}$   $t^h \acute{i}$   $t^h \grave{e} = n\acute{o} = \acute{i}$  white.scarf that where=LOC inward-hang=PROG that that=inside=TOP

syì thí thè=nó jì=gắ

Buddha.incarnate that that=inside exist.ANM=PROS

'The one on whom [the elephant] will put a ceremonial scarf will be the new Buddha incarnate.' (Three Brothers)

(4) ŋ³=si ŋ³=ji dzyś=ıɛ̃=zı ıèʁɛ́=nó dzś=nó=ıɛ̃

1SG=PNT 1SG=GEN friend=AGT=TOP cliff=inside water=inside=ABL

miè-nɔ̈=dzɜ́ [...] ŋɜ́ là-mù-ɕɜ́ té dzɜ́ tɕìqɛ́ downward-push=EXP 1SG PFV-NEG-die there river bank

bù-tcé=dzõ sè ŋá [...] dzà-gó ni mù=zḗ=jí outward-put=PRF then 1SG eat-NMLZ.PNT CONJ NEG=exist=PROG

zyé ni zyé=jí

be.hungry CONJ be.hungry=PROG

'A friend of mine pushed me from a cliff into the river, [fortunately] I did not die, but was washed ashore by a wave, and then [wandered here in search of a living soul, as]

 $^{10}$  In the corpus, the perfective prefix co-occurs with ca. 110 different verbs, including such basic, high-frequency verbs as 'do, make', 'strike', 'put on', 'wear', 'eat', 'look', 'kill', 'slaughter', and 'die'.

<sup>&</sup>lt;sup>11</sup> Note that the expression /tshe=wu=s,I/ (described in Table 1 as denoting perfect aspect) consists of (i) the non-controllable verb /tshe/ 'finish' (likely a borrowing from Tibetan, WT *tshar* 'be finished, completed'), (ii) the non-controllable morpheme /wu/ in Upper Shuhi or /xe/ in Lower Shuhi, and (iii) an appropriate evidential marker. It may be analyzed as a periphrastic resultative construction.

I don't have anything to eat, and I am very hungry.' (The Good, the Bad, and the Mountain God)

Note that when used in combination with bare verb stems, /ji/ expresses progressive meaning, as in the expression /zyé=ji/ 'am [being] hungry' in example (4). Combinations of the progressive marker /ji/ with prefixed verb stems, on the other hand, may have an inchoative or a future meaning, as in the expression /khú-té=jí/ 'will be put' in example (3).

The experiential marker /dz3/ (as in the expression /mjè-nɔɔ́=dzɜ́/ 'pushed' in example 4) is infrequent in the corpus. It is mostly used with controllable verbs and in sentences with a first-person subject (but is not limited to those, as can be seen in example 4). Unlike other Shuhi aspectual markers, it mostly appears alone.

The meanings and functions of /tev/ and /dzã/ are more disputed in previous studies.

The use of /teɐ/ in the corpus can be analyzed as expressing completive aspect, that is, signaling that the event denoted by the verb has been performed to completion. The speakers consulted for this study consistently translate /teɐ/ in contrastive pairs with and without that marker with the help of the Mandarin resultative complement -wán 元 'finish' (see Chao 1968: 449; Li & Thompson 1981: 65). Examples include: /négú ʎɐ̀-tì=si̞/ clothes PFV-fold=EGO '[I] folded clothes' versus /négú ʎɐ̀-tì=teɐ̄=si̞/ clothes PFV-fold=COMPL=EGO '[I] finished folding clothes'. /teɐ/ likely etymologically derives from the verb /teɐ̄/ 'put, place' (which can be seen in example 4, /dzɜ́ teiqɐ̃ bù-teɐ́=dzɔ̃/, literally 'have been put /carried ashore by a wave').

Finally, in most contexts where it occurs in the corpus,  $/dz\tilde{a}/$  can be analyzed as expressing perfect aspect, that is, a state resulting the from an earlier event. However, it may also express evidential meanings, as discussed in detail in the following section. The marker  $/dz\tilde{a}/$  likely derives from the locative verb  $/dz\tilde{a}/$  (which can be seen negated in example 4,  $/dz\tilde{a}-g\tilde{a}/g$ 

#### 3. Evidentiality in Shuhi

The three markers that can express evidential meanings in the corpus, viz. /sɪ/, /teyɐ/, and /dzɑ̃/, form a heterogeneous group with a complex system of oppositions between its constituent members with respect to (i) whether the speaking person is a direct witness of the reported situation; (ii) the lexical category of the verb (controllable or non-controllable), and (iii) correlation with the person of the subject.

Elicitation with non-verbal stimuli for this study revealed a dedicated evidential marker that signals that the speaking person is a direct witness to the reported situation, /teye/. /teye/ is used in reports of various types of situations elicited with visual prompts (both video and picture). It may co-occur with both controllable and non-controllable verbs. An example of the use of /teye/ with a controllable verb (the lexical causative verb / $\Lambda$ è- $\chi$ ú/ 'break') is provided in sentence (5). It is a description of the video clip 058P\_tablethrow from the set "Staged events" by Van Staden et al. (2001).

(5) múzέ-dzĩ=ị qhú mjè-teàwè=sé ʎè-χù=teyé girl-one=TOP bowl downward-throw=SQT PFV-break.CAUS=DIR 'A girl threw the bowl and broke it [and the speaker saw it happen].'

Sentence (6), a description of the final event in the video clip 005P\_collidebreak from the set "Staged events" by Van Staden et al. (2001), provides an example of the use of /teye/ with a non-controllable verb (the non-causative counterpart of / $k\dot{e}$ - $\chi\dot{u}$ // $k\dot{e}$ - $\chi\dot{u}$ /).

(6) kə́də́ıɐ́ tjɐ́ mjɐ̀-zyɐ́=wu=se ʎɐ̀-ʁú=xɐ=tɕyɐ tray there downward-fall=go=SQT PFV-break.N-CAUS =N-CTR=DIR 'The plate fell down and broke [and the speaker saw it happen].'

It is important to note that /teye/ is used in reports of past situations, to which the speaking person is a direct witness. Reports of situations that are ongoing at the time of speaking are marked with the evidentially neutral progressive marker /ji/. Compare the following minimal pair in sentences (7) and (8). Sentence (7) is a description of the video clip cb03stickontree from the "Cut and break clips" by Bohnemeyer et al. (2001).

(7) xế zầ xế sếpế kèlì mjè-tcì=tcyế this child this tree branch downward-chop=DIR 'This man has chopped a branch off the tree [and the speaker saw it happen].'

Translation of a sentence with the intended meaning 'This man is chopping a branch off the tree' with the implication that the speaker, while speaking, is witnessing the ongoing event calls for the use of the progressive marker /ji/, see sentence (8).

(8) xế zầ xế sếpế kèlì mjè-tcì=jí this child this tree branch downward-chop=PROG 'This man is chopping a branch off the tree.'

In reports longer than one sentence, /teye/ does not require to be redundantly added to every sentence, but typically occurs in the last sentence describing the closing event in the reported sequence (see example 12 below).

Systematic elicitation including all person subjects suggests, contra H. Sun et al. (2014), that /teyɐ/ is not limited to third-person subjects, but can also occur with second-person subjects. Hence, the expression /κè-χù=teyé/ break.CAUS=DIR can mean both '[the speaker saw that someone, a third person] broke [the bowl]' and '[the speaker saw that a second person, the addressee] broke [the bowl]'. The lexical non-causative verb /κè-κú/ 'break' (as in sentence 6) is infelicitous with human agents. A more apposite choice of a non-controllable verb that can be used in both second- and third-person statements with human agents is /tswé/ 'cough'. The expression /tswé=xɐ=teyɐ/ cough=N-CTR=DIR can mean both '[the speaker saw that the addressee] coughed' and '[the speaker saw that someone else, a third person] coughed'. On the other hand, in sentences involving a first-person subject, irrespective of the type of the verb (controllable or non-controllable), the sentence-final /teyɐ/ obligatorily needs to be replaced by the marker /sɪ/. Note that this type of distribution is reminiscent of the dichotomous distinction between self-person (first person, the speaker) and other person (embracing second person, the addressee, and third person, other referents), as typical of person-correlation in evidential marking (J. Sun 1993: 955; 2018).

When co-occurring with controllable verbs, the use of /sɪ/ signals that the speaker is the volitional and conscious executer of the action described by the predicate. Hence the expression / $\hat{\kappa}$ e- $\chi$ u=si/ can only mean 'I broke [the bowl]'. On the other hand, with non-controllable verbs, the use of /sɪ/ rather signals that the speaker is the epistemic authority for the statement, reporting the speaker's personal knowledge rather than their sensory experience as grounds for obtaining the information about the event. While with controllable verbs, /sɪ/ is only accepted in sentences with the first-person subject, with non-controllable verbs /sɪ/ is equally acceptable also with second- and third-person subjects. Hence the expression /tswé=xv=sɪ/ can mean '[a first person, the speaker] coughed', '[a second person, the addressee] coughed', and '[a third

person] coughed', where in all three cases, the use of /sɪ/ signals that the report is based on the speaker's personal knowledge.<sup>12</sup>

In both cases (when co-occurring with controllable and non-controllable verbs), the use of /sɪ/ may be taken to signal the speaker's access to information, whether through their own volitional participation in the reported event or through their personal knowledge, rather than the source of information, as in the case of /teyɐ/ (direct visual evidence). As such it has a close correspondence in markers of participatory evidence or egophoricity, as found in Tibetic languages (see, among others, Tournadre 1991; J. Sun 1993, 2018; Tournadre & LaPolla 2014; Kittilä 2019: 1273).

Unlike /teye/, the use of /sɪ/ is not restricted to reports of situations that are subject to direct observation by the speaker. It is equally common in traditional narratives and in translation-based elicitations. With controllable verbs, it occurs in sentences with the first person subject and the logophoric person in quoted sentences in narratives. Sentence (9) shows an example of the use of /sɪ/ in a first-person statement in translation-based elicitation. This example is based on the closing sentence of the connected text B2 in Dahl's (1985) TAM questionnaire "I TAKE a stone and THROW at the snake. It DIE".

(9) ŋέ jằguế dzì dzì-zé=sé bè.rú=sị λè-sì=tcé=s. 1SG stone one upward-take=SQT snake=PNT PFV-kill=COMPL=EGO 'I took a stone and killed the snake.'

Sentence (10) provides an example /sɪ/ in a logophoric quote from a traditional narrative.

With non-controllable verbs that describe situations that do not have an overt outward manifestation, that is, inner (or endopathic) sensations such as cold, pain, hunger, or fear, /sɪ/can occur with all person subjects, as long as the implication is that the report is based on the speaker's personal knowledge. Consider examples in (11) (paradigmatic elicitation).

(11) zỳ=xɐ=sɹ dùgú=xɐ=sɹ be.afraid=N-CTR=EGO be.full=N-CTR=EGO
'[I/you/he/she] was/were afraid.' '[I/you/he/she] was/were full (after eating).'

(reports based on the speaker's personal knowledge)

Both /teye/ and /s.t/ further contrast with /dzã/. In reports of situations that are subject to direct observation by the speaker, such as sentence (6), the replacement of the sentence-final /teye/

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<sup>&</sup>lt;sup>12</sup> The use of /s<sub>1</sub>/ with what looks like a controllable verb 'come' in Huang & Renzeng Wangmu's example in footnote 3 (/thi5³ tehũ³³=s₁³³/ 'He came') has to do with the fact the verb /tehû' 'appear' is only used in other person statements. The use of /s₁/ in this example signals that the reported event is based on the speaker's personal knowledge. The same sentence is equally acceptable with the marker /dzã/ (that is, /thí tehû=dzå/), with the implication that that report describes a situation that is completed in the past but is still relevant for the present, that is, expressing an aspectual perfect reading, 'He has come'. The corresponding self-person form for 'come' is /dzã/. Accordingly, the Shuhi translation of the sentence 'I came' is /ŋé dzã=s₁/.

by /dzã/ can be taken to have evidential overtones, specifically, that the speaker infers the occurrence of an event, which they have not witnessed, from perceptual inference or based on logical assumption. In the context of the situation described in example (6), the changes of the sentence-final /teye/ by /dzã/ may be taken to imply that the report of the event is inferred on the basis of visible cues, for example, broken bowl shards. In other words, in reports of situations that are subject to direct observation by the speaker, /dzã/ may be analyzed as having an indirect evidential meaning (marking non-firsthand source of information).

More commonly, however,  $/dz\tilde{a}/$  is used in the corpus in contexts with no evidential sense. For example, in longer descriptions of video clips,  $/dz\tilde{a}/$  is commonly used to signal a sequence of actions. An example is provided in sentence (12), which is a description of the video clip 035ET foottohand (Van Staden et al. 2001).

(12)  $z\tilde{a}$ dzĩ ηí m<del>ú</del>zε miè-zú=dzã zã=1 khé=wé child girl downward-sit=PRF child=TOP one CONJ one foot=INSTR bà-tchè=jí 13 àrál kè-zè=sé múzé=s.i scarf PFV-take=SOT girl=PNT outward-pass=PROG 'A young man and a young woman are sitting [on the floor]. The young man has lifted the scarf with his foot, and is passing it to the young woman.'

In this sentence,  $/dz\tilde{a}/$  is used with the verbs  $/mj\dot{e}-z\dot{u}/$  'sit' in its aspectual meaning to signal that the event is completed prior to the next event in the sequence. To compare, in shorter descriptions consisting of just one sentence, the same verb  $/mj\dot{e}-z\dot{u}/$  'sit' may be used with the direct visual evidential /teye/ to highlight the fact that the speaker witnessed the reported event. This is the case in sentence (13), which is a description of the videoclip 079ET\_chairsit (Bohnemeyer et al. 2001):

(13) zὰ dzĩ tjέ kʰú-ʎέ=se sὲιέ=la mjè-zǘ=teye child one there inward-come=SQT stool=LOC downward-sit=DIR 'A man has walked in and sat down [and the speaker saw it happen].'

In translation-based elicitation, /dzã/ is commonly used with controllable verbs in other person sentences as a counterpart of /sɪ/ in self-person sentences. Consider example (14), which is a translation of the closing sentence of the connected text B3 in Dahl (1985) "[My brother] TAKE a stone and THROW at the snake. It DIE".

(14) ἐ-jý=ɪ jằguś dzĩ ʎὲ-zὲ=sé bὲ.rú ʎὲ-sì=tɕέ=dzã KNSP-elder.brother=TOP stone one PFV-take=SQT snake PFV-kill=COMPL=PRF 'My brother took a stone and killed the snake.'

/dzã/ is also used in first person statements. With controllable verbs, the use of /dzã/ signals that the speaker is a passive undergoer of the action denoted by the verb. An example can be seen in sentence (4), /tr dzś teìqr bù-tr =dzɔ/ there water wave outward-put=PFV '[I] was washed ashore by a wave'.

With non-controllable endopathic verbs,  $/dz\tilde{a}/$  may be added directly to the verb, that is, without the marker /xe/. This type of use appears to be evidentially neutral. Consider an example in sentence (15).

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<sup>&</sup>lt;sup>13</sup> The sentence-final /ji/ can be changed to /teye/ with the implication that the event of passing is completed prior to the report, /bə<sup>33</sup>-tehe<sup>33</sup>=teye/ outward-pass=DIR '[the young man] passed [the scarf] to the young woman [and the speaker saw it happen]'.

The difference between /dùgú=dzɔ̃/ in sentence (15) and /dùgú=xɐ=sɪ/ in sentence (11) appears to be that between, respectively, a primarily aspectual (perfect) meaning (a state resulting from an earlier event) and a primarily evidential (egophoric) meaning (a report of a completed event on the basis of the speaker's personal knowledge).

Table 3 summarizes the distribution of the three markers in declarative sentences.

|                       | Controllable |   |              | Non-controllable |             |              |     |
|-----------------------|--------------|---|--------------|------------------|-------------|--------------|-----|
| speaker is:           | self person  |   | other person |                  | self person | other person |     |
| a direct witness to   |              |   | teye         |                  |             | teye         |     |
| the reported event    | S            | Ţ |              | dzã              | ŖĮ          |              | dzã |
| not a direct witness  |              |   |              |                  |             |              |     |
| to the reported event |              |   |              |                  |             |              |     |

Table 3. Distribution of the markers /sˌi/, /teye/, /dzã/ in declarative sentences in relation to the type of the reported situation (whether or not subject to direct observation by the speaker), the lexical category of the verb (controllable or non-controllable) and the person of the subject (self person vs. other person)

As can be seen in Table 3, /teye/ is the most restricted in terms of situation type and the person of the subject. It is only used to describe situations that are subject to direct observation by the speaker and mostly in other-person sentences. /si/ is the most deictically bound of the three markers, co-occurring with the first person subject across both controllable and non-controllable verbs. In addition, with non-controllable verbs it can also occur in other-person sentences. Finally, /dza/ is most unrestricted of the three markers in terms of situation type (whether or not subject to direct observation by the speaker), the lexical category of the verb (controllable or non-controllable) and the person of the subject (self person vs. other person).

The distribution of the three markers according to the person subject is rather inflexible. The native speakers consulted for this study do not accept the marker /st/ after controllable verbs with second- and third-person subjects. Neither do such combinations occur in narratives or conversations. /teye/ can occur in first person statements, although such use has a very low frequency of occurrence in the corpus. The use of /teye/ with the first person subject portrays the speaker as a passive undergoer and an unwitting observer of the action denoted by the verb. Consider an example in sentence (16), which derives from a traditional story, in which the protagonist reports being unwittingly exposed to the workings of invisible evil forces (ghosts and demons).

The three markers also behave dissimilarly in (non-rhetorical) questions to the addressee.

Questions with /teye/ appear to presuppose the addressee's information source (direct visual) and anticipate the use of /teye/ in the answer. The interrogative prefix /e-/ is prefixed directly to /teye/. An example is provided in sentence (17), which is based on sentence 58 in Dahl's (1985) questionnaire "[Q: Do you think the king will go to sleep? A:] (Yes.) he BE TIRED".

(17) tshốpế λὲ-ȝị v=teyv? λὲ-ȝị=teyế merchant.TIB PFV-sleep Q=DIR PFV-sleep=DIR 'Have you seen the merchant go to sleep? He has gone to sleep [and I [= the speaker] saw it happen].'

In contrast to /teye/, /sɪ/ is a bound morpheme, which cannot be preceded by the interrogative prefix /e-/. In questions with a controllable verb, the interrogative morpheme is prefixed to the verb, while the marker /sɪ/ is omitted. An example is provided in sentence (18). (In questions with prefixed verbs, the interrogative morpheme is infixed between the prefix and the verb).

(18) ní m3 tchí dồ dz3-gó è=dế

2SG today what see eat-NMLZ.PNT Q=find

'[The mountain god asked the leopard:] What have you seen today? Have you found anything to eat?' (The Good, the Bad, and the Mountain God)

The response to the question in (18) presupposes the use of the marker  $/s_{\perp}/(/d\tilde{e}=s_{\perp}/'iI)$  found'). Consider also the use of  $/s_{\perp}/iI$  in example (15) taken from the same story and answering a similar question.

On the other hand, in questions with a non-controllable verb, the interrogative morpheme is placed before the non-controllable morpheme /xɐ/ or /wu/, as in example (19). 14

(19) dùgú è=xé
be.full Q=PFV.N-CTR
'Are you full?' (elicited)

In questions with  $/dz\tilde{a}/$ , the interrogative/negative prefix is again placed before the verb, but the morpheme  $/dz\tilde{a}/$  remains attached to the verb. Consider an example in sentence (20).

(20) thí-itế é=dzè=dzð? 3SG-PL Q=eat=PRF 'Have they eaten?' (elicited)

Finally, in contrast to both /teye/ and /sɪ/, the use of which is restricted to reports of past situations, the use of /dzã/ is independent or almost independent of time reference, so that it can occur in reports of both actualized and non-actualized situations. An example of the use of /dzã/ to describe a non-actualized event is provided in sentence (21), based on Dahl (1985: 202), sentence 104, "If the boy GET the money, he BUY a present for the girl".

(21) hố lìqán  $z \hat{a} = zy = i$  hế= ji  $m \hat{u} z \hat{c} - dz \hat{d} dz y \hat{c} = s i$   $ts \hat{a}$ 

 $^{14}$  One of the speakers consulted for this study exceptionally accepts questions with the interrogative morpheme prefixed to /s<sub>1</sub>/. Also, Huang & Renzeng Wangmu (1988: 190) provide a few similar examples, e.g. /ni<sup>55</sup> dz3<sup>35</sup> a<sup>33</sup>s $_1^{33}$  ( $\sim$  a<sup>55</sup> dz3<sup>53</sup> s $_1^{33}$ )?/ 'Have you eaten?'; /ni<sup>55</sup> dz3<sup>35</sup> tsha<sup>35</sup>-wu<sup>33</sup> a<sup>33</sup> s $_1^{33}$ ? 'Have you finished eating?'. At the present state of our knowledge, it is impossible to say whether this use is idiosyncratic or systematic, or whether it may represent change in progress.

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silver fist obtain=COND=TOP self=GEN girl-friend=PNT things j\acute{\epsilon}=j\acute{\epsilon}=dz\~{\alpha} buy=PROG=PRF 'If [the boy] gets the money, he'll be buying presents for his girlfriend.'
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Due to its use in descriptions of both actualized and non-actualized situations, /dzã/ may co-occur with a broader range of aspectual markers than either /sɪ/ or /teyɐ/. Hence, /dzã/ frequently co-occurs not only with the completive marker /teɐ/ (as in example 14), but also with the progressive marker /ji/ (as in example 21), and also the prospective marker /gã/. Finally, /dzã/ may be followed by /sɪ/, albeit unfrequently in the corpus. Such a use can be seen in sentence (22), taken from a personal narrative.

That  $/dz\tilde{\alpha}/$  can appear together with the egophoric marker /sz/ may be taken as additional evidence to consider  $/dz\tilde{\alpha}/$ , on the one hand, and /sz/, on the other hand, as part of two systems, respectively aspectual and evidential, rather than two paradigmatically related evidential markers.

One additional argument to consider  $/dz\tilde{a}/$  as evidentially neutral is that in reports relying on non-firsthand evidence (such as hearsay and folk stories),  $/dz\tilde{a}/$  requires to be followed by one of the composite evidential constructions. These include (i) a reported evidential construction with the verb  $/p\dot{v}/$  'speak', as in examples (9) and (15), see also an additional example in sentence (23); and (ii) a folklore evidential construction (cf. Kittilä 2020), which consists of a nominalizer (Lower Shuhi /  $\Lambda$  o/, Upper Shuhi / li/), a copula and the progressive marker / ji/, see an example in sentence (24).

- (23) tshốpế tjé pá=xe=dzã pé=jí merchant.TIB there arrive= N-CTR=PRF speak=PROG 'The word is that the merchant has arrived.' (based on Dahl 1985: 204, sentence 136, [A person who has heard [that the king has arrived] but not seen the event says:] The king ARRIVE.
- (24)  $\dot{\text{Id}}\dot{\text{B}}\ddot{\text{O}}$   $q\dot{\hat{\epsilon}}=l\alpha$   $p\dot{\alpha}$   $lj\epsilon$   $l\dot{\alpha}$   $t\dot{\epsilon}$   $\int\dot{\tilde{\alpha}}=dz\tilde{\alpha}$   $\delta o=u\tilde{\epsilon}=ji$  road middle=LOC arrive become tiger there wait= PRF NMLZ.PST=COP=PROG 'When the ewe and the lamb were half way, the tiger awaited them there.' (Hare, Ewe, Lamb, and Tiger)

A comparison of the markers /sɪ/, /teyɐ/, and /dzɑ̃/ in this section suggests that although all three markers may express evidential meanings and contrast in a number of contexts (situations directly witnessed by the speaker), only the former two markers may be analyzed as primarily evidential, that is, signaling respectively the source of information (direct visual evidence) and the mode of access to information that speakers employ to justify a statement (egophoric, participatory or firsthand knowledge). On the other hand, the primary meaning of /dzɑ̃/ may be analyzed as aspectual. Given that /dzɑ̃/ combines semantic parameters of aspectual and evidential character, it may be analyzed as a type of evidential strategy (Aikhenvald 2004: 105–152), that is, a grammatical form that does not have the expression of the source of information

as its primary meaning, but develops an evidential meaning as collateral effect of other categories, such as tense, mood, and aspect.

/teye/ is the most bound of the three markers. It is difficult to elicit, unless a context can be created in which the speaker reports on a completed event of which they have been a direct witness (as in elicitations with non-verbal stimuli). This may account for the fact that it has been overlooked in some previous studies, including my own work based on traditional narratives.

By contrast, both /si/ and /dzã/ can be used in a much broader range of contexts and are, for that reason, much more frequent. /si/ may be particularly frequent in translation-based elicitation for the reason that in that type of data the speakers may choose to present themselves as the epistemic authority for the statements. Due to its high frequency in translation-based elicitation and its ability to combine with both controllable and non-controllable verbs and to occur in both self-person and other-person statements, /si/ may give an erroneous impression of having a primarily aspectual meaning (perfective, as in Table 1), if examined primarily on the basis of translated example sentences. Finally, /dzã/ is commonly found in traditional narratives, which are based on non-firsthand evidence; and it may also be interpreted in some contexts as an indirect / inferred evidential.

The three markers correlate to some extent with the grammatical person of the subject. The strongest correlation is observed in the case of /sɪ/ when co-occurring with controllable verbs. That being the case, the occurrence of /sɪ/ may to some extent help track person reference in a sentence otherwise unmarked for person.

Finally, the distributional features of the three markers (with which other markers they do or do not co-occur in the corpus) tally well with their meanings and functions, as outlined above. Of the two evidential markers, only the egophoric marker/sɪ/ may follow the completive marker /tɛʊ/ (which a type of perfective) and the perfect marker /dzɑ̃/ (as can be seen in sentences 9 and 22). Likely reasons why the direct visual marker /tɛʊv/ does not occur with the perfective or perfect marker are cognitive: it is impossible to witness only the result of an event and not the entire event itself (cf. Tournadre 2017: 103 on the distributional features of direct sensory evidentials in Tibetic languages). On the other hand, the perfect and by semantic extension the indirect inferential marker /dzɑ̃/ may co-occur with the completive marker /tɛʊ/ (as can be seen in sentence 14).

## 4. Shuhi evidentials: Historical origins and pathways of development

The etymological histories of the three markers are as heterogeneous as their synchronic relationships.

/dzã/ is the most etymologically transparent of the three. The three meanings of this morpheme, lexical (locative, 'exist'), aspectual (perfect), and evidential (indirect, non-firsthand information) are clearly interrelated, with the latter two (derived) meanings being related to the original lexical meaning. According to Willett (1988, section 4), Bybee & Dahl (1989), Bybee et al. (1994: 63), Heine & Kuteva (2001), the development of aspectual markers out of expressions referring to the place where something is located is cross-linguistically common. The semantic extension of a marker with perfect features to a marker of non-witnessed information (inference, non-firsthand information) is also a typologically widespread tendency, attested in many different languages of distinct language families (cf. Bybee et al. 1994: 96; Aikhenvald 2004: 112–116, 2014; Friedman 2018). The relevant developmental pathway includes reinterpretation of an action or state viewed as relevant for the moment of speech as having being inferred on the basis of visible traces, which meaning may be further extended to inference based on assumption and also other non-firsthand sources. As has been suggested in section 3, in the case of /dzã/, non-firsthand meaning extensions have not (yet) become the

main meaning of that form, but rather represent an evidential extension of the main perfect meaning of  $dz\tilde{a}$ .

In previous studies, Shuhi /sɪ/ has been argued to be a reflection of the Proto-Sino-Tibetan past marker (Huang 1991: 325–326; H. Sun et al. 2014: 124). In terms of synchronic comparison with its neighboring languages, Shuhi /sɪ/ may be related to the perfective aspect marker in Naic languages (e.g. Naxi siə³³, se³¹; Yŏngníng Na ze) (see Chirkova 2012). In contrast with Shuhi /sɪ/, the perfective aspect marker across Naic languages does not appear to have evidential overtones, neither is it correlated with a particular person subject.

The etymological origins of /teye/ are uncertain at the present state of our knowledge, and there appear to be no markers with comparable form and meaning in the neighboring languages of Shuhi.

The marker /xɐ/ or /wu/, which in reports of past situations is attached to non-controllable verbs, is likely related to motion verbs: the past form of the verb 'go' (/xɐ/) in the former case and the verb /wú/ meaning 'proceed' or 'exit' in the latter case.

In view of those etymological histories and synchronic parallels in the neighboring languages, the following scenario of the development of the Shuhi evidential system can be tentatively proposed. By virtue of its being the most etymologically obscure, the direct visual evidential marker /teyv/ may be the oldest of the three markers, likely both predating and constraining the development of the remaining markers with evidential meanings. In view of its aspectual (perfective) parallels in Naic languages, /si/ may likely be originally an aspectual form indicating perfective aspect or change of state. It likely acquires its egophoric evidential meaning through contrastive paradigmatic relationship with the direct visual marker /teyv/. As can be seen in the data discussed in this study, the direct visual evidential is commonly used in describing the actions of other people, that is, those in which the speakers did not participate themselves. By implicature, clauses not marked with a direct visual evidential can come to be understood as having a participatory meaning, that is, that the speaker did participate in the event. Finally, the etymologically most transparent /dza/ is likely the most recent addition to the system, coming in contrast with both /si/ (egophoric) and /teyv/ (direct visual) and developing evidential overtones through this paradigmatic relationship.

The resulting tripartite evidential system (egophoric-direct visual-indirect) shows a number of striking similarities with evidential systems in Tibetic languages, including their hallmark feature of egophoricity, which is cross-linguistically uncommon (see J. Sun 1993, 2003; Tournadre & LaPolla 2014; Tournadre 2017; Gawne 2017; DeLancey 2018 for overviews). Additional rare and specific features of Tibetic languages found in Shuhi include lexicalization of the semantic feature of control in the verb (the lexical distinction between controllable and non-controllable verbs), and the characteristic person-sensitive distribution of evidential forms.

Despite the formal presence of those features, however, the Shuhi system is set up and functions quite differently from those in Tibetic languages. Among most notable distinctions we can note the following. (1) The restriction of the egophoric evidential /sɪ/ to declarative sentences, hence violating the anticipation rule in interrogative sentences in Tibetic languages (that is, in the case of questions, the speaker must anticipate the source and access to information that is available to the addressee). (2) The fixedness of the Shuhi system, generally not allowing for flexible use of the evidential markers according to the epistemic stance that the speaker may want to project or their attitude towards the reported event, as typical of Tibetic evidentials. (3) Different correlation patterns with the person of the subject of the Shuhi egophoric /sɪ/, as compared with egophoric markers in Tibetic languages. Not only can Shuhi /sɪ/ be used in reports of situations intentionally and volitionally instigated by the speakers themselves and in reports of the speaker's mental and physical states, but it can also be used in reports of uncontrollable states, actions, and inner processes by others, which in egophoric systems in Tibetic languages normally call for the use of a direct or indirect evidential. In the case of non-

controllable verbs, the morpheme /xɐ/ or /wu/ may be seen as a proxy direct or indirect evidential. However, /xɐ/ or /wu/ are not in a paradigmatic relationship with either of the markers with primarily evidential meanings /sɪ/ or /teyɐ/.

The heterogeneous and composite nature of the Shuhi system, the sharing of some hallmark features of evidential systems in Tibetic languages (most importantly, egophoricity, evidential marking in first-person contexts), combined with clear differences from prototypical egophoric systems in Tibetic languages all point to the likelihood that the Shuhi evidential system has evolved under contact pressure from Tibetic languages. Specifically, some evidential distinctions found in Tibetic languages (such as egophoric and indirect) have been replicated in Shuhi using Shuhi native morphemes (such as perfective and perfect). One more development that may have a close parallel in Tibetic languages is that of the markers /xɐ/ and /wu/ from verbs of motion. The relevant parallel development in Tibetic languages is that of the past sensorial marker *song* used as a non-volitional auxiliary from the motion verb 'go' (see Oisel 2017 and references therein).

That evidentiality distinctions may spread through contact should come as no surprise. In fact, evidentiality has been argued to be one of the grammatical categories that are particularly prone to diffusion and contact-induced change in language contact situations and language areas (cf. Aikhenvald 2018). That is likely due to the important role that evidentiality (as a grammatical means of overtly expressing information source) plays in communication, cognition and speakers' status within a community. In fact, similar to Shuhi, one of its main contact languages Northern Prinmi also demonstrates contact-induced development of Tibetanstyle evidential distinctions. It has been argued that under the influence of Tibetic languages, Northern Prinmi is changing from a system with richer inflection, marking person-number or actor-agreement, which are typically found in Southern Prinmi varieties, to a much more reduced verbal paradigm with a clear pattern of egophoricity, which patterns according to the self-person and other person distinction rather than actor-agreement or person hierarchy (see Daudey 2014 for Wadu Prinmi). Overall, the Wadu Prinmi system, as described in Daudey (2014), appears to be a closer match to the Tibetic prototype in that it observes the anticipation rule. Accordingly, its egophoric perfective marker (=seng) is used in first person statements, logophoric quotes, and also second person (introspective) questions. The paired inferential evidential marker (=si) is used in first person questions, second person statements, third person statements and questions.

In sum, evidential systems of both Shuhi and Northern Prinmi have characteristic traits of Tibetic-style evidential systems with their cross-linguistically rare feature of egophoricity. The evolution of the evidential system in each case likely results from copying using native linguistic elements, which likely condition specific outcomes in each language.

Looking beyond Shuhi and Northern Prinmi, it may be surmised that evidentiality is yet another common feature of the Qiangic linguistic or convergence area (as discussed in Chirkova 2012), commonly found in local Tibetic and non-Tibetic languages alike. Importantly, while clearly prominent and dominant in some parts of the area, Tibetan-style evidentiality with evidential marking in first-person contexts is not the only type of local evidential systems, neither is it likely the oldest or indigenous to the area. The rise of the current Tibetic evidential system coincides with the decline of Old Tibetan as a lingua franca and the shift to local varieties, whereas its elaboration dates from the late fifteenth-sixteenth centuries (e.g. Zeisler 2014, cited from Friedman 2018; Hill & Gawne 2017: 29–30; Gawne 2017; Oisel 2017).

An alternative type of evidential systems found in the area lacks evidential marking in first-person contexts (cf. Aikhenvald 2004: 232–233). In those alternative evidential systems, evidential categories characterized by the speaker's higher access to information are zero-marked, whereas those evidential categories that are characterized by lower information access receive explicit marking. This type is attested in various varieties of the Qiang or Rma language

(e.g. LaPolla & Huang 2003; Evans & J. Sun 2015), in Dgeshes Horpa (see Tian & J. Sun 2023), and possibly also Jiaowu nDrapa (Huang 2023). As argued by Tian & J. Sun (2023) in relation to Dgeshes Horpa, such systems likely represents an output of internal evolution rather than language contact. The explicitly marked categories (whether direct visual, inference/immediate evidence, as in various Rma varieties; or that between newly obtained and old or integrated knowledge, as in Horpa) may vary per language. At the present state of our knowledge of the area, it remains unclear how and when these systems developed and spread.

In view of the etymology of the Shuhi evidential markers, with the etymologically obscure direct visual marker /teye/ likely being the oldest, it cannot be ruled out that Shuhi may have had a native small evidential system that disallows evidential marking in first-person contexts. That system has likely been in place before any contact of Shuhi with Tibetic languages and/or before the elaboration of the Tibetic-style evidential systems with their hallmark of egophoricity. At the present state of our knowledge, it is merely a conjecture, as more work on the neighboring varieties of Shuhi, including its contact variety of Tibetan, is necessary to evaluate its plausibility.

#### 5. Conclusions

This study provides a novel analysis of evidential contrasts in Shuhi on the basis of a new corpus of data, which includes elicitations with non-verbal stimuli, traditional narratives, and conversations. It suggests that the two markers with primarily evidential meanings and functions are /teye/ (direct visual) and /st/ (egophoric). By contrast, the meanings and functions of the marker /dzã/ are primarily aspectual (perfect), so that its indirect evidential meaning is an extension of its primary perfect meaning. An overview of the Shuhi evidential system and possible etymological origins of the three markers suggests that the Shuhi evidential system in its present form has likely developed under contact pressure from Tibetic languages, replicating some characteristic features of their evidential systems (most importantly, egophoricity). Interestingly, Shuhi may have had its native evidential system prior to contact with Tibetic languages, which type-wise may be more similar to indigenous evidential systems found in the northern part of the Qiangic area (as in Qiang or Horpa).

One salient if truistic conclusion of this study pertains to the controversies surrounding the expression of evidentiality in previous studies of Shuhi. Namely, the quantity and quality of data strongly influence the quality of a linguistic analysis and the extent to which it is representative and generalizable to the language described. This has two practical implications for linguistic description. First, a detailed overview of the underlying data (most importantly: quantity, types, genres, number of speakers) is a necessary part of any description. Second, compared to the early days of linguistic fieldwork, it is becoming increasingly easy to collect, store, and share large amounts of data. Hence, data underlying results of analysis should ideally be made open access. This allows for the verification and expansion of the analysis, and anticipates the need for new data collection. These two factors are all the more important for little-known and under-resourced languages, such as Shuhi, to which access remains limited.

The two requirements described above are met in this study. It is based on a relatively large-scale open-access corpus that encompasses different genres and includes speech samples of speakers from both Shuhi subvarieties. The composition of the corpus (particularly the small amount of conversational data that it contains) also shows the limitations of the present study. As more and more languages featuring dedicated evidential systems are being described, it becomes apparent that evidential marking indexes not only (i) the source of evidence and the mode of access to information, but also (ii) the distribution of knowledge between speech-act participants, and, in many cases, (iii) knowledge-related rights and responsibilities (cf. e.g. Nuckolls & Michael 2014; Grzech 2020). That being the case, a coherent study of evidentiality critically requires looking at evidentials in their discourse contexts and their use as conditioned

by the interpersonal context of the interaction (see Mushin 2013, 2022; Hintz & Hintz 2017; Schultze-Berndt 2017; Sandman & Grzech 2022 amongst other). Hence in the case of Shuhi, additional and primarily conversational data are required to test the robustness of present conclusions, and provide a more comprehensive description of the expression of evidentiality in this language.

On a different note, the Shuhi case presented in this study points to the interest of investigating evidential systems in languages of the Qiangic area. Such investigations may yield insights into (i) the mechanisms of language contact in the area (in terms of transfer of evidentials from the Tibetic-style evidentiality system), and (ii) the typology and evolution of indigenous evidential systems in local non-Tibetic languages. More fine-grained descriptions of local evidentiality systems are bound to contribute to an improved understanding of the historical developments in local languages. Those insights may be all the more valuable when investigating morphologically impoverished languages such as Shuhi.

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