9

Topographical Deixis and the Tani Languages of North East India[1]

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1. Introduction

Many if not most Tibeto-Burman languages exhibit a means of referencing the location or trajectory of a referent in terms of one of three topographically-oriented planes: *upward*, *downward* and *on the same or an unknown level* (as a shifting reference point). A brief example from Lare Galo (Tibeto-Burman > Tani; Arunachal Pradesh) illustrating use of an *upward* distal demonstrative is first given in (1).

(1) *tâə hɨɨrêk tâə dà, japóm əcĭn rədâk*

tə̀	hɨ̀ɨrèk	**tə̀**	da	japóm	ə=cĭn	rə́-dàk
DST.UP	banyan	**DST.UP**	CNTR	demon	TOP=ADD	exist-COS

[1] I gratefully acknowledge the assistance of my primary Galo consultants for this paper `Igoo Rwbaa, `Ilww Rwbaa, and `Miilww `Xodu, my Mising consultants Avn Dole:, Polobu Dole: and Jugendra Pe:gu: and my Apatani consultants Habung Taki and Nending Jorang. I am also indebted to Stuart Blackburn and Pascal Bouchery for helping me to better understand the situation in Apatani. This paper was written while on fieldwork in Arunachal Pradesh, for which a grant was provided by the Research Centre for Linguistic Typology at La Trobe University.

bentù.
bèn=tu
EVID=AURV
'As for **that** banyan **up there**, there certainly also now seems to be an evil spirit living (in it).'

In this paper, I will introduce the term *topographical deixis* to describe this sort of system as it is found in the Tani languages, which constitute a medium-sized branch of Tibeto-Burman languages spoken primarily in Arunachal Pradesh and Assam, North East India, as well as in small numbers in Tibet (Sun 1993). Although a survey of topographical deixis and related systems in Tibeto-Burman has been initiated and remains ongoing (Post in preparation), in this paper I will mainly restrict discussion to an explication of the system as it operates in those Tani languages which exhibit it. The paper is thus primarily descriptive in intent, and may also, I hope, be used as a benchmark reference for the study of similar and possibly related systems in other North East Indian languages.

The remainder of the paper has the following structure: §2 discusses the environmental context of the Tani languages. In §3, we outline the basic characteristics of a system of topographical deixis, also discussing its hypothetical origins and semantic extensions. §4 presents a detailed overview of the system of topographical deixis found in Lare Galo, based on the recent description of Post (2007), and §5 discusses the status of topographical deixis in other Tani languages.

2. The environmental context of the Tani languages

The majority of modern-day Tani languages are spoken in and around central Arunachal Pradesh state, North East India. The locus of highest intra-Tani linguistic diversity is found in north-central Arunachal Pradesh, which may well be the approximate location of the earliest reconstructible Tani "homeland" (Post forthcoming 2010). Located roughly between 27 and 29 degrees latitude, central Arunachal Pradesh sits squarely within the Eastern Himalaya, where altitudes range between highs of around 5,000–6,000 metres above sea level, at and beyond the Tibet border, all the way down to 200–300 metres at the border with Assam and the Brahmaputra floodplain.

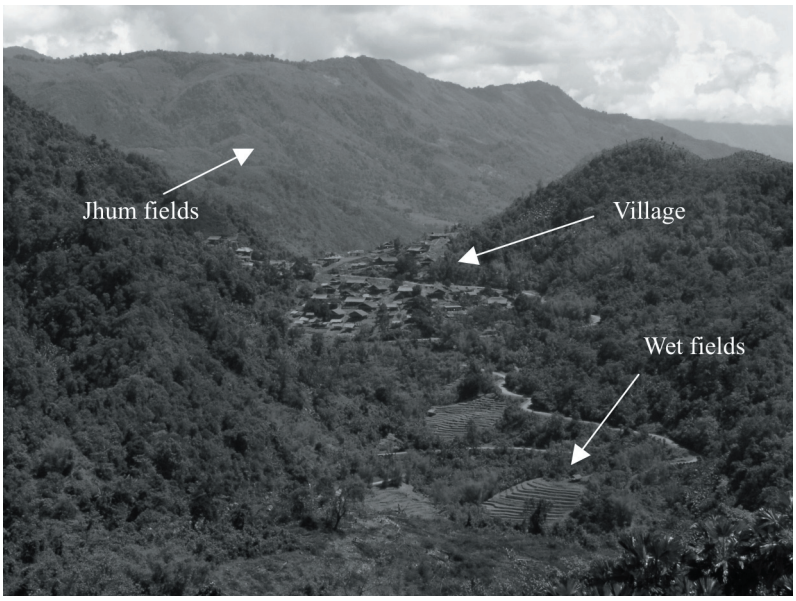

Figure 1 *rɨlúu* (Galo) village, West Siang district, Arunachal Pradesh, with *moodĩi-rɨkə́* (jhum fields) in background and terraced *isĩ-rɨkə́* (wet fields) in foreground

Mountain topography shapes almost every aspect of the traditional Tani lifestyle. Most Tani-speaking villages and towns in central Arunachal Pradesh are located at altitudes of between 500–2,000 metres, usually on sloping hillsides near to, but not within, river valleys (Figure 1). Traditional agriculture is centred on the practice of *jhum*, or shifting, hillside cultivation. *Jhum* fields are often located above or adjacent to villages, on mountain slopes which would be too steep to settle, and which are often barely traversable to a novice. Terraced wet rice fields were traditionally not widely cultivated by most Tani tribespeople, however efforts to boost productivity have led to their introduction in several areas.

There are, however, at least two important exceptions to the above description:

First, within Arunachal Pradesh, the Apatani are the only Tani group who have traditionally lived almost exclusively within a plateau area. Legendary for their high agricultural productivity, Apatani devote nearly every square inch of land available in their plateau to intensive wet rice cultivation-cum-pisciculture, i.e., paddy-based fish farming (von Fürer-

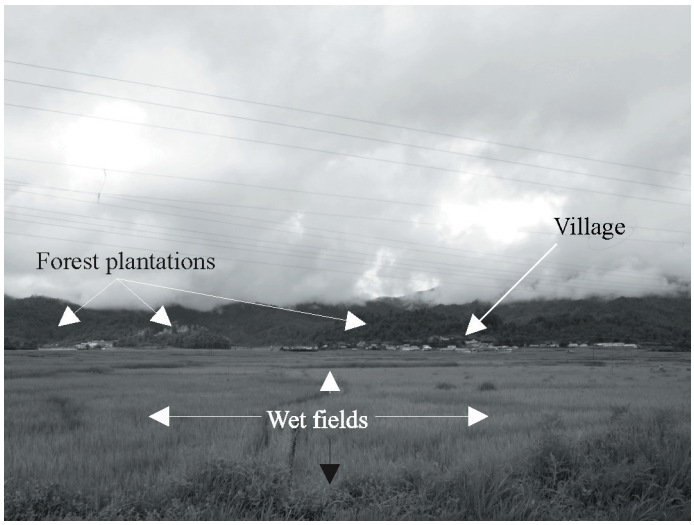

Figure 2 Ziro, Apatani plateau; Lower Subansiri district, Arunachal Pradesh

Haimendorf 1980). Densely-arranged villages ring the large plateau, while surrounding hills are primarily employed as plantation grounds, where forest resources such as bamboo and firewood are obtained; hillsides are not generally cultivated by Apatani (Figure 2).

A second important exception is that of the largest single population of Tani tribespeople, the Mising, who are found almost exclusively within the Brahmaputra floodplain of Upper Assam. Topographically quite unlike most parts of central Arunachal Pradesh, the Upper Assam plains lack hills of almost any size, permit only wet rice agriculture (supplemented by kitchen gardens and small forest plantations intermixed with villages), and undergo extensive flooding sometimes for several months in a year (Figure 3).

In addition to those Tani language speakers currently found in North East India, small numbers are also found in Tibet. Very little current information of any reliability is available regarding their distribution or environmental context, although a few remarks may be found in Sun (1993).

3. Topographical deixis

Deixis may be understood quite generally as a set of "ways in which languages encode…features of the context of utterance" (Levinson

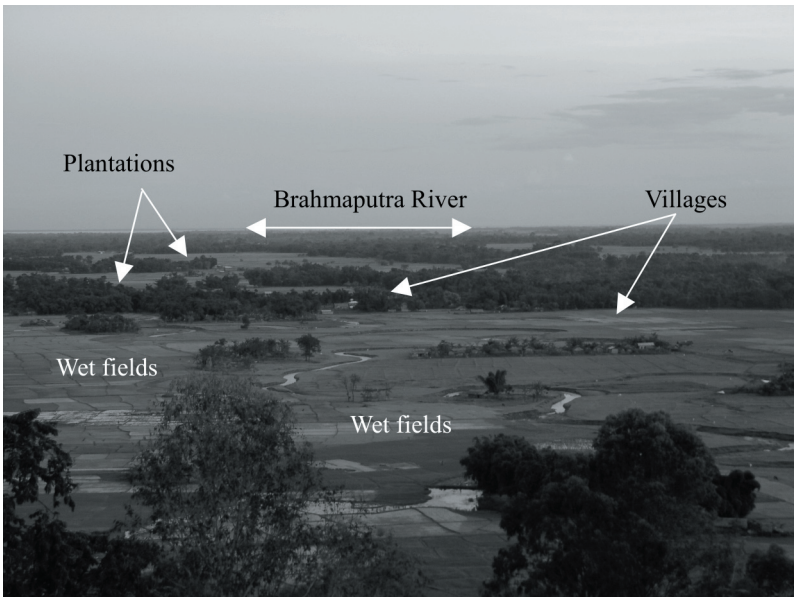

Figure 3 View of Upper Assam from the West Siang district border, with Mising and Bodo-Kachari villages in distance

1983: 54). As Senft (1997a: 2) writes, "when we communicate, we communicate in a certain context, and this context shapes our utterances".

In a system of *topographical deixis*, referents' locations or trajectories are identified in spatial terms, as being *upward of*, *downward of* or *on the same (or an unknown) level as* a shifting "deictic" centre (often, though not always, the place of speaking). Similar or identical systems are quite common in Tibeto-Burman, and have been fully or partially described from various perspectives as "environmental space deixis" (Bickel 2001), "altitudinal case markers" (Ebert 2003) and "vertical case" (Noonan 2006). Outside the Tibeto-Burman area, languages which exhibit some form of topographical deixis (whether as the primary or secondary basis for some system of spatial reference) are common in Papua New Guinea and Oceania (Senft 1997b; 2004), and seem to occur in some form in Uto-Aztecan and in Dyirbal (see discussion in Dixon 2003).

3.1. Environmental source

The ultimate source of topographical deixis, as well as its prototypical domain of reference, would appear to be human interaction with a

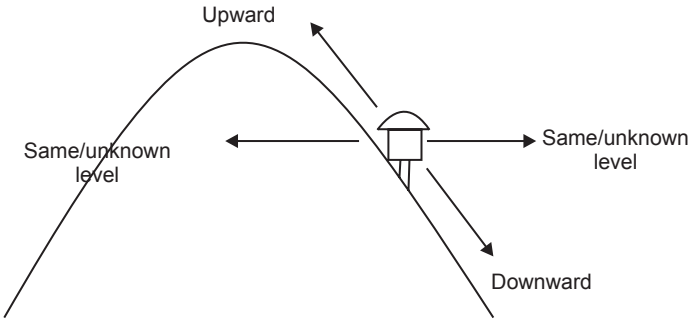

Figure 4 Environmental source of topographical deixis

topographically varied environment such as that roughly schematized in Figure 4 (to be compared with Figure 1).

3.2. Environmental extensions

From the topographical source illustrated in Figure 4, a number of environmental *extensions* are also observed. The first is *riverine orientation*: in this extension, *upward* is transferred to *upriver*, *downward* to *downriver*, and *same/unknown level* is effectively extended to mean *not along a river course* (Figure 5).

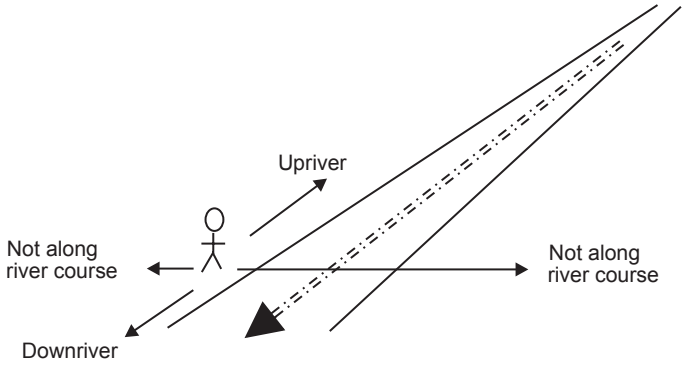

Figure 5 Environmental extension 1: Riverine orientation

The second extension is *compass orientation*. In this extension, *upward* is transferred to *northward*, *downward* to *southward*, and *same/unknown level* to *east/west/unknown direction* (effectively, neither north nor south; Figure 6).

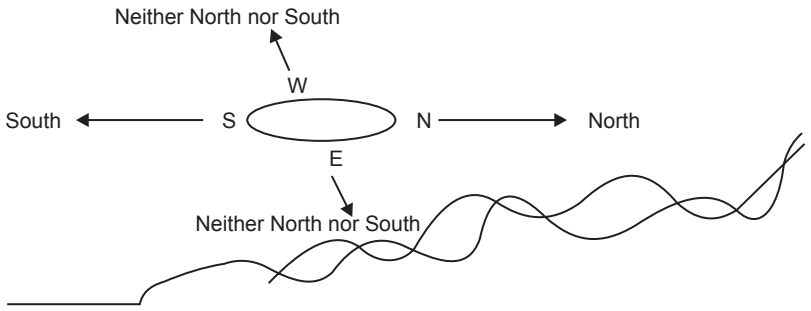

Figure 6 Environmental extensions 2: Compass orientation

The reasons why these particular extensions are possible seem straightforward: both reflect what are virtually necessary interpretations of the central Arunachali environment (§1). Just as it is the case that altitude decreases in this area as one moves southward – but remains, overall, more or less the same as one moves from east to west – it is also (necessarily, therefore) the case that all Arunachali rivers ultimately flow from north to south; hence the syncretism. For two telling exceptions to this generalization for the Tani languages, however, see §5.

4. Topographical deixis in Galo

In Galo, topographical deixis is found in two primary linguistic domains, with a variety of sub-domains. Within the *predicate* domain, topographical deixis is encoded by *verb roots* and by *directional predicate derivations* (§4.1). Within the *noun phrase* domain, topographical deixis is encoded by *demonstratives* and *demonstrative postpositions* (§4.2)[2].

[2] Descriptions of topographical deixis in other Tibeto-Burman languages are often not sufficiently detailed to give a clear sense of how widely this particular set of domains is distributed; however, it is striking to find that Belhare – an Eastern Kiranti language of Nepal which is not usually thought to be particularly close to Tani within Tibeto-Burman – seems to share *exactly* this fundamental set, albeit with some further complexities (a vowel alternation encodes an additional dimension of *deictic displacement*, which is not found in Tani) (Bickel 2001). This perhaps unexpectedly close correspondence – which also involves at least some cognate formatives – could in principle support a theory that topographical deixis reconstructs quite deeply within Tibeto-Burman. This possibility is currently under investigation.

4.1. Predicate domain

The set of Galo *verb roots* encoding topographical deixis are presented in Table 1. An example of use is in (2). Note that one of the three verb roots is polysemous with two other deictic domains (motion *towards* a reference point and motion *into* an enclosed space); note also that although the English translations are necessarily somewhat elaborate, these are among the most frequent and ordinary verbs used for expressing motion to a goal in Galo.

Table 1 Galo verb roots encoding topographical deixis

Function	Form	Gloss
MOTION UPWARD/UPRIVER/NORTHWARD	*càa-*	'ascend'
MOTION DOWNWARD/DOWNRIVER/ SOUTHWARD	*ïi-*	'descend'
MOTION ON THE SAME OR UNKNOWN LEVEL/ NOT ALONG RIVER COURSE/EAST/WEST	*áa-*	'come; enter; move laterally'

(2) *caarûu làp máər əm...*
càa-rûu-lapə́ máə-rə́=əm
ascend-DEF-CTZR:PURP think-IRR=ACC.TSUB
caalâa rə́.
càa-làa-rə́
ascend-ABIL-IRR
'If they definitely want to **move in**[3], they'll be able to.'

The set of *directional predicate derivations* ("directionals" for short) encoding topographical deixis in Galo are presented in Table 2. The

Table 2 Galo directionals encoding topographical deixis

Function	Form	Gloss
DIRECTION UPWARD/UPRIVER/NORTHWARD	*-càa*	'GOAL:UP'
DIRECTION DOWNWARD/DOWNRIVER/SOUTHWARD	*-lòo*	'GOAL:DOWN'
DIRECTION ON THE SAME TOPOGRAPHICAL LEVEL/ NOT ALONG RIVER COURSE/EAST/WEST OR UNKNOWN TRAJECTORY	*-áa*	'GOAL:SLEV'

[3] 'Move in' here refers to *ascending* the ladder of a newly-built house for the first time.

function of a directional is to modify a predicate by specifying the direction or trajectory of an activity verb (such as a verb of throwing) or transferred location of a state (for example, when the location in which a state is said to obtain becomes different from where it may be said to have previously obtained). Directionals in at least some Tani languages are also applicative, in that they additionally function to add an obligatory (usually locative-marked) goal argument to the clause. In Table 2, note also that two out of three forms are cognate with the directional verb roots in Table 1; this would suggest that directionals have an ultimate source in motion verbs, but that since the sharing of forms is not complete, the relationship may no longer be active[4].

An example of use is in (3). Note here that the obligatory GOAL argument *hogò* '(to) here' is licensed by the (applicative) directional *-lòo* 'GOAL:DOWN'; in absence of *-lòo*, *hogò* could only be understood as an optionally-mentioned *location* at which 'fleeing' simply happens to take place.

(3) *hodûm-horə́ hòg*
[hodùm-horə́]$_S$ [**hogò**]$_{GOAL}$
barking.deer-boar **SPRX.LOC**
keŋŋám loodûu kutú!
[kéK-ŋám-**lòo**-dùu-kú]$_{PRED}$=tu
flee-EXH-**GOAL:DOWN**-CMPL=AURV
'The game animals are all fleeing **down here**, don't you see (because there's a tiger roaming about up in the mountain)!'

4.1. Noun phrase domain

Within the noun phrase, Galo *distal demonstratives* encode topographical deixis (Table 3); note that they do not seem to be cognate with forms found in the predicate domain[5]. As in most Tibeto-Burman languages, Galo demonstratives function both as pronominals and as referential modifiers. An example of pronominal use is in (4) (also cf. (1) above).

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[4] See also Post (2010) for a general discussion of the etymologies of Tani predicate derivations, including directionals.

[5] *à* 'DST.SLEV' and *-áa* 'GOAL:SLEV' may at first look promising, however the Proto-Tani forms **vaŋ* 'come' and **a(a)* 'distal demonstrative' (Sun 1993) suggest otherwise.

Table 3 Galo distal demonstratives encoding topographical deixis

Function	Form	Gloss
LOCATION UPWARD/UPRIVER/NORTHWARD	*tə̀*	'DST.UP'
LOCATION DOWNWARD/DOWNRIVER/ SOUTHWARD	*bə̀*	'DST.DOWN'
LOCATION ON THE SAME TOPOGRAPHICAL LEVEL/ NOT ALONG RIVER COURSE/EAST/ WEST OR UNKNOWN TRAJECTORY	*à*	'DST.SLEV'

(4) *bə̂ə jəkkə̂ə làa?*
bə̀ jə-kə̀=ə làa
DST.DOWN who-GEN=COP.IPFV CQ
'Whose is **that (thing down there)**?'

In addition to distal demonstratives, a very wide range of *relational markers* employ topographical deixis in Galo (Table 4). Quite clearly etymologically complex, they also usually include a distal demonstrative as one of the incorporated formatives. However, since their phonological forms involve vowel harmony processes which are not generalizable beyond a subset of any given paradigm (and which therefore cannot be predicted by a synchronic rule), they are treated as morphologically non-compositional in terms of modern Galo.

Relational markers employing topographical deixis encode a variety of relational functions, including locative/allative, ablative/partitive, and genitive/semblative. Due to their ability to either precede the noun, follow the noun, or occur on both sides of a noun – like Galo demonstratives – together with their ability to mark relational functions – like Galo postpositions – they are assigned the hybrid label *demonstrative postposition*[6]. A set of *manner demonstratives* seems to share a similar origin and structure and is also included here; however, the manner demonstratives cannot precede a head noun, unlike all simple demonstratives and demonstrative postpositions. Examples of use are in (5)–(7). In (7), note the parallel use of a 'same level' demonstrative postposition and 'same level' motion verb.

[6] The statistically most common position is post-head; it is likely that ability to occur pre-head (and to "bracket" the head simultaneously) owes to earlier grammaticalization of a topic-comment construction in which a pronominal head is marked for relationality; schematically, something like: "(as for) up there, the mountain up there…" → "that there mountain up there…".

Table 4 Galo demonstrative postpositions exhibiting topographical deixis

Function	Upward	Downward	Same/unknown level
DST.LOC/ALL	*tolò*	*bolò*	*alò*
DST.ABL/PART	*to(lo)kə*	*bo(lo)kə*	*a(lo)kə*
DST.SEMB/GEN	*təkə*	*bəkə*	*akə*
DST.MAN	*təmbə*	*bəmbə*	*ambə*

(5) *ŋôk tòk ʾêz^{i} go.*
ŋó-kə **tokə** ʾezə=go
1.SG-GEN **DST.ABL.UP** clothing=IND
lâaz^{i} takèe!
làa-zí-tà(a)=kée
take-BEN-MOT=HORT.POL
'Go get my shawl **from up there**!'

(6) *ʾastrée lijáa bəmbə kaí rəm, buppɨ̂ɨ.*
ʾastreelijáa **bəmbə** kaí-rə́=əm buppɨ̂ɨ
PLACE **DST.MAN.DOWN** big-IRR=TSUB all
minə́ rələm paarûu rə́.
minərə́l=əm pàa-rûu-rə́
mineral(<Eng)=ACC get-CERT-IRR
'If Australia **down there** is **so** big, certainly you'll find all (manner of) minerals.'

(7) *âl nám âl ŋó aakáa rə́.*
alò namə́ **alò** ŋó áa-káa-rə́
DST.LOC.SLEV house **DST.LOC.SLEV** 1.SG come-TENT-IRR
'I'll go check **that** house **over there**.'

5. Topographical deixis in other Tani languages

The basic outlines of the system of topographical deixis described for Lare Galo in §4 seems to be shared by the great majority of Western and Eastern Tani languages, almost always employing clearly cognate formatives; this would suggest that a system not very much different from that discussed above must be reconstructible to the Proto-Tani stage (and indeed, as suggested in fn 2, quite probably well beyond). Table 5 presents the sets of topographical-deictic demonstratives found in all Tani languages for which any data are currently available to me.

Table 5 Distal demonstratives exhibiting topographical deixis in a sample set of Tani languages (phonetic values are approximate in most cases)

Language	Up	Down	Slev
Proto-Tani[7]	**tà*	**bà*	**à*
Bori (Megu 1988)	*taa*	*bə (?)*	*aa*
Galo (Post 2007)	*tə̀*	*bə̀*	*à*
Bokar (Sun 1994)	*təə*	*bəə*	*aa*
Bengni (Sun 1994)	*tɯɯ*	*bɯɯ*	*ɯɯ*
Tagin (Keepor Mara, p.c.)	*tə*	*bə*	*a*
Aashing (Megu 2003)	*tə*	*bə*	*a*
Ramo (Badu 2004a)[8]	*tolo*	*bolo*	*alo*
Hills Miri (Simon 1976)	*tə*	*bə*	*ə*
Karko (Megu 1993)	*tə-*	*bə-*	*ə-*
Paadam (Tayeng 1983)	*tə*	*bə*	*ə*
Mising (Post field notes)	*tə*	*bə*	*ə*
Pasi (Yankee Modi, p.c.)	*tə*	*bə*	*ə*
Minyong (Post field notes)	*tə̀*	*bə̀*	*ə̀*
Nishi (Post field notes)	*te*	*be*	*e*
Tangam (Badu 2004b)	*te-*	*me-*	*e-*
Milang (Post field notes)	*ʧə̀-*	*mò-*	*jò-*
Apatani (Simon 1972; Abraham 1985)	–	–	–

There are, however, two interesting exceptions to the general trend here: Apatani and (some dialects of) Mising.

[7] Although the two consonant initials are clear enough, the vowels are simply placeholders; there is too much variation in the data – possibly in some cases reflective of paradigm-interaction and/or irregular sound changes – to advance anything with confidence at present. Vowel lengths in the Sun (1994) Bokar and Bengni data appear to reflect regular operation of a Western Tani Bimoraic phonological word constraint, which is generally not found in suffixed forms.

[8] The cited source lists the locative demonstrative postpositions, but no simple demonstratives. It is, however, more than likely that a more complete description would uncover corresponding simple demonstratives in this language.

In Apatani (Tani > Western), topographical deixis appears to be well-represented in the predicate domain. In the descriptions of Abraham (1985; 1987) and Simon (1972) (dialect(s) not identified), we find directionals *-ca* 'move up to perform the act' *-yi* 'move down to perform the act' and *-bo* 'move on level ground to perform the act' (Abraham 1987: 123). Among motion verbs, Post (field notes) has attested four verbs of seeming relevance in Apatani, *càa-* 'ascend; move north', *tòʔ-* 'descend; move south', *ín-* 'go; move on the same level' and *bòo-* 'cross (a river); move east or west'. All of the listed forms have solid cognates with similar meanings in other Tani languages. However, when we turn to the noun phrase grammar, we find no sign of topographical deixis in Apatani at all. Demonstrative deixis in Apatani instead seems to distinguish only proximity, and exhibits speaker-proximate, addressee-proximate and speech-act-participant (SAP)-distal forms[9].

The second exception is found in Mising (Tani > Eastern). Although in Mising, a similar set of forms to that described in §4 is exhibited, in some (not all) Mising dialects, a comprehensive shift in compass orientation has been observed. In the subdialect of Pagro Mising which I studied in the North Lakhimpur area, very near to the north bank of the Brahmaputra River in Upper Assam, the *upward* forms also indicate *eastward* (not northward), *downward* forms indicate *westward* (not southward) and *same/unknown level* forms indicate *north/southward* (not east/westward). A sample set is given in Table 6; examples illustrating

[9] Although one may automatically suspect descriptive incompleteness here, these observations have been confirmed by the folklorist Stuart Blackburn and the social anthropologist Pascal Bouchery (in personal communication), each of whom possesses an enviably rich knowledge of Apatani language and culture, having independently conducted extensive field research in the area over several years. SAP-sensitivity is found in other Western Tani languages (it is rare in or possibly absent from Eastern Tani), however it generally co-exists with a system of topographical deixis, as is the case in, for example, Galo (see Abraham (1985: 31–35) for Apatani and Post (2007: 341–355) for Galo). Topographical deictic demonstratives are also missing from some descriptions of Tibet-area Tani languages such as Bengni and Bokar (Sun, Zhang et al. 1980; Ou-Yang 1985), however since they were identified in the same languages by Sun (1994), it does seem that descriptive incompleteness would apply in this case. That said, if at least some dialects of any Tibet-area Tani languages could be demonstrated to lack topographical deictic demonstratives, this fact would both complicate and potentially enrich the present overview considerably.

Table 6 Sample set of terms employing topographical deixis in Pagro Mising

	Upward/East	Downward/West	Same-level/ North or South
Motion verbs	*saa-*	*tok-*	*aa-*
Directionals	*-saa*	*-jii*	*-aa*
LOC/ALL Dem. Pos.	*tolo*	*bolo*	*olo*

use of the Pagro Mising set of topographical-deictic directionals are in (8)–(10).

(8) *ədə-m* *gə-**aa**-lɨk-tok*!
SDST-ACC throw/carry-**SAME.LEVEL**-APPL:INTO-IPTV
'Throw it **over/along a north/south axis**!'

(9) *ədə-m* *gə-**saa**-lɨk-tok*!
SDST-ACC throw/carry-**UPWARD**-APPL:INTO-IPTV
'Throw it **upward/to the east**!'

(10) *ədə-m* *gə-**jii**-lɨk-tok*!
SDST-ACC throw/carry-**DOWNWARD**-APPL:INTO-IPTV
'Throw it **downward/to the west**!'

What accounts for these differences? In the case of North Lakhimpur Pagro Mising, the explanation would appear straightforward. As shown in Figure 2, there are virtually no hills of any size in the Pagro area, quite in contrast with the almost uniformly mountainous terrain of central Arunachal Pradesh (cf. Figure 1). Instead, the overwhelmingly dominant environmental feature is the Brahmaputra river, which flows from east to west. Accordingly, it would appear that the cognitive *anchor* of the system (on which compass orientation is predicated) has shifted from *topography* to *riverine* orientation. To the extent that Tani oral histories – which uniformly point to a historical Mising migration from the hills of Arunachal down to the plains of Assam – have any validity, this would appear to represent a clear instance of linguistic adaptation to shifting environmental circumstances[10].

[10] Jugendra Pe:gu: (in personal communication) reports that this shift has not taken place in all Mising dialects, some of which continue to resemble the Galo system described in §4. I have not yet had the opportunity to study any non-shifting Mising dialects myself.

The absence of topographical deixis in the Apatani noun phrase grammar may have a similar explanation. Apatani – unique among the Tani languages – is spoken almost exclusively within a *plateau* area, where wet-rice-cultivation-cum-pisciculture is well-known to have been practiced over a wide and flat expanse of land since well before modern times (von Fürer-Haimendorf 1980). It may be that in the Apatani area, there was neither a topographical factor nor a riverine factor of sufficient saliency to anchor some aspects of the system, whereby the inherited set of topographical deictic forms may have partially disappeared from the language. Why only in the noun phrase, and not the verb phrase? The only truthful answer is that we don't know. However, if one is to speculate, it may reflect a possible fact that systems describing upward and downward *motion* are more easily anchored by human social and environmental interaction than are systems employed for upward and downward *reference*. Note that the former occurs in (or is based on) a large, open class of lexemes (memorized in a large list, just like English 'ascend' and 'descend') whereas the latter occurs in a small, closed class of functional words, which both arise and coalesce due to, and are subsequently maintained primarily by virtue of, discourse-frequency (Bybee and Hopper 2001). In the mountainous central Arunachali environment, awareness of the relative topographical situation of referents is virtually inescapable, whereas in the Apatani plateau, opportunities to describe contrasting heights of referents would have been relatively much rarer. Note that in Mising, by contrast, speaker awareness of the relative riverine orientation of referents would have been relatively robust. This evidently led to the formal conservation of topographical deixis even as its semantic contents were adapted to reflect novel environmental realities.

Conclusion

Topographical deixis has been described in this paper as a unified cognitive system underlying the grammars of most Tani languages, which is probably reconstructible to Proto-Tani, and indeed beyond. It is represented in four linguistic domains: verb roots, directionals, distal demonstratives and demonstrative postpositions. While the principal (and probably in some sense "original") basis for the system is viewed as topographical, extensions are also observed in the areas of compass and riverine orientation. When a salient topographical anchor to the system

is no longer available, a salient riverine anchor to the system may "take over." When no anchors of sufficient salience are available, the system may partly erode or perhaps obsolesce entirely. Accordingly, topographical deixis would appear to provide good evidence of the shaping of diverse linguistic structures by means of human interaction with diverse geo-topographical environments; however, it probably does not make a good genetic sub-grouping criterion. Further research will address these and similar topics in a broader Tibeto-Burman context.

Abbreviations

ABIL	Ability
ABL	Ablative
ACC	Accusative
ADD	Additive
ALL	Allative
APPL	Applicative
AURV	Auto-Revelative
BEN	Benefactive
CERT	Certainty
CMPL	Completive
CNTR	Contrastive
COP	Copula
COS	Change of State
CQ	Content Question
CTZR	Complementizer
DAT	Dative
DEF	Definitive
DST	Distal
EVID	Evidential
EXH	Exhaustive
GEN	Genitive
HORT	Hortative
IND	Individuative
IPFV	Imperfective
IPTV	Imperative
IRR	Irrealis
LOC	Locative
MAN	Manner

MOT	Motion
PART	Partative
POL	Polite
PRED	Predicate
PURP	Purpose
S	Intransitive subject
SDST	Speech-act-distal
SEMB	Semblative
SG	Singular
SLEV	Same-level
SPRX	Speaker-Proximate
TENT	Tentative
TOP	Topic
TSUB	Temporal subordinator

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