

Predicate derivations in the Tani languages: Root, suffix, both or neither?

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1. Introduction

It is common among synthetic and agglutinating Tibeto-Burman (TB) languages of the Eastern Himalaya¹ to find large sets of semantically rich predicate stem-expanding formatives. In example (1) from Lare Galo, a Western (Transitional) Tani (TB) language spoken in central Arunachal Pradesh, North-East India, the forms in question and their nearest English translations are in **bold**, as they will be throughout this paper.²

(1) *bujɲə...kɪrkíəm...ləkkôk paalà...*

bujɲə = əə kɪrkí = əəm lək-**kók-pàa-là(a)**

3.DL=TOP window(<Asm)=ACC slide-**OPEN-ATTN-NF**

kaabôk bihitò.

káa-**bók-bì-hí-tó**

look-**DOWN/SOUTH-DCOL-REFL-PFV**

‘They two **got** the window to slide **open** and looked **down as a pair.**’ (TR, FS 016)

The forms in question have been accorded various labels; sometimes, the difference in nomenclature reflects different analytical decisions made by various authors – usually, in terms of whether some or all forms are viewed as lexical roots, as derivational affixes, or rather as some third formative type. Other times, the use of different labels appears to be purely conventional, and reflects the failure or unwillingness of some analysts to build upon the established work of previous authors. In this paper, the term *predicate derivation* is adopted to refer to the forms in question in a cross-linguistic sense. By adopting a common, generic descriptive label, I do not mean to imply that there *are no* substantial differences in the systems so identified across different

¹ By “Eastern Himalaya” is here meant most of North East India, as well as, potentially, some or all of Bhutan and Eastern Nepal. This label is not intended to be areally precise or linguistically well-motivated in any overall sense.

² Except when noted, data in this paper are from the author’s field recordings/observation logs. Tani language transcriptions follow IPA, except where *c* = [tɕ] and *z* = [ʈ]. *K* is an underspecified consonant which surfaces [k] word-finally and when preceding vowels, and which fully assimilates to a following consonant word-medially. Tones are ˊ High/Plain, ˋ Low/Tense and ˋˊ Rising-Falling. In the *surface* line of examples, spaces denote *phonological* word boundaries, which may or may not correspond to grammatical word boundaries. In the *parse* line of examples, spaces denote *grammatical* word boundaries, except where = denotes a clitic boundary. Data from non-Tani languages follow the orthographic conventions of the cited source. I thank my primary Galo consultants *mĩlĩ podù*, *igò ribáa*, *ilĩ ribáa* and *tomóo ribáa*, and my primary Mising consultant *ain dole*, also absolving them of responsibility for any errors; they are mine. This work was partly supported by a grant from the Institute for Advanced Study at La Trobe University.

languages, such as might ultimately merit the use of different labels in at least some contexts. Rather, the term is meant in a relatively non-leading, generic descriptive sense³ which should enable the forms in question to be talked-about in common in the process of developing a cross-linguistic framework for their synchronic and diachronic analysis.

The primary purpose of this paper will be to sketch out the structural and functional properties of Tani predicate derivations, with particular attention to the Lare dialect of Galo as described by Post (2007). In the process, we will also discuss some of the theoretical questions that arise in the course of the analysis of predicate derivations, particularly with regard to the “root or suffix” question. Finally, a preliminary account of the diachronic origin of Tani predicate derivations in proto-verb-serialization is presented. Although it is not yet possible to present a comprehensive cross-linguistic framework for the analysis of predicate derivations, whether this is limited to TB or also includes unrelated languages elsewhere,⁴ a secondary aim of this paper is to work toward such a framework.

2. Theoretical-typological preliminary

2.1. Predicate derivations in cross-linguistic perspective

As briefly discussed in the introduction, predicate derivations are:

- 1) morphologically bound
- 2) prosodically dependent
- 3) optional (non-inflectional)
- 4) predicate stem-expanding
- 5) semantically rich/complex

In addition, they are:

- 6) often homophonous with lexical roots (usually but not always, verb roots)
- 7) often translated by independent lexemes in other languages

Examples (2) and (3) respectively illustrate the use of predicate derivations in Mongsen Ao Naga and Meithei, two basically synthetic and agglutinating TB languages of the South-eastern Himalaya.

³ The term “predicate derivation” is descriptively justified inasmuch as the “predicate” is certainly the primary site of the forms in question, and they are always “derivational”, whether the specific process involved is ultimately of the nature of compounding, affixation, or something else.

⁴ Very large systems of predicate derivations which may or may not be functionally comparable to those found in Tibeto-Burman are also found in North and South American languages (DeLancey 1991, among others), and possibly elsewhere. Unfortunately, a comparative cross-linguistic survey of predicate derivations does not yet seem to have been conducted.

- (2) *tətʃhàku mitəm nə pi tshəmàzək.*
 tətʃhà-ku mitəm nə pi tshəmà-zək-Ø
 thus-do-LOC.CV pestle INST PROX pound-SPLIT-SEND-PST
 ‘And then, this [cane] was **split apart** by the (pounding of the) pestle.’ (Mongsen Ao Naga, Coupe (2007: §8.46, adjusted by this author))
- (3) *əynə inkholdəgi yén tanthokʔí*
 əy-nə inkhon-təgi yén tan-thok-í
 I.SG-CNTR garden-ABL hen drive-OUT-NHYP
 ‘I drove the hen **away** from the garden.’ (Meithei, Chelliah (1997: §7.1:1r))

The sets of predicate derivations which have been described in Eastern Himalayan TB languages are sometimes surprisingly large, extending to scores or even hundreds of members. The question then quickly arises as to whether they are best analyzed as productively-compounding *lexical roots*, or rather as *derivational suffixes* which may simply happen to, in some if not all cases, be homophonous with and possibly historically derived from (but which are not synchronically analyzable as) lexical roots. Certain analysts have preferred the first solution, labeling predicate derivations as *compound elements* (Sun 2003), *following verbs* (Lorrain 1995 [1910]) and *auxiliary verbs* (Rutgers 1998).⁵ Other analysts have basically taken the second view, labeling predicate derivations as *aktionsart suffixes* (Bickel 1999), *adverbial suffixes* (Burling 2004) *derivational suffixes* (Chelliah 1997), *semantic suffixes* (Barbora this volume), *event specifier suffixes* (van Breugel in preparation) or simply *verbal suffixes* (Taid 1995). Finally, seemingly *hybrid* descriptions also exist, such as *lexical suffix* (Coupe 2007), *verbal classifier* (Prasad, Sastry et al. 1991) and *verb particle* (Abraham 1985). Can these different approaches be reconciled, and if so, how?

2.2. Lexical compounding versus affixal stem modification

It is common in the world’s languages to find examples of a *cline* between root/compound element and derivational affix, inasmuch as the former very often give rise diachronically to the latter. English *able* → *-able* ([ˈeɪbəl] → [əbəl]) is an example of a compounded verb which has transparently given rise to an adjectivalizing derivational suffix; in this case, the suffix is clearly synchronically distinct from its lexical source – as is shown by their distinct phonological values – despite that many speakers continue to sense a semantic relationship between them. It is certainly possible to find analytically messy “middle grounds” in which it is not entirely clear whether we are dealing with a productively-compounding lexical root or a derivational affix, such as American English *tele-* as in *television* → *tele-prompter* (Anderson 1985). However, it is just as common to find, in those same languages, clear-cut cases of productive compounding (*dog show*, *car show*...) and derivational affixation (*reconfirm* (a flight), *reformat* (a hard drive)).

⁵ Foley and Olson’s (1985) concept of *nuclear verb serialization* (in which a grammatical word-internal sequence of lexical verb roots is analyzed as a subtype of serial verb construction), while not yet widely adopted by Tibeto-Burmanists, seems likely to be applicable in this context.

The particular difficulty with Tani languages, as with, seemingly, many other TB languages of the Eastern Himalaya, is that the majority of predicate stem-expanding formatives appear to occupy a sort of middle ground in which it may be impossible, or at least undesirable, to draw a clear categorical distinction between compounded lexical roots and derivational suffixes. For example, consider the Lare Galo Result derivations *-úu* ‘AWAKE’ and *-kúm* ‘SENSELESS’, as in *kók-úu* ‘crow-AWAKE’ ‘crow someone **awake** (wake someone by crowing, as a cock)’ and *tí-kúm* ‘imbibe-SENSELESS’ ‘drink/smoke oneself **senseless**; be drunk/stoned’. In the first case, the Result derivation *-úu* is homophonous with and clearly semantically relatable to the intransitive verb root *úu-* ‘awaken; be awake’. In the second case, the Result derivation *-kúm* has no clear lexical root cognate in modern Galo. However, the two forms are basically identical in terms of their distribution, productivity and semantic complexity, occurring as members of the same predicate derivational subclass of Result derivations (§3.2.2). In short, it is not immediately clear that criteria can be developed to show that one but not both of the two forms is a compounded root or a derivational suffix, or that both forms are clearly roots, or that both forms are clearly suffixes. The majority of predicate derivations in Tani languages, as well as, seemingly, in several other TB languages, are subject to the same analytical difficulties.

We next discuss the Lare Galo system of predicate derivations in more detail.

3. Predicate derivations in Lare Galo

3.1. Predicate structure

We first discuss the structure of the Galo predicate. The present discussion is a simplified overview based on final (main, non-subordinated) predicate structure only; a fuller exposition of predicate structure is found in Post (2007: §10).

Morphologically, a Galo predicate is a single grammatical word.⁶ Ignoring for present purposes that there are several predicate stem types, each with different subsequent word-formation possibilities and constraints, we can say that the nucleus of a final predicate of the type to which predicate derivations are most often applied is a bound verbal root. Optionally, one or more predicate derivations is then applied; this then forms the predicate stem. Obligatory, one or more inflections then terminates the predicate word (Figure 1).

[[ROOT – (DER_{1...n})]_{STEM} – INFL]_{WORD}

Figure 1 – Structure of a Galo final predicate (simplified; DER = derivation, INFL = inflection)

Example (4) shows that verb roots are bound, and cannot alone form a grammatical predicate word (even in imperative mood). (5) illustrates the grammaticality of an inflected final predicate, while (6) illustrates the same predicate type, this time

⁶ Immediate predicate dependents which are outside of the grammatical predicate word, such as compounded/incorporated nominals and various types of particle, are analyzed as part of a larger predicate-headed constituent called the “predicate complex”. The “predicate complex” is then analyzed as head of a predicative clause.

including a Desiderative predicate derivation. (7) then shows the ungrammaticality of a final predicate which bears only a predicate derivation and no inflection, or which is “headed” by a predicate derivation, and has no root.

- | | |
|---|--|
| <p>(4) * <i>bɛ̃ ɛ̃n</i>
 bɛ̃ ɛ̃n-
 3.SG go-
 ROOT-</p> | <p>(5) <i>bɛ̃ indù.</i>
 bɛ̃ ɛ̃n-dùu
 3.SG go-IPFV
 ROOT-INFL
 ‘He’s going.’</p> |
| <p>(6) <i>bɛ̃ inlɛ̃ dùu.</i>
 bɛ̃ ɛ̃n-lɛ̃-dùu
 3.SG go-DESD-IPFV
 ROOT-DER-INFL
 ‘He wants to go.’</p> | <p>(7) * <i>bɛ̃ inlɛ̃/lɛ̃ dùu.</i>
 bɛ̃ ɛ̃n-lɛ̃/lɛ̃-dùu
 3.SG go-DESD/DESD-IPFV
 ROOT-DER/DER-INFL</p> |

Taken together, examples (4)-(7) demonstrate that roots and inflections are obligatory elements of a final predicate word, and that derivations are optional and do not (automatically or in all cases) qualify as either roots or inflections.

3.2. Functional properties of predicate derivations

In Galo, predicate derivations⁷ can be functionally subdivided as follows:

Manner	(§3.2.1)
Result	(§3.2.2)
Motion/Direction	(§3.2.3)
Aspect/Aktionsart	(§3.2.4)
Class Change	(§3.2.5)
Argument-determining	(§3.2.6)
Modality	(§3.2.7)

3.2.1. Manner

Manner derivations are often translated via manner adverbs in other languages, and modify the core semantics of a predicate in terms of often semantically complex senses related to *speed* (quickly/slowly), *value* (well/poorly), *extent* (completely/slightly), and so on (8). Despite the commonly adverbial semantics of Manner derivations, it is important to note that they are *not* themselves adverbs; no Manner derivation can occur outside the grammatical predicate word (i.e., it cannot move independently in the clause

⁷ In this paper, only *simplex* (monomorphemic) predicate derivations are considered. Complex continuous and discontinuous predicate derivations are also found, however their analysis requires a great deal of structural description and does not add much to the discussion as it is presented here. For an extended overview of complex predicate derivations, see Post (2007).

syntax, unlike all true adverbials in Galo. Manner derivations form a large (> 80) set in Galo.

(8) *akènna da êm iîṅâk hilà duutò.*

akèn = na da əmə-í-ṅâk-hí-làa dùu-tó

one=SLCT CNTR fire-bask-INTENSELY-REFL-NF sit-PFV

‘Another of them was sitting and warming himself **intently**.’ (TR, FA 022)

3.2.2. Result

Result derivations are often translated via result(ative) verbal complements in other languages. They generally indicate some *state* obtaining to S or O of an intransitive or transitive predicate respectively, understood as a *result* or *outcome* of the predicated event/state (9)-(10). As with Manner derivations, since Result derivations cannot occur outside the grammatical predicate word, and cannot be separated from the verb root by any independent syntactic words, they are not themselves analysable as verbal complements. Result derivations form a large (> 100) set in Galo.

(9) *dîrtûu doonà.*

dîr-tûu-dóo-nà = əə

break.INTR-DIVIDE.S/O.ON.WIDTH-STAT-NZR:SUB=COP.IPFV

‘(The lamp chimney) is broken **apart**.’ (JKKN, OL13:6) (intransitive > result to S)

(10) *ṅó biriém tîitûu ká.*

ṅó biri = əəm tîi-tûu-káa

1.SG cigarette=ACC imbibe-DIVIDE.S/O.ON.WIDTH-PF

‘I’ve smoked **up** half the cigarette.’ (RmR, OL13:106) (transitive > result to O)

3.2.3. Motion/direction

Motion/direction derivations are often translatable via directional serial verbs or adpositions in other languages. Again, however, they cannot occur outside the predicate word and thus are not themselves syntactically independent serial verbs or adpositions. Motion/direction derivations generally indicate the *direction* or *path/vector* of an event/state (11). Many, though not all, also have *applicative*-like functionality, introducing an obligatory locative-marked argument to the predicated event/state, usually understood as a semantic *goal*. In (12), a goal argument such as ‘(into) the fire’ is understood to be obligatorily present whether or not it is syntactically overt; in absence of the Directional derivation *-lîk* ‘INTO’, the locative-marked noun phrase ‘the fire’ can only be understood as a *location* where the event simply happens to take place. Motion/direction derivations form a smallish-sized (≥ 14) set in Galo.

- (11) *mægumè gumbôk rəbbooló, ɲó nòklo aaló pə.*
 mægum = əə gùm-**bók**-rə-boolo ɲó nó-kə = lo áa-lapə
 flame=TOP lean-**DOWN/SOUTHWARD**-IRR-COND 1.SG 2.SG-GEN=LOC come-INTN
 ‘If the flames lean **to the south**, I will go to your (home; i.e., marry you).’ (NyPB, LAT 198)

- (12) *əm aló dəəlɪgla morə!*
 [əmə aló]_{GOAL} déə-**lɪk**-làa mərə-rə
 fire DST.LOC.SLEV soar-**INTO**-NF make-IRR
 ‘I’m going to make (the paper airplane) fly **into** the fire!’ (KN, OL23:81)

3.2.4. Aspect/aktionsart

Aspect/aktionsart derivations are often translated via adverbs, adpositions and/or auxiliary verbs in other languages, and provide information concerning the temporal and/or procedural structure of an event/state (13). They form a smallish (≥ 18) set in Galo.

- (13) *akíə dettə duukù!*
 akíi = əə déK-**tà**-dùu-kú
 belly=TOP crack-**INCP**-IPFV-CMPL
 ‘My stomach is **about to** burst!’ (DW, OLB5:158)

3.2.5. Class change

Class changing predicate derivations are either *nominalizing* (14) or *adjectivalizing* (15).⁸ Often highly complex semantically and sometimes polyfunctional (i.e., adjectivalizing derivations very often express Manner or Result), Galo class change derivations are often translated via deverbal compounds and/or participial constructions in other languages. They form a relatively large set in Galo (≥ 25 nominalizers, number of adjectivalizers unknown, seemingly at least dozens).

- (14) *nók əmbə mendínə joowə là?*
 nó-kə əmbə mèn-**dín** = əə jòo = əə la
 2.SG-GEN like.that say-**NZR:REASON**=TOP what=COP.IPFV CQ
 ‘What’s your **reason for** talking like that?’ (MN, OL19:1) (nominalizing)

- (15) *mootùm tə rəkenə, maazí dù!*
 mootùm tə rá-**kèn** = əə maazí-dùu
 jungle DST.UP exist-**AZR:GOOD/EASY**=COP.IPFV very.much-IPFV
 ‘The jungle up there is **nice to** be in, really!’ (RmR, CC 118) (adjectivalizing)

⁸ For a basic discussion of Galo lexical classes and their recognition criteria, see Post (2006).

3.2.6. Argument-determining

Argument-determining derivations may add or suppress a core predicate argument (usually O), or else reassign core argument roles without changing predicate valence. In (16), Applicative *-káa* adds an obligatory O argument – not licensed by the inherently intransitive verb root *ɲír-* ‘laugh’ – which is understood as an entity ‘at’ or ‘onto’ whom the event/state is directed. In (17), the Reflexive derivation *-hí* suppresses the O argument of transitive verb root *pòo-* ‘cover’, causing the resulting intransitive S argument to be understood as both agent and patient. Note that the result derivation *-túm* ‘CLOSED.S/O’ in this case also makes reference to the S argument. Argument-determining derivations form a medium-sized set of about 25 members.

(16) *nó ɲóm ɲírkáa dù laka!*

nó ɲó-m ɲír-**káa**-dùu laka
2.SG 1.SG-ACC laugh-**APPL:AT/ON.O**-IPFV MIR

‘What the hell are you laughing **at me** for?’ (lit., ≅ ‘You’re unexpectedly/surprisingly laughing at me!’) (MN, OL23:107)

(17) *bì...həkə má...pootúm himá.*

bì həkə-máa pòo-túm-**hí**-máa
3.SG HEST-NEG cover-CLOSE.S/O-**REFL**-NEG

‘He didn’t...you know...cover **himself** up.’ (TR, FA 057)

3.2.7. Modality

Modality derivations express functions related to possibility, desirability, need, obligation, necessity and ability (18). They form a small set of about five members.

(18) *jalùk dodeemá. také dodeemá.*

jalùk dó-**dée**-máa také dó-**dée**-máa
chili.pepper eat-**PROS**-NEG squirrel eat-**PROS**-NEG

‘You **can**’t eat chillies; you **can**’t eat squirrels (during the taboo period).’ (MN, T16:34)

3.3. Structural/behavioural properties of predicate derivations in Galo

3.3.1. Productivity

As a rule, Galo predicate derivations are *fully productive*. However, semantic compatibility restrictions often apply. For example, although the semantically general Manner predicate derivation *-mèn* ‘AS PLAY’ seemingly occurs on any event- or state-denoting predicate type (basically, all verbs and some but not most adjectives), the more

semantically particular Result derivation *-zúm* ‘RELEASE WATER’ generally only occurs with verbs denoting actions which can plausibly be viewed as resulting in the release of water (19).

- | | | |
|------|-------------------------------|--|
| (19) | <i>ezzúm</i> | <i>?tuzúm</i> |
| | éK-zúm | tú-zúm |
| | wring-RELEASE.WATER | kick-RELEASE.WATER |
| | ‘wring out (clothing)’ | ? ‘kick something such that water drips from it ’ |

3.3.2. Co-occurrence and ordering conventions

There seem to be no structural restrictions against co-occurrence of predicate derivations. The order expressed in Figure 2 tends to predominate, with the majority of the more abstract, versatile and productive derivations occurring further from the head root, and the majority of the more semantically particular and less productive derivations occurring closer to the head root.

MANNER	RESULT - MOTION/DIRECTION	ASPECT/AKTIONSART	ARG. DET.	MODALITY
SEMANTICALLY PARTICULAR	–	–	–	– SEMANTICALLY GENERAL
DESCRIBES SEMANTIC CORE	–	–	–	– WIDELY APPLICABLE TO
OF EVENT-CONSTRUAL				DIVERSE EVENTS

Figure 2 – Semantically-based ‘position classes’ and their potential cognitive underpinnings (Class-changing derivations are seemingly distributed across several other types, especially Manner, Result and Motion/Direction)

Unfortunately however, these tendencies do not seem to provide a watertight basis for positional subclassification of predicate derivations into “roots” (closer to head root) and “suffixes” (further from head root), since variable orderings have been occasionally attested. In such cases, there is always a difference in meaning which is seemingly attributable to leftward scope effects; in (20)-(21), the different position of the Exhaustive Result suffix causes it to be understood as applying only over the head root (‘*finish/all of* (the event)’ in the first case, and over the larger, causativized stem in the second (‘let *all of* (them participate)’). Similarly, structural restrictions on the number of predicate derivations which may co-occur on a given stem have not so far been identified. However, processing constraints seem to limit the number in practice to around three or four (as in (20)-(21)).

- (20) *tíjám côm^o lakè!*
 tí-**jám**-còo-mò-làa-kée
 imbibe-EXH-FIRST-CAUS-IPTV.SDIR-HORT.POL
 ‘Let them **finish** drinking **first**, will you?’ (MN, OL23:75)

- (21) *t̃icôo moŋâm lakè!*
 t̃i-còo-mò-ŋâm-làa-kée
 imbibe-FIRST-CAUS-EXH-IPTV.SDIR-HORT.POL
 ‘Let all of them drink first.’

3.3.3. Lexical root-cognacy

The number of currently-attested Galo predicate derivations with homophonous and semantically-relatable lexical roots is 108/321, or 33.7%. Of these, approximately 76, or 2/3, are verb roots, while the remaining 32 are nominal or adjectival roots.

Even in cases of clear cognacy however, there often remain semantic differences which distinguish a predicate derivation from a lexical root (or, to put it differently, which distinguish the character of a particular root when it occurs as the predicate head, and when it occurs as a dependent formative). In (22), note that the transitive verb root *kák-* ‘wash surface’ subcategorizes for an O argument which is construed as having some surface area; the separate ‘wash’ verb *rík-* ‘wash clothing’ cannot take such an argument, but must take an O argument which is construed as clothing, clothing-like, or made of a pliable fabric (23); in this case, *kák-* ‘wash surface’ is unacceptable. However as (24) shows, the Result predicate derivation *-kák* ‘CLEAN.S/O’ – clearly relatable to *kák-* ‘wash surface’ – *does not* project the same semantic restrictions as its apparent lexical source form; rather, it can denote a ‘clean’ result to any ‘wash’ verb (also including *hú-* ‘wash body’). Note also that *kák-* ‘wash surface’ is the only ‘wash’ verb with a seemingly cognate predicate derivation.

- (22) *ŋó cikcíóm kagró/*rigró*
 ŋó cikcí = əəm kák-ró/*rík-ró
 1.SG wall=ACC wash.surface-IRR/*wash.clothing-IRR
 ‘I’ll wash the wall.’
- (23) *ŋó ezzəm rigró/*kagró*
 ŋó ezə = əəm rík-ró/*kák-ró
 1.SG clothing=ACC wash.clothing-IRR/*wash.surface-IRR
 ‘I’ll wash the clothes.’
- (24) *ŋó ezzəm rikkák ró*
 ŋó ezə = əəm rík-kák-ró
 1.SG clothing=ACC wash.clothes-CLEAN.S/O-IRR
 ‘I’ll wash the clothes clean.’

3.3.4. Root-relatedness and depth of grammaticalization

Although it seems possible to describe certain predicate derivations as “more abstract”, “more functional” and/or “more (deeply) grammaticalized” than others (cf. §3.3.2), this does not correlate consistently with the continuing presence or absence of a putative lexical source form in the language. For example, Result derivation *-ùp* ‘SHATTER S/O’ is semantically relatively rich, but has no clearly relatable lexical root in modern Lare Galo. By contrast, the Causative Argument-determining derivation *-mò* ‘CAUS’ is one of the most abstractly functional of all Galo predicate derivations; and yet, it seems clearly related to (and furthermore, seems to be relatively recently derived from) the transitive verb root *mò-* ‘make’. Similarly, Applicative derivation *-rɪk* ‘MEET.O’ has a comparable functional value in Lare Galo and Pagro Mising, adding an O argument which is understood as ‘encountered’ in the course of bringing about the predicated event/state (in Mising, the sense is somewhat closer to a comitative, in that the ‘encountered’ entity is more likely to be viewed as a co-participant). However, while the seeming source form *rɪk-* ‘meet someone; encounter’ is found as a verb root in Mising, no such verb root is attested in Galo. Thus, the value and behaviour of the predicate derivation and the presence or absence of a (seemingly) cognate verb root seem to be independent of one another.

3.3.5. Open/closed status of the class

A key criterion for determining whether predicate derivations are best analysed as lexical roots or as derivational suffixes might be the open or closed status of the class, the general assumption being that a class of roots would be more likely to be subject to expansion. Here, however, an epistemological problem arises: to the extent that the class of predicate derivations can be expanded, it is expanded via induction of a lexical root which is already established in the language (it cannot be expanded by a loanword, for example). Given, then, that Galo predicate derivations frequently, though not in the majority of cases, exhibit homophony and likely cognacy with a given lexical root in the language (§3.3.3), how can the analyst distinguish between *expansion* of the class of predicate derivations and *discovery* of an additional predicate derivation which is latently “available” in the language, but which had not yet appeared in the corpus? No straightforward solution to this problem has yet been identified.

3.4. Interim summary

To summarize the above discussion, predicate derivations in Galo constitute a relatively “well-definable” morphological class of highly productive, bound predicate formatives, but whose open or closed status is uncertain. Many are clearly relatable to lexical roots, however the majority are not. Lexical root-relatability does not appear to correlate to degree of grammaticalization. In addition, the functional properties of predicate derivations are not necessarily predictable from, or exhaustively describable in terms of, the semantics of potentially related roots.

4. Predicate derivations in other Tani languages

4.1. Overview

Existing descriptions of Tani languages are not yet sufficiently detailed to enable complete reconstruction of an ancestral system at the Proto-Tani (PT) stage. However, it appears that relatively large and functionally comparable systems of predicate derivations are found in Mising (Lorrain 1995 [1910], and my field notes), Galo (Post 2007) and Apatani (Abraham 1985; Abraham 1987). Given this relatively good genetic coverage from all major branches of the Tani languages (see Sun (1993)), it seems likely that a system of predicate derivations, or some analogous precursor system, will be reconstructible to PT and/or one or more later ancestors. (25)-(27) briefly illustrate the occurrence of a Motion/direction derivation ‘ASCEND’, which is relatable to PT verb root **caŋ* ‘ascend’, in Mising, Galo and Apatani respectively.

(25) *ŋo koosaaduŋ*

ŋo koo-**saa**-duŋ

1.SG row/cross.river-ASCEND-IPFV

‘I’m rowing upstream.’ (Mising: AD, 2:63)

(26) *ŋó zaacâa ré*

ŋó zâa-**câa**-ré

1.SG swim-ASCEND-IRR

‘I’m swimming upward/upstream.’ (Galo: TR, 6:126)

(27) *reke kacalyayo*

reke ka-**ca**-lja-jo

ceiling look-ASCEND-ISOL-PROH

‘Don’t look up at the ceiling!’ (Apatani: Abraham 1985: 172; analysis by this author; tones present but unknown)

Although a large number of predicate derivations appear to be held in common among Mising, Galo and Apatani, a possibly equally large number are not. Therefore, it would seem that whether or not a system of predicate derivations is itself reconstructible to PT, at least some developments must also have taken place in the daughter languages at various post-PT stages.

4.2. Topics for continuing research

4.2.1. Size of systems

All reasonably well-described Tani languages appear to have very large systems of predicate derivations. Post (2007) has so far identified 321 for Lare Galo, a number which is sure to grow. Lorrain’s (1995 [1910]) dictionary of Mising contains an

uncounted number, seemingly in the hundreds (a figure with which Taid (1995) concurs), and Abraham's (1985) Apatani grammar and (1987) dictionary, while relatively slimmer volumes, contain dozens if not hundreds of forms (and probably many more, if one considers that many of Abraham's (1987) disyllabic verbs are likely to be analysable as sequences of Verb root + Predicate derivation). Is it possible to establish a meaningful average size of systems of predicate derivations on an intra-Tani basis, both in themselves and in terms of their relationship to a distinct class of forms which can occur as predicate-heading verb roots?

4.2.2. Class-openness

Given that many predicate derivations seem relatable to verb roots (and can even be seen alternating with them in texts), is it possible to show, for any particular Tani language, that the class of predicate derivations is directly expandable via importation of verb roots? How can we develop methods for distinguishing between productive expansion of the class of predicate derivations and discovery of an existing member of the class of predicate derivations which had previously been unattested?

4.2.3. Functional variation

Most extant descriptions of Tani languages tend to simply list undifferentiated sets of forms. Accordingly, we are not yet able to develop a pan-Tani functional subclassification of predicate derivations, and, thus, not yet able to develop a solid basis for comparison with non-Tani languages or for reconstruction beyond Tani. Thus, a more rigorous approach to functional subclassification of predicate derivations must be taken in future descriptive work within the branch.

5. Typological drift in Tani and the historical source of predicate derivations

I have argued elsewhere (Post 2006; Post 2007) that Proto-Tani, or a near ancestor, was probably a *morphosyllabic* language in line with the Mainland South-East Asian prototype (i.e., isolating, analytical, morpheme = syllable = word (Light 1978)).⁹ As the above examples show, however, central Tani languages such as Galo have become strongly synthetic and agglutinating; eastern Tani languages such as Mising are approaching polysynthesis (28).

(28) *kironbi oŋo-sogaptiladuŋai*

kiron = bi oŋo-so-gap-ti-la = duŋ-ai

NAME=3.SG fish-pull-STUCK-PERS-NF=COP.IPFV-PST

'Kiron had been catching fish.' (Post, Mising field notes: AD, 3:49) (cf. also Prasad, Sastry et al. 1991: 59)

⁹ The principal arguments involve the differential lexicalization across Tani languages of compounds, prefixations and suffixations (suggesting earlier productivity and variability), the easy segmentability of most affixal strings and the relative ease with which lexical source forms of functors are discovered, the almost uniform monosyllabicity of morphemes, and the overall lack of stem alternations or any other signs of collapsed earlier morphology in modern Tani languages.

Assuming there is at least some likelihood that Tani languages had a morphosyllabic past, it is interesting to note that Tani systems of predicate derivations bear a strong functional resemblance to the *serial verb constructions* of the Mainland South-East Asian type (Table 1).

Function	Galo	Thai	Gloss
Manner	<i>ín-mèn</i>	<i>dəən lén</i>	‘stroll (walk <u>as play</u>)’
Result	<i>dó-ŋám</i>	<i>kin (háj) mót</i>	‘eat <u>all up</u> ’
Direction	<i>gá-càa</i>	<i>piin khên</i>	‘climb <u>up</u> ’
Valence increase	<i>mèn-zí</i>	<i>bòk háj</i>	‘tell <u>to/for someone</u> ’
Aspect/aktionsart	<i>ín-béə</i>	<i>dəən jùu</i>	‘(be) walk(ing) <u>continuously</u> ’
Modality	<i>dó-lâa</i>	<i>kin dâj</i>	‘ <u>can</u> eat’

Table 1 - Comparison of Galo predicate derivations and Thai post-head serial verbs

It is possible that the systems of predicate derivations found in the Tani languages, as well as potentially elsewhere, represent reified serial verb constructions. If such a line of reconstruction were eventually to prove tenable, it should provide us with a good opportunity to develop an understanding of the diachronic possibilities for the evolution of verb serialization, in terms of which features may carry over into a new typology, and which other features may be lost in the process of deeper grammatical entrenchment (if that is what happened).

6. Conclusion

The primary purpose of this paper has been to sketch out the basic functional and structural/behavioural properties of predicate derivations in Lare Galo, which are seen to be morphologically bound, semantically complex, highly productive predicate stem-expanding formatives. The principal function of Galo predicate derivations is to modify predicate semantics and functionality in terms of a range of domains, including *manner*, *result*, *motion/direction*, *aspect/aktionsart*, *class change*, *argument-determining* and *modality*. Although Galo predicate derivations are often translated by forms in other languages which are categorically and syntactically distinct from the predicate word, such as adverbs, adpositions, verbal complements and (other types of) serialized verb, corresponding predicate derivations in Galo are always predicate word-internal dependents. The morphological status of predicate derivations remains somewhat mysterious. Given the sheer number of attested predicate derivations in Galo (321 and counting), their frequent semantic complexity and their frequent (though not typical) relatedness to lexical roots which may be found elsewhere in the language, it is tempting to view at least some types of Galo predicate derivations as themselves (productively compounded or nuclearly-serialized) lexical roots. At the same time, the semantic abstractness of some other predicate derivations and the difficulty of establishing their potential source forms seems to argue in favour of viewing these types of predicate derivations as suffixes. Ultimately, although, Galo predicate derivations do *not* subdivide

nearly into root and suffixal subclasses; rather, the overall rule is high productivity, chance in terms of relatedness to a (continuing) lexical source form, and basically uniform positional characteristics. Finally, it was suggested that predicate derivations in Galo, as well as potentially elsewhere, may be historically derived from an earlier system of serial verb constructions.

As we look beyond Tani languages, both within Tibeto-Burman and elsewhere, it will become important to determine whether and how verb-compounded roots and derivational suffixes can be distinguished, and what other synchronic and diachronic facts may correlate with these distinguishing criteria (such as the potential presence of word classes which are generally lacking in Tani, and which correlate functionally with one or more subclasses of Tani predicate derivations). This is a topic which I have proposed for ongoing research.

7. Abbreviations

ABL	Ablative
ACC	Accusative
APPL	Applicative
Asm	Assamese
ATTN	Attainment
AZR	Adjectivalizer
CAUS	Causative
CMPL	Completive
CNTR	Contrastive
COND	Conditional
COP	Copula
CQ	Content question
CV	Converb
DCOL	Dual collective
DER	Derivation
DESD	Desiderative
DL	Dual
DST	Distal
EXH	Exhaustive
GEN	Genitive
HEST	Hesitation
HORT	Hortative
INCP	Incipient
INFL	Inflection
INST	Instrumental
INTN	Intentional
INTR	Intransitive
IPFV	Imperfective

IPTV	Imperative
IRR	Irrealis
ISOL	Isolative
LOC	Locative
MIR	Mirative
NEG	Negative
NF	Non-final
NHYP	Non-hypothetical
NZR	Nominalizer
O	Transitive object
PERS	Persistent
PF	Perfect
PFV	Perfective
POL	Polite
PROH	Prohibitive
PROS	Prospective
PROX	Proximate
PST	Past
REFL	Reflexive
S	Intransitive subject
SDIR	Self/speaker-directed
SG	Singular
SLCT	Selective
SLEV	Same topographical level
SUB	Subject
STAT	Stative
TOP	Topic

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