

ENCODING TOPOGRAPHY AND DIRECTION IN THE VERBAL SYSTEMS OF LAMANG AND HDI (CENTRAL CHADIC)

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1. Introduction*

In some Chadic languages of northeastern Nigeria and northern Cameroon, in what would appear to be a fairly restricted geographical area, we are likely to find the mapping of salient TOPOGRAPHIC FEATURES of the habitat of the speakers into the grammar of their language. Speakers tend to explicitly and almost consistently indicate, by morphological and/or syntactic means, the DIRECTION of movement of action as either UPHILL or DOWNHILL or as on the SAME LEVEL OF ELEVATION. Also, they have a choice of looking at it from either the SOURCE/ORIGIN or the GOAL/TARGET of the movement, and this can also be encoded in the verb. Speakers of these languages also like to encode movement of the speaker or some protagonist TOWARDS a certain location (often called ALLATIVE), or movement FROM a certain deictic point of reference towards the speaker or protagonist (usually called VENTIVE), or movement away from the speaker or another point of deictic reference (ABLATIVE or EFFERENTIAL), distinct from other locative-directional concepts such as movement into (ILLATIVE) and out of (ELATIVE). In such systems it could be expected that the speakers also have a choice to indicate that the deictic centre of the discourse has shifted to some location not identical with that of the speaker or some protagonist (a concept referred to as

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ALTRILOCALITY). Some of these directional concepts have wider distribution cross-linguistically, beyond the confines of the Chadic language family; but the mapping of topography into grammar appears to be a striking feature of a few Central Chadic languages only (cf., for instance, the descriptions of such languages as Margi (Hoffmann 1963), Higi (Hoffmann 1967), Wandala (Mirt 1970/71), Dghwede (Frick 1978), Podoko (Jarvis 1989), and Malgwa (Löhr 2002, 2003), and de Colombel (2003), which provide evidence for similar elaborate verbal derivational systems in the immediate vicinity of Lamang-Hdi).

For readers who are more or less familiar with Hausa, the best-known and best-described language of the Chadic family (cf. Wolff 1993, Newman 2000, Jaggat 2001), some of the concepts to be discussed have counterparts in the grade system of the Hausa verb: the “ablative/efferential” idea as encoded in grade 5, the “altrilocal/ventive” idea as encoded in grade 6, and “source-orientation” as encoded in grade 7. In addition, “away” readings (displacive/separative) are at least implied with a number of verbs operating grades 2 and 4, as are “goal-oriented” readings with certain verbs operating grade 1. As in the two Central Chadic languages discussed in this paper, DIRECTIONALITY would also appear to be a salient semantic feature in verbal derivation for Hausa, which belongs to the West Chadic branch of the family. (There is, however, no encoding of topographical features in Hausa.) In light of this background, a detailed contrastive look at two Central Chadic systems should help to gain deeper insights into fundamental principles governing the encoding of directionality in Chadic verbal derivation in general.

North of the River Benue and south of Lake Chad, the Mandara Mountains cut through the savannah plains in a north–south direction. The foothills and mountains testify to long periods of human settlement surrounded by elaborate terrace farming (even though many of the terraces and settlements are now abandoned—and have been for some time). *Lamang* speaking groups are spread out over various settlements in the western plains on the Nigerian side of the border with Cameroon, largely having abandoned previous habitats on the foothills for ease of farming in the plains. The *Hdi*, on the other hand, reside in basically one location, Turu (= Tourou), on a mountain plateau on the eastern side of the Cameroon border. The present, and possibly quite ancient, habitat of the speakers of the languages under consideration is characterized by remarkable topographic profiles in terms of plains, foothills, sharp mountain escarpments, and extended mountain plateaus (cf. schematic representation in fig. 1). Living and moving around in the area meant, and still means for those who remain settled there, either strenuous and breathtaking climbing and descending along steep and rocky mountain paths overcoming up to several hundred metres of

elevation, or moving more comfortably on a plateau and along the mountain edge on basically the same level of elevation. A schematic cross-section in a west-east direction would look something like the following:

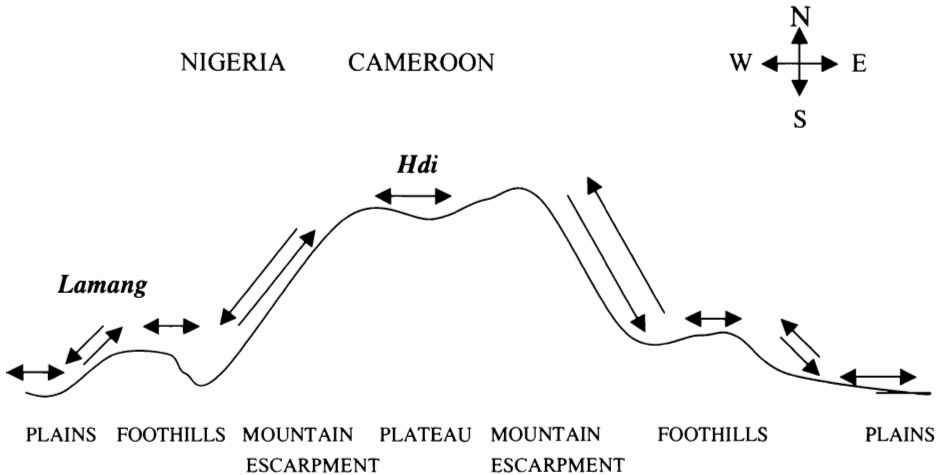


Figure 1: Schematic topographic profile of the Mandara Mountains, indicating necessary uphill, downhill, and equi-level movements, and roughly locating the speakers of Lamang and Hdi in terms of topographic environment

In the absence of donkeys and mules, not to speak of horses, that would be able to climb and descend and carry loads, it is the people themselves that have to carry their goods—a fact that physically sensitizes one to topographical features (as the author knows from painful experience during field work expeditions)! It is not unlikely that here lies one of the non-linguistic motivations for why speakers would tend to indicate topographical specifications excessively in their language use.

For purely practical reasons of limitation and convenience of reference, the term “topographic extension” shall refer to such morphological elements of verbal derivation that relate to and are used for, encoding the topographic profile of the speakers’ habitat on and along the Mandara Mountains, i.e., either

- uphill/upward movement (not to be confused with other locative/directional categories like, for instance, ‘onto, on top’), or
- downhill/downward movement, or
- movement along same level of elevation.

We shall discuss such topographic extensions as part of a more general system of encoding directionality in the verbal grammar of Hdi and Lamang.

Lamang and Hdi, together with practically unresearched varieties called *Mabas* and/or *Vemgo*, appear to form a language continuum with, however, rather low intercomprehensibility (cf. Stalder 1993) within what is called the *Wandala-Lamang Group* (aka *Mandara Group*, cf. Newman 1990).

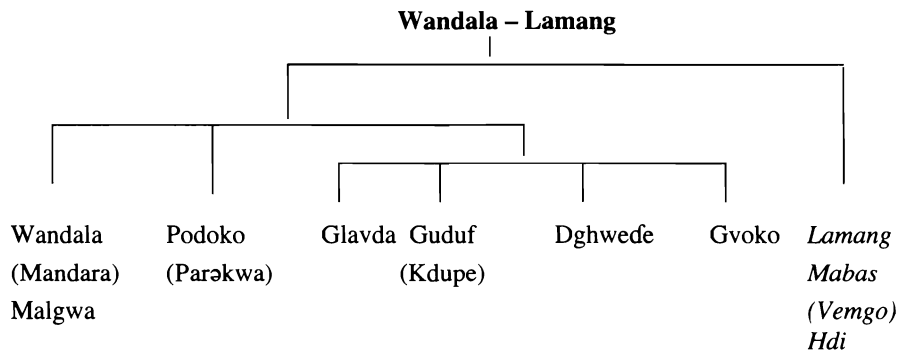


Figure 2: The Wandala-Lamang Group

Both Lamang (Wolff 1983) and Hdi (Frajzyngier & Shay 2002 [henceforth F/S]) have been the subject of monographic grammatical descriptions.¹ This paper will discuss morphological coding strategies with regard to thematic derivation of verb stems only. Concomitant or complementary syntactic manifestations of these features by frequent use of some kind of adverbial constructions involving topographically specified so-called motion verbs will not be treated here.

2. Alternative Descriptive Accounts of Coding Strategies in Hdi

The language possesses several extension suffixes which denote direction and/or location, but not all of them pertain to topography. Some of these suffixes take 1st or 2nd postradical position in the suffix chain to the right of the verb base and thereby precede the slot for object pronouns, while some extension suffixes take a postradical position further to the right, i.e., follow the object pronouns. Extension suffixes of different positions in the postradical chain may combine. Note that the systematic description suggested here is at variance with the description provided by F/S (141ff; cf. Wolff 2004), allowing for a total of five

¹ For a critical assessment of Frajzyngier and Shay's grammar of Hdi from the point of view of Lamang and received wisdom based on other Central Chadic languages, cf. Wolff (2004, in press).

postradical slots for extension suffixes (disregarding the functional slot for object pronouns that systematically become inserted between positions 2 and 3). We will look at non-topographic extension suffixes in Hdi first. Reference to F/S, the major source, is simply by page numbers which are given in parenthesis.

-d(á)	Allative (ALL) Grammaticalized preposition: <i>dá</i> ~ <i>dà</i> ‘movement to or from a place’ (213)	1 st post-radical ext position
-g(á)	Inner space (INN) (at times confused with “ventive” [VENT], cf. 240f) Grammaticalized prep.: <i>gà</i> ‘inner space’ (229)	
-í	Movement away (AWAY) or under; affected object integrity	2 nd post-radical ext position
-m(à)	Movement in/into (IN) Grammaticalized prep.: <i>mà</i> ‘in’ (230)	3 rd post-radical ext position
-k/-g	? Ventive (VENT) ?	
-ú(´)	Source-orientation (SO); subject-affectedness Grammaticalized noun: <i>wi</i> ‘mouth’	4 th post-radical ext position
Low tone on ‘distal’ extension	altrilocal-ventive (ALT)	

Table 1: Non-topographic locative-directional extension suffixes

Note that tone plays a contrastive role in coding direction with regard to the “distal” extension: “With the high tone the movement is seen from a point of view other than that of the goal... With the low tone the movement of the object is represented from the point of view of the goal” (248, also 245 and elsewhere). I assume that the most widespread extension category in Chadic, the so-called “altrilocal-ventive”, which is conspicuously absent in terms of a separate segmental extension suffix in F/S’s description (but cf. below), is here coded by tonal means, i.e., low tone in combination with the distal extension. It is worth rereading the following description in this sense under the proviso that the deictic centre of reference is altrilocal (altrilocality is quite often a concomitant feature of the ventive category in Chadic), i.e., is not identical with the position of the speaker: “The goal oriented extension has high tone when it codes movement toward the goal from a point of view other than the goal, and low tone when it codes movement toward the goal from the point of view of the goal” (245). I shall henceforth refer to this extension under the term “altrilocal-ventive” (ALT) and distinguish it from the non-source oriented “ventive” (VENT) marked by the suffix -k/-g in Hdi, for which only very few examples are provided by F/S who

unconvincingly treat this suffix as an allomorph of the *-gá* ‘inner space’ extension. Let us now look at the topographic extensions in Hdi.

<i>-(a)ghá</i>	Movement on same level (112) Distal (DIST)	3 rd post-radical ext position
<i>-(a)ghà</i> <i>-(a)ghú</i>	Distal (DIST) + altrilocal-ventive (ALT) Distal (DIST) + source-orientation (SO)	3 rd + 4 th post-radical ext positions
<i>-xà</i>	Movement down (DOWN)	3 rd post-radical ext position
<i>-f(à)</i>	Movement up (UP)	3 rd post-radical ext position
<i>-b/-p</i>	Movement out (OUT) – ? same level ?	3 rd post-radical ext position

Table 2: *Topographic locative-directional extension suffixes*

The ‘distal’ extension (I shall maintain some of F/S’s terminology for practical reasons), with its assumed combinations with categories such as altrilocal-ventive and source-orientation, is the most interesting topographic extension in Hdi. Its etymological origin quite likely is the same as in Lamang, i.e., a largely defunct noun **t[ə]gha* with the meaning ‘home, residential compound’, even though F/S claim that they “have no information about the possible source of the distal extension *gh*” (269). There are, however, reflexes of this noun in lexicalized expressions like the following, found in another source on Hdi:

- (1) *mitgha* ‘dans la maison’ (Eguchi 1971: 263)
watgha ‘porte’ (Eguchi 1971: 271); lit. ‘mouth-of house’
witgha ‘porte de la case’ (Eguchi 1971: 271); lit. ‘house mouth’

Further, Hdi uses a word translated as ‘home’, i.e., *dzághà*, which incidentally has the same shape as the Lamang motion verb *dza-* ‘go’ plus extension *-ghà*, i.e., *dzághà* ‘go home, go into/towards a populated or sacred place’ (Wolff 1983: 111). The following example is from F/S (185, with slightly modified interlinear translation; note that 3rd pers. sg. subject is zero in certain verb forms like the following):

- (2) *klà -dá -ghá -ghà -klà dzághà*
⏟
 take-ALL-2SG-DIST+ALT-take (3SG) home
 ‘he brought you home’

First of all, this extension codes “movement on a level”, just like in Lamang. Strangely, this important piece of information is somewhat hidden away in F/S’s description (112) and is not repeated in the subchapter devoted to the distal extension (243-252)! Unlike Lamang, however, the ‘distal’ extension in Hdi allows further and specific combinations with two other directional extensions which, for system-internal reasons, are attributed 4th postradical ext(ension) position:

3 rd postradical ext position: ‘distal’	4 th postradical ext position: (a) ‘altrilocal-ventive’ (b) ‘source-orientation’	Phonetic shape	Meaning
-(a)ghá	---	[-(a)ghá]	Moving (without necessarily arriving)
	(a) LOW TONE	[-(a)ghà]	Moving and arriving at another place
	(b) ú(´)	[-(a)ghú´]	Departure from a place

Table 3: The subsystem of the distal extension in Hdi

F/S provide some evidence for analysing the suffix -(a)ghá ‘distal’ to begin with a vowel based on the observation that the “1st pers. dual (incl.)” (DU) object pronoun -úú- ([sic] (135), but given with L-H tone melody on p. 243!) undergoes automatic “assimilation” to [-ù’wá-] when followed by the distal extension; this claim is made in addition to the generalisation that “like all spatial extensions, the extension gh must be preceded by the goal oriented marker a” (243). For the following example, for instance, F/S provide a morphological analysis that postulates double occurrence of a so-called “point of view” marker (in this case: “goal-orientation” identified with the vowel á, i.e., PV:G = “point of view of goal”, and D:GO = “distal extension: goal orientation”).

[hl-ù’wá-ghá-hlà] /hl -ù’ú -á -ghá -hlà/
 find-1 DU-PV:G-D:GO-find
 ‘he found the two of us’ (243)

I consider postulated multiple occurrences of same markers in one verb form to be instances of over-analysis (cf. below for a discussion of the category goal-orientation in Hdi) and would rather reanalyse the above example as follows:

[hlù-'w-ághá-hlà] (/hla -`w´ -aghá -hlà/)
 find-1DU-DIST-find
 'he found the two of us'

Note that tonal issues in F/S's grammar frequently involve mismatches between examples and descriptions. This is also the case with regard to the tonal behaviour of the distal extension and its combinations. The majority of examples indicate that the (reduplicated) verb base following *-(a)ghú-* carries a high tone that might be carried over from the suffix *-ú(´)* in terms of a floating tone (note that such floating tones with extension suffixes are very common in closely related Lamang). This would, however, conflict with the statement by F/S (296 and elsewhere) that the reduplicated forms of the verb end in low tone *à* with zero representation of 3rd pers. sg. subject (which, however, like in one of the examples under (3) below, is not true for many examples throughout the book anyway). Examples (my reanalysis, with 1st and 2nd post-radical ext positions not filled):

(3) mà klá -ghá -ká
 PROHIBITIVE take-DIST-2SG
 'do not take it there' (237)

lá -ghá -` -la → lághàlà
 go- DIST -ALT-go
 'he arrived [at a place other than the one where the speaker is]' (113)

lá -ghá -ú´ -la → lághúlá
 go- DIST -SO-go
 'he left [the place where the speaker is]' (113)

Interestingly, the speaker's potential of playing with the deictic centre of utterances is more elaborated in Hdi than it is in its sister language Lamang. Lamang codes the basic direction towards or away from the deictic centre (the default deictic centre would be where the speaker is) by the use of specialised motion verbs, namely 'go' (movement away from the deictic centre) and 'come' (movement towards the deictic centre). The deictic centre can, of course, be shifted away from the speaker or to and from the location of any protagonist in the discourse. Hdi, on the other hand, not only uses the motion verbs 'go' and 'come' in a parallel fashion, but additionally has options to code notions of 'departure' and 'arrival' with both motion verbs and other verbs, and it does so by the use of combined extensions. The language thus has ways and means to distinguish between "goal-orientation" (moving towards a place) and "source-

orientation” (moving from a place) as manifestations of a “point of view” category—in F/S’s terms—in addition to the more general notions of “allative” and “ventive” which are lexicalised, for instance, in the motion verbs. F/S and the present author, however, differ drastically in their analysis regarding domains and scope of this “point of view” category: Whereas F/S allow for almost ubiquitous and structurally uncontrolled marking and distribution across the whole verbal complex wherever a contrast between the vowels *a* and *u* can be established, I am inclined to accept the *goal* : *source* dichotomy as marked by the *a* : *u* contrast only as part of a subsystem with the distal extension. I maintain that, throughout the verbal morphology system of Hdi, we are dealing with an independent extension suffix *-ú* whose value of “source-orientation / auto-benefactive / subject-affectedness” as an extension suffix in its own right is supported by the observation that, as tends to be generally the case with extensions in Chadic, there is also a reading of “finality, completion, perfectivity” involved, which is referred to in the literature as “particular [vs. general] aspect” (Smith 1969), “specific reference” (Wolff 1983), “referentiality” (Frajzyngier & Shay 2002); inaptly also referred to as “perfective” in Hoffmann (1963). This aspect-like category is often confused by non-initiated linguists and readers with the co-existing category of PERFECTIVE in the inflectional system of the language; cf. F/S’s translation of the following example where the reduplication of the verb stem *sá* ‘come’ marks PERFECTIVE aspect in the inflexional system, and the extension *-ú* (here following the ‘distal’ extension) manifests REFERENTIALITY in terms of “finality, completion” in addition to “subject-affectedness”:

(3a) *sá -gh -ú -sá* ‘he left the other place and came (for good)’ (246)
 come-DIST-SO-come

At variance with the analysis proposed by F/S and with the exception of the subsystem of the distal extension, I consider their “goal-orientation” the unmarked default counterpart of marked “source-orientation” elsewhere in the system. Note, however, that in the overall organization of the motion verb *cum* directional extension system of both Hdi and Lamang, goal- vs. source-orientation can indeed be viewed as a semantic and organizational concept (cf. the concluding section of this paper).

From the point of view of its closest sister-language Lamang, this evolution of a subsystem within the domain of the distal extension would appear to be an innovation of the Hdi verbal extension system.

particular (in our case: ‘upward’) extension—a process one is tempted to refer to as “directional agreement”:

- (11) *kà hliyá -f -tá zvàxw kà dǎwá-f -tá ntfàn dǎwá-f -xà -tá dǎwrà*
 SEQ leave- UP-REF bat SEQ ask - UP- REF glue ask - UP- ALSO - REF cloth
 ‘the bat left and asked for glue and also for clothing’ (263)

Quite like the ‘upward movement’ extension suffix *-f*, the ‘movement out’ extension suffix *-b/-p* also combines freely with non-motion verbs. Its topographic nature cannot be assessed from F/S’s description, which fails to indicate whether, like in the case of the ‘distal’ extension suffix *-(a)ghá*, movement is on the same level. One could only guess at its topographic nature by analogy with Hdi’s closest sister-language, Lamang. In Hdi, generally speaking, non-motion verbs tend to use the following:

- *dá* ‘allative’ for direction away from deictic centre towards a specific locative goal at a distance, and
- *gá* ‘inner space’, occasionally and misleadingly glossed ‘ventive’ by F/S, for bidirectionality in terms of movement towards or away from the deictic centre’s conceived ‘inside’.

The motion verbs *lá* and *sá*, on the other hand and like in other Chadic languages, appear to have developed their own set of extensions, among them

- the special ‘distal’ suffix *-(a)ghá* (with its altrilocality/source-orientation potential, i.e., additional marking by either L tone or suffix *-ú*, cf. above) which, however, is also available for non-motion verbs, and
- the still highly restricted extension suffix *-xà* for ‘downward movement’ for motion verbs only, i.e., in Hdi, the ‘distal’, the ‘upward movement’ and the ‘movement out’ extensions are shared now by all verbs, motion verbs and non-motion verbs alike, ‘movement down’ is only marked with motion verbs;
- the special allomorph *-b* of the ‘movement out’ extension for motion verbs, as opposed to *-p* for non-motion verbs.

Compare also the special behaviour of these verbs “with respect to the referential marker in sequential clauses, which is *i* rather than *ta*” (266). All this is clear indication of the existence of a separate subgrammar for these verbs in Hdi also, a point not considered worth mentioning by F/S in their grammar.

3. A Contrastive Look at Coding Strategies in Lamang

Like Hdi, Lamang possesses several extension suffixes which denote location and/or direction, and again, like in Hdi, some of them pertain to topography. There are, however, some major differences between the two languages with regard to topographic and directional extensions. (a) A fundamental distinction between goal- and source-orientation comparable to Hdi as described by F/S in terms of a systematic vowel contrast *a : u* does not exist in Lamang, even though the distinction as such is encoded in more general ways. (b) On the other hand, while Hdi appears not to possess a subgrammar for motion verbs worth detailed description, Lamang has developed such a system in an elaborate manner. The subgrammar of motion verbs is organized in two parallel subsystems, each subsystem characterized by pairs of suppletive verbs stems (*la-* : *dza-* ‘go’, *sa-* : *skwa-* ‘come’) that combine with specialized topographic extensions based on the marked aspectual dichotomy between IMPERFECTIVE and NON-IMPERFECTIVE (Wolff 1983: 103ff.).

-ù´	Movement away; ‘off’; object is removed from original location; with some verbs: intransitive-passive / medial reading (cf. source-orientation / subject-affectedness in Hdi)	3 rd post-radical position
-´η`	Location ‘inside’, direction ‘towards within’ Grammaticalized preposition: η´ ‘in(to), within’ (cf. grammaticalization of preposition mà in Hdi)	
-úη´ < /-´η´´´	Movement away may be implied when the action of the verb is carried out to its ultimate stage, even to the point of destruction of object	
-`s´	Idea of adding (from the bottom), increasing (from below) Grammaticalized noun: <i>sto</i> ‘bottom’	
-´s`	‘of/off’; idea of separating part of the effected object matter ? Grammaticalized motion verb: <i>sa</i> ‘come’ ?	
-`vv´ (vowel length)	Idea of location or adding ‘on top’	
-´vv´ (vowel length)	Idea of reducing object matter; may indicate or imply movement ‘down’	

Table 5: Non-topographic locative-directional extension suffixes

As regards the position of topographic extensions in the post-radical suffix chain of non-motion verbs, they indiscriminately take the 3rd post-radical position, i.e.,

directly follow the fixed slot for object pronouns which is always the 2nd post-radical position. Note that the highly restricted subset of “imperfective motion verbs” (i.e., the roots *dza-* ‘come’ and *skwa-* ‘go’) allows for only one post-radical position which is reserved for the topographic extensions which are the only extensions allowed to occur with these roots anyway (for details cf. Wolff 1983: 103-106; 111-125). It will appear that grammaticalization in terms of semantic bleaching, as far as we are able to suggest etymological sources, appears to have progressed further in Lamang in comparison to Hdi. In tables 5 and 6, “meanings” represent rough semantic approximations only.

IMPERFECTIVE motion verbs	other verbs		
-‘ghà	-‘v̀	Movement on same level (eastward ~ westward); allative ~ ventive (depending on deictic centre through choice of verb ‘go’ vs. ‘come’); cf. “goal-orientation” and DIST (+ ALT) extensions in Hdi Grammaticalization source: -‘ghà < tégghà ‘home’	1 st and only post-radical position with IMPERFECTIVE motion verbs. 3 rd post-radical position with non-motion verbs.
-‘bè	-‘b̀	Movement ‘out (of), away (from)’; movement on same level (eastward ~ westward) is implied unless change of level is indicated elsewhere in the clause (by “adverbial” use of motion verb); cf. OUT extension in Hdi Grammaticalization source: b̀l̀k̀k̀ ‘outer world, the world beyond the compound walls’	
-‘fé	-‘f̀	Movement ‘uphill, up(ward), eastward’; cf. UP extension in Hdi Grammaticalization source: f̀t̀t̀ ‘sun, sky’	
-‘dè	-‘g̀á’	Movement ‘downhill, down(ward), westward’; cf. DOWN extension in Hdi ? Grammaticalization source: -‘dè < d̀ám̀b̀à̀k̀e~ ‘valley, depression’	

Table 6: Topographic locative-directional extension suffixes

Note that, given the habitat of Lamang speakers, movement uphill implies eastward direction, movement downhill corresponds to westward direction; movement on same level is either in a southward or northward direction. Whether by historical accident or on systematic grounds, change of topographic level corresponds to a tone melody H-H while movement on same level is characterized by a H-L melody.

4. Comparing Coding Strategies in Lamang and Hdi

Based on F/S’s description of Hdi, one is surprised by what appear to be major structural differences of verbal morphology between Hdi and Lamang with regard to apparent stunning reflexes in Hdi of the ancient Semitic/Afroasiatic “root and pattern” system involving consonantal roots and vocalized bases or stems. After some necessary demystification, however, Hdi can be accepted as a fairly straightforward type of Central Chadic language that structurally matches its closest genealogical relatives and geographical neighbours.

4.1. Demystification of the “Fundamental Point of View Category”

In order to compare the coding strategies for movement and direction in Hdi and Lamang, we need, first of all, to demystify the highly idiosyncratic analysis and description of Hdi with regard to both the root-and-pattern type system with regard to verb-final vowels which are said to carry semantic movement/direction-related functions, and the postulated category of coding “point of view” in terms of goal- vs. source-orientation through systematic vowel contrast *a* : *u* across the whole chain of morphemes that make up any complex verbal form.

In Hdi, verb *roots* are said to have two alternative forms “whereby some forms end in vowels *a* or schwa” (99), and where “schwa in verbal forms is an epenthetic vowel” (100). I take this to mean that the verb root either ends in *a*, or its final vowel is deleted, i.e., the verb ends with its final root consonant (with an epenthetic vowel then inserted “whose presence is motivated by syllable structure constraints and by the need to realize the tone of the verb...” [100]).

Simple verb form ending	Hdi (305, 316)		Lamang	
	-a	verb stem	<i>pghá</i> ‘spread’ <i>xàná</i> ‘sleep’	simple verb stem
-u	verbal noun	<i>pgh-ù</i> ‘libation’	verbal noun	<i>pgh-ù</i> ‘pouring’
-i		<i>xàn-í</i> ‘sleep’	noun (lexical)	<i>xini</i> ‘sleep’
Zero [schwa]	dependent IMPERFECTIVE (= verb root)	<i>tà ksǎ-tsí</i> IMPF touch-3SG ‘while he devours’	ITERATIVE DURATIVE (= simple verbal noun with deleted suffix)	<i>tǎ kǎl -dě</i> it.dur-take-3SG ‘he keeps taking’

Table 7: Verbal endings in Hdi and Lamang

This is, basically, what one would expect from a sister language of Lamang where practically all verb *bases* (= consonantal *root* plus vowels) end in *a*, and so-called simple verbal nouns take a suffix (/–u/) that is often deleted and then triggers the insertion of an epenthetic schwa (see table 7). Since in Hdi “the imperfective form of the verb...has no vowel other than the epenthetic schwa” (101), we may equate this imperfective form with its Lamang counterpart, i.e., the (imperfective) simple *verbal noun* after regular deletion of the verbal noun suffix.

In addition, our major source for Hdi identifies a verb stem-internal derivational subsystem involving (a) “thematic vowels” within the verb root (110), and (b) “a hypothesis concerning verb-final vowels” (111), which the present author tends to consider empirically and analytically unjustified in the light of comparative data from Lamang and other related languages within Central Chadic. Based on three qualities of verb-final vowels (*a : i : u*) and under the assumption that –*i* constitutes a true suffix (‘movement away’), F/S postulate a fundamental “point of view” distinction between source-orientation and goal-orientation that relates to the vowel qualities *a : u* of the verbal stem (and elsewhere in the verbal complex): “The terms *source* and *goal* designate clusters of functions. The *source* includes the subject of the clause and for verbs of movement the place from which the movement originates. The *goal* includes direct and objects [sic!] and the place or spatial configuration toward which movement is directed.” (111)

- The vowel *u*, whether root-internal (115), verb-final, or elsewhere in the verbal morpheme chain, is indiscriminately analysed as coding source-orientation.
- The vowel *a* is taken to mark goal-orientation.

(Note that elsewhere, and more in line with the present author’s understanding, F/S state that “the function of *a* will emerge as an ‘everything else’ function” (110), i.e., a kind of default vowel, very much corresponding to a treatment in a previous source on the language, namely Eguchi (1971) who “represents all verbs with the final vowel *a*” (110).)

The analysis and description becomes semantically quite implausible and counter-intuitive when we read that verb stems may be marked for both source- and goal-orientation at the same time, i.e., by what would appear to be mutually exclusive categories. The authors use the notion of “lexicalization” as *deus ex machina* device to make the implausible plausible: “The verbal root with a point of view marker constitutes a verbal stem. Such stems have lexicalized to the point that other markers, including point of view markers, are added to them. A lexicalized stem built on the goal oriented marker may have the source oriented

marker added, and conversely, a lexicalized stem built on the source oriented marker can have the goal oriented marker added.” (114) The reader is left puzzled as to how to conceive of an action or event that is goal-oriented and source-oriented at the same time! (As a matter of fact, all questionable examples provided in F/S can be accounted for in much simpler and less counter-intuitive ways.)

In Lamang and other closely related languages, including Eguchi’s (1971) views on Hdi, verb-final *a* is part of the lexical base without any particular derivative function or morphological value attached. The derivative extension *-u*, on the other hand, is a widespread suffix in the area with indeed source-orientation-like functions such as, for instance, subject-affectedness and auto-benefactive (and which is etymologically related to the word for ‘mouth’ and, therefore, is the preferred suffix for verbs like ‘eat’ and ‘drink’—in Hdi as much as in the other languages of the group).

On the basis of internal contradictions and in addition to evidence from neighbouring languages, and contrary to the sweeping statement that “the coding of the point of view is a fundamental category in the grammatical structure of Hdi...” (239), I see no reason to accept “goal-orientation” as a valid *morphological* (!) category in Hdi. The notion of a basic distinction of “point of view” in terms of a fundamental source- vs. goal-orientation linked to contrastive *a : u* marking and allowing several occurrences of these markers in the verbal morpheme chain is, in my view, largely a mystification! Rather, I would maintain that the verb system of Hdi, like in closely related languages of the group that it belongs to, is characterised by a default phonological verb class with *a* as final vowel on the one hand, and by use of specialized extension suffixes to encode topography, movement and direction on the other. This does not, however, invalidate the relevance of “goal-“ vs. “source-orientation” as relevant *semantic* categories that underlie ABSTRACT LOCATIVE CASE notions, cf. below.

If *a* is indeed the default lexical verb-final vowel, and immediate postradical *-í* is indeed an extension suffix indicating ‘movement away’, we still need to look at post-radical *u* and its posited function as coding “source-orientation”. This involves reanalysis of all the examples containing immediate postradical *u* that are given by F/S who, first of all, identify two allomorphs of this marker (171):

(12) [-ugh] following the vowel /a/, [-u] elsewhere.

This analysis can be challenged on systematic and phonological grounds. The form [-ugh] is most likely a conditioned variant form of the distal extension + source-orientation, normally occurring in the shape *-ghú*. The conditioning factor for what looks like metathesis appears to be, from the few examples provided in

characteristic concomitant “completive” semantic feature of ‘eating up’, ‘drinking up’ when used, for instance, with verbs of eating and drinking, both in Hdi and other languages. Based on Hdi-internal and comparative observations, therefore, it seems safe to suggest that in Hdi

- simple verb stems/bases end in a lexical default vowel /a/ which has no semantic function (i.e., it does not code “goal-orientation” or “subject control” as suggested by F/S);
- there is no fundamental category of coding “the point of view” in terms of almost obligatory alternative choice between “goal-orientation” and “source-orientation” for practically all verbs, as F/S suggest;
- rather, Hdi, like its sister language(s), has an ordinary extension suffix *-ú´* that codes subject-affectedness, auto-benefactive, source-orientation of movement and similar notions, and which may occur alone or in (frequent) combination with the ‘distal’ extension suffix (*-(a)ghá + -ú´ > -(a)gh-ú´*) and thereby can be used to mark point of ‘departure’ (in systematic relationship with devices which mark point of ‘arrival’, cf. below);
- finally, the over-aesthetic view of a “root-and-pattern” system in Hdi in which the three verb-final vowels *a, i, u* have related semantic functions in terms of movement and direction does not stand the test of reanalysis. Rather, *a* remains the only lexical verb-final vowel, both *-í* and *-ú´* are regular extension suffixes which may be separated from the verb root by intervening suffixes, such as the ‘distal’ extension (in the case of *-ú´*, cf. examples above), and the ‘allative’ and the ‘inner space’ extensions (in the case of *-í*), note that the vowel [i] immediately following the verbal root in the examples below represent—in F/S’s transcription and admittedly quite confusingly—the epenthetic vowel that elsewhere is given as schwa [ə]; cf.

(16) bí -d -í -dí -f -bà tá mùxúl

build-ALL-AWAY-1SG-UP-build OBJ wall

‘he built me a wall’ (184)

klí -g -í -ďá -ghà -klá tá krì

take-INN-AWAY-1SG- DIST+VENT -take OBJ dog

‘he brought a dog for me’ (185)

4.2. *The Postradical Extension Chain in Hdi and Lamang*

4.2.1. *Fixed positions of extension suffixes.* In order to compare the derivative morphology of verbs in Hdi and Lamang, the description available for Hdi has to

be modified with regard to F/S's rather incomplete listing (241), including an adequate description of the tonal contrasts involved in coding direction. The numbering of the groups in the following table refers to their relative position following the verb, which is the leftmost component in the string of morphemes. The table leaves out the "partitive" morpheme *-á*, which is not part of the "regular" post-radical suffix chain but which occurs "infixed" between reduplicated verb bases outside the extension suffix chain (cf. 211). Also, the "tentative" extension *-n*, *-ŋ* (which has a cognate in Lamang *-`ŋ*) is omitted for the same reason that the examples provided by F/S (219f) do not allow any analysis as to its relative position with regard to other extensions. F/S mention two occurrences of a suffix *-rə* of which they know nothing. Its position, however, can be identified as following Group 3 extensions, i.e., after, for instance, the OUT extension. It could be tentatively classified with Group 5.

Group 1		Group 2		Group 3		Group 4		Group 5	
-`gá	inner space	-í	movement away	-aghá	distal (same level)	L	altrilocal-ventive (+DIST only)	-ndá	associative
-`dá	allative			-xà	'also'				
-vá	applicative			-f(à)	movement up	-ú	subject-affectedness	-rə	(???)
-gla	'again'			-xà	movement down				
				-p/-b	movement out				
				-m(á)	movement in				
				-s	inverse				
				-k/-g	ventive (?)				

Table 8: Reanalysis of Hdi verbal extension system ("topographic" extensions shaded)

Note that only true motion verbs, namely *sá* 'come' and *lá* 'go', are allowed to take the extension *-xà* (251). Also, the OUT extension given as *-p* elsewhere tends to be realized as a voiced consonant *-b* only with these two verbs.

For Lamang we can give the following structural representation of positions in the postradical extension chain, keeping distinct the subsystem of motion verbs:

Group 1				Group 2		
non-motion verbs		motion verbs		non-motion verbs	motion verbs	
-gà	applicative			-v̀ (vowel length)	-`ghà	allative ~ ventive (same level)
-v̀	reflexive			-`b̀	-`bè	movement out (same level)
		-ŋ̀	causative	-`f̀	-`fè	movement up(hill)
				-`gá´	-`dè	movement down(hill)
				-v̀ (vowel length)		reduce, down
				-ù´		remove, away
				-úŋ̀		away, to no further use
				-`s̀		separate (& leave some)
				-`ŋ̀		action into or within
				-v̀ (vowel length)		add, increase (on top)
				-`s´		add, increase (at bottom)
				-úŋ´		benefactive (non-agent/goal)
				-ú´		auto-benefactive (agent/source)
				-`ŋ´		action done a little

Table 9: Lamang verbal extension system (“topographic” extensions shaded)

4.2.2. *Position of incorporated object pronouns.* In Hdi, the position of the object pronouns is before Group 3, the REF[erential] marker *-tá* (and the reduplicated verb base in the PERFECTIVE) would follow Group 5 extensions. Note that the descriptive account of “pronouns and the order of extensions” in F/S (141f.) is wrong when they say (with regard to the 1st pers. sg. object pronoun): “The object marker *i* always occurs after the verb and before verbal extensions”. Systematic reanalysis shows that all extension suffixes and the object pronouns occupy fixed positions in the postradical suffix chain, just like in the neighbouring languages of the group, and that the object pronoun may be preceded and followed by extension suffixes. Further, F/S tend to confuse the extension *-gà* (called INN “inner space” by them) and the “altrilocal/ventive” *-k/-g* (VENT “ventive”, not systematically accounted for by them) which occupy different structural positions in the postradical suffix chain.

In Lamang, the position of the object pronouns is always between Groups 1 and 2; the morpheme *-(´)tá* (corresponding to the Hdi REF[erential] marker) and the reduplicated verb base would follow the Group 2 extensions.

4.2.3. *Comparing the extension systems in Lamang and Hdi.* Comparing the verbal extensions systems in both languages in terms of postradical position and function, we observe shared structural properties, common categories, and some cognate morphemes. Still, there are some remarkable but rather shallow structural differences. We shall look at the extensions by group, i.e., according to their position in the postradical chain.

Hdi and Lamang Group 1 extensions:

- Both languages share the cognate extension suffix *-va* with clearly reflexive meaning, grammaticalized from the noun *vgha* (Hdi) ~ *ghva* (Lamang; with metathesis affecting C_1 /v/ and C_2 /gh/) ‘body’. (Why F/S would call this “applicative” rather than “reflexive”, contrary to established Chadic and general usage, is a mystery.)
- The suffix *-ga*, which occurs in both languages in this position, despite deceptive surface similarity, appears not to be a cognate: For Hdi, F/S claim a grammaticalization path from preposition (*gà* ‘in’) to the function ‘inner space’. Lamang *-gà* ‘applicative’ (Wolff 1983: 122) has two quite different (possibly interrelated) meanings of ‘lending a helping hand’ and ‘intervening by force’; a possible grammaticalization source could be the verb *ga* ‘gain, own, rule’.
- There is no “allative” extension in Lamang cognate with Hdi, i.e., the preposition *dá* ‘towards’ that both languages share has not been grammaticalized in Lamang as a verbal extension (but is rather used in preradical position to mark future tense). The allative function in Lamang (like the ventive) is part of the extension pair *-ghà / -v̀v̀*, which formally corresponds to the Hdi DIST (+ ALT) extensions.
- Lamang *-ɲà* ‘causative’ for motion verbs has no obvious correspondent in Hdi; it appears to be a grammaticalization from a preposition *ɲgà* ‘for, to the benefit/because of’. However, Lamang *-ɲà* ‘causative’ is functionally similar to Hdi *-ná*, which is treated by F/S (albeit somewhat hesitantly) as part of the object pronoun system.³
- Hdi *-gla* ‘(do) again’ is obviously an innovative grammaticalization of the particle *gli~guli* ‘aussi’ (Eguchi 1971: 204, 205; cf. Lamang *gùlɛŋ(e)* ‘also, too’).

³ Note the description of *-ná* as “additional argument marker” (170), which would be appropriate also to describe a function of the suffix *-ɲà* in Lamang! (Interestingly, this suffix has begun to spread into the system of the non-motion verbs.)

Hdi Group 2 with just the AWAY extension in it is missing in Lamang; the general idea of “movement away” is inherent, however, in several extensions of different shapes of Lamang Group 2 suffixes (cf. tables 6 and 9).

Hdi Group 3 largely corresponds to Lamang Group 2 where we find the topographic extensions (four in Lamang, possibly only three in Hdi) plus several other extensions, some of them with locative-directional meanings. Only two of the topographic extensions can be considered cognates, i.e., Hdi DIST and UP extensions *-(a)ghá* and *-f(à)* and Lamang *-`ghà* and *-`f(è)* with fairly transparent and shared grammaticalization paths (from lexical items ‘home’ and ‘sun, sky’). Cf. the following correspondences between Lamang-Hdi verbal extensions in terms of function, some of them clearly cognate morphemes, some not:

<i>Hdi</i>				<i>Lamang</i>	
<i>Group 3</i>		<i>Group 4</i>		<i>Group 2</i>	
<i>-aghá</i>	distal			<i>-`ghà</i>	‘home’, allative ~ ventive (motion verbs only)
		L	altrilocal/ventive (with ‘distal’ only)	<i>-`v̀</i>	allative ~ ventive (non-motion verbs)
		<i>-ú´</i>	source-orientation, subject-affectedness	<i>-ú´</i>	auto-benefactive, subject-affectedness
<i>-f(à)</i>	movement up			<i>-`f´ ~ -`fè</i>	upward
<i>-p/-b</i>	movement out			<i>-`b´ ~ -`bè</i>	out, away
<i>-m(á)</i>	movement in < prep <i>mà</i> ‘in’			<i>-`ŋ´</i>	into, within < prep <i>ŋ´</i> ‘in(to)’
<i>-xà</i>	movement down (motion verbs only)			<i>-`gá´</i>	downwards (all verbs)
				<i>-`dè</i>	(motion verbs only)
<i>-s</i>	inverse			<i>-`s´</i>	separative
				<i>-`s´</i>	increase (from below)
<i>-n/-ŋ</i>	tentative			<i>-`ŋ´</i>	action done a little

Table 10: Lamang-Hdi verbal extension correspondences

Hdi Group 4 and its systematic usage with preceding distal extension of Group 3 in terms of altrilocality vs. source-orientation as such appears to be a Hdi innovation. Note, however, that both Group 4 markers appear to be cognate with Lamang *-ú´* ‘auto-benefactive’ (= agent-affectedness/source-orientation) and the

allomorph $-\acute{v}\grave{v}$ of the ‘allative~ventive’ topographic extension. Obviously, both languages have rearranged common inherited morphological material and formed their own language-specific subsystems. Hdi Group 5 extensions are grammaticalizations of apparently very recent vintage and are absent in Lamang.

5. Conclusion

Both languages under review display elaborate systems of encoding movement and direction in their verbal grammars, including the mapping of salient topographic features of their habitat. The systems can be looked at from various vantage points which would reflect different theoretical and conceptual preoccupations.

In their description of Hdi, F/S for instance, identify a fundamental “point of view” category with a dichotomous distinction between “goal-orientation” and “source-orientation”. On this assumption, they are able to describe a highly aesthetic “root-and-pattern” system for Hdi verbs reminiscent of “root-and-pattern” in Semitic scholarship, in which the three qualities that are available for final vowels of verb stems, namely *a* – *i* – *u*, relate to and are marked by:

- *a* point of view of goal (= object affected by action/event, with subject in control),
- *u* point of view of source (= subject affected by action/event, not controlling it);
- *i* movement away.

In their analysis, further markers (such as tonal distinctions) can also be seen to contribute to the fundamental functional distinction of “point of view”. Their analysis and description, however, can be challenged on systematic and theoretical grounds and, at least in the view of the present author, does not stand the test of neither consistent internal reanalysis nor of contrastive comparison with closely related and neighbouring Central Chadic languages which have highly similar extension systems. The rather idiosyncratic “point of view” analysis has some major theoretical weaknesses and partly, at least, rests on questionable morphological analysis:

1. Theoretically, it relies on functional definitions of “goal” and “source” which add little or nothing to (a) the traditional distinction between transitive and intransitive verbs on the one hand, and verbs indicating movement/dislocation vs. verbs that do not, and (b) the received notion of a category of subject-affectedness in the derivational systems of Chadic verbs (including Hausa verbal grade 7).

2. It excessively expands to the whole verbal grammar a secondary contrast of goal- vs. source-orientation which should be restricted to instantiations of “altrilocality” as part of the “distal” extension subsystem.
3. It allows—*horribile dictu* for a Chadicist—several occurrences of the same markers in different positions in the same verbal suffix chain (which is consistently disallowed in related neighbouring languages with similar extension systems).
4. It also allows, quite counter-intuitively and hard to accept on semantic grounds, the co-occurrence of both goal- and source-orientation markers in the same verb stem (which would be expected to be mutually exclusive notions).

As such, the “point of view” theory as developed from and applied to Hdi constitutes a watertight theory that disallows falsification:

- With maximally only three distinctive vowels available in the language in the appropriate positions, practically every occurring verb form must be said to carry one of these markers (and intelligent semantic interpretation will always find a more or less plausible explanation for their occurrence!).
- A verb in Hdi is either transitive (= goal-oriented) or intransitive (= source-oriented); verbs of movement/dislocation allow either allative (= goal-oriented) or ablative (= source-oriented) readings.

The Hdi system could be analyzed—and profitably so, as I would claim—in much simpler terms that would match the received wisdom among Chadicists of strictly distinguishing between simple verb stems (with lexical final vowels: usually and by default this would be the vowel *a*) and extended verb stems that carry extension suffixes, some of which may be vocalic, and in certain instances (i.e., in the absence of intervening morphemes) may directly follow the verb root or base (such as *-í* and *-ú*). These extension suffixes would then still obey strictly to constraints regarding (a) single occurrence, and (b) fixed structural positions in the postradical suffix chain!

Nevertheless and irrespective of different or even conflicting theoretical and conceptual vantage points, it remains true that various interlocking conceptual categories are encoded in Hdi and Lamang and make up a highly complex system of derivational verbal morphology, in addition to more or less elaborate subsystems of specialized motion verbs that carry the basic meanings of ‘going’ and ‘coming’. Motion verbs and directional extensions (with all verbs, motion and non-motion verbs alike) are used to highlight both actions or events with regard to topographic features of the speakers’ habitat as well as to indicate maintained or shifted deictic centres within discourse. The categories that we find

encoded but that are organized, however, in different subsystems in both languages, are the following.

Mapping habitat in terms of topography (cf. fig. 1)

		<i>Lamang</i>		<i>Hdi</i>		
		Motion verbs	Non-motion verbs	Motion verbs only	All verbs	
					DISTAL	DISTAL +ALTRILOCAL
Same level of elevation	GOAL	-`ghà	-`v̀v̀ (vowel length)		-(a)ghá	-(a)ghà
	SOURCE	-`bè	-`b̀			-(a)ghú'
UPHILL		-`fè	-`f̀		-f(à)	
DOWNHILL		-`dè	-`gá'	-xà		

Table 11: Topographic extensions in *Lamang* and *Hdi*

Goal-orientation (ALLATIVE AND VENTIVE)

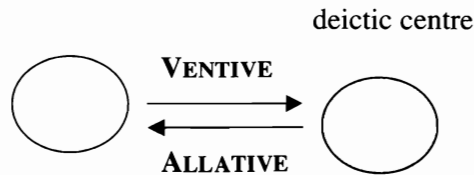


Figure 3: Directionality I (goal orientation): Allative vs. Ventive

(a) Lexicalization: the subsystem of “motion verbs”

	<i>Lamang</i>		<i>Hdi</i>
	IMPERFECTIVE	NON-IMPERFECTIVE	
ALLATIVE ‘go’	<i>dza-</i>	<i>la-</i>	<i>la-</i>
VENTIVE ‘come’	<i>skwa-</i>	<i>sa-</i>	<i>sa-</i>

Table 12: Subsystem of “motion verbs” in *Lamang* and *Hdi*

(b) ALLATIVE AND VENTIVE extension (with goal-orientation)

	<i>Lamang</i>		<i>Hdi</i>
	Motion verbs	Non-motion verbs	
ALLATIVE (GOAL)	-`ghà	-`v̀v̀ (vowel length)	-`dá
VENTIVE (GOAL)			-k/-g

Table 13: Goal oriented “allative” and “ventive” extensions in Lamang and Hdi

Source-orientation (ABLATIVE)

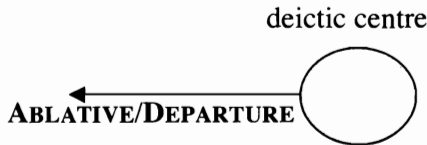


Figure 4: Directionality II (source-orientation): Departure (Ablative)

	<i>Lamang</i>	<i>Hdi</i>
ABLATIVE	-ù´	-f

Table 14: Source-oriented “ablative” in Lamang and Hdi

Altrilocal orientation (with additional goal- and source-orientation)

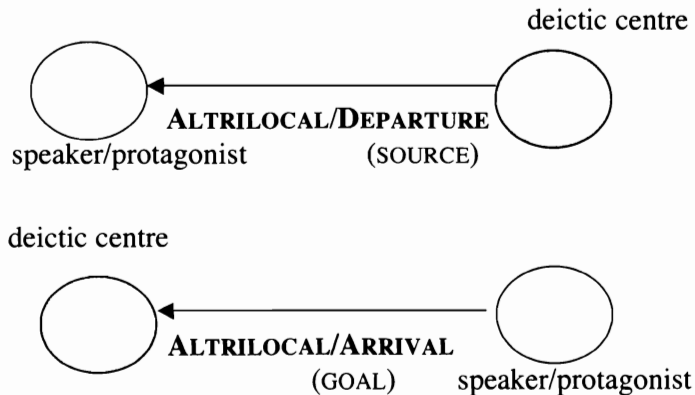


Figure 5: Directionality III: Altrilocality

Source- and goal-orientation: Departure vs. Arrival

	<i>Lamang</i>		<i>Hdi</i>	
	Motion verbs	Non-motion verbs	Distal	Distal modification
<i>Source:</i> ALTRILocal + DEPARTURE	(- 'bè)	(- 'b`)	(-aghá)	-aghú´
<i>Goal:</i> ALTRILocal + ARRIVAL				-aghà

Table 15: Goal vs. source oriented “altrilocality” in Lamang and Hdi

Note: Lamang does not possess a subsystem comparable to the “distal” category in Hdi. The extensions Lamang uses to convey the idea of “movement away” from a deictic centre are those referred to as “elative” and which correspond to the Hdi OUT extension.

Inner space orientation (INESSIVE, ILLATIVE, ELATIVE)

indicating location within or movement into or from within, a space/deictic centre that is conceived of as having an “inside”

deictic centre (with “inside”)



Figure 6 : Direction : Illative vs. Elative; Location : Inessive

	<i>Lamang</i>		<i>Hdi</i>	
	Motion verbs	Non-motion verbs	Motion verbs	Non-motion verbs
INESSIVE (be inside)	- 'ŋ`		- `gá	
ILLATIVE (go/come into)			-mà	
ELATIVE (go/come out of)	- 'bè	- 'b`	-b	-p

Table 16: “Inner space” extensions in Lamang and Hdi

Hdi and Lamang share considerable cognate lexical and derivational material with regard to verb roots (motion verbs) and the expression of directionality, some of it testifying to fairly recent and still transparent grammaticalization (from nouns, verbs, and prepositions). On the other hand, they also show remarkable structural, functional and lexical differences. This is what makes it difficult to assess the degree of genealogical and dialectological nearness or distance between them. Major structural differences pertain to, for instance,

- number of functional “slots” in the postradical suffix chain (including incorporated object pronouns: three in Lamang; six in Hdi),
- constraints on the combinability of extensions in the suffix chain (not treated in any detail in this paper),
- elaboration of a subgrammar of motion verbs which is almost non-existent in Hdi but highly developed in Lamang,
- sensitivity to inflectional aspect (IMPERFECTIVE vs. PERFECTIVE) of both derivational material (in both Lamang and Hdi) and motion verbs (Lamang only); this point was also not treated in any detail in the present paper.

Lamang and Hdi can be viewed and understood, at the same time, to be remote dialects within a dialect chain stretching along the border between Northern Nigeria and northern Cameroon, as well as very closely related sister languages within the Wandala-Lamang Group of Central Chadic (subbranch A). Depending on one’s own view on the matter, linguistic analyses and descriptions will differ in terms of highlighting the similarities or the differences, no matter how structurally shallow they may turn out to be. In any case, looking at Lamang and Hdi on the basis of the available major sources, reveals rich insights into fairly recent processes of language diversification from a common stock including independently ongoing grammaticalizations.

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