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Tone anticipation in Gbanu (Gbaya)

Kenneth S. Olson *

Abstract. In Gbanu, anticipatory ("leftward") tone spreading is more general than perseverative ("rightward") spreading. This is one counterexample to the observation that perseverative spreading is more natural (Hyman & Schuh 1974). Leftward H-Spread (/HLH/ → [HⓁHH]) occurs regularly, including in monomorphemic words. Downstep results from the anticipatory spread of the second High, delinking the Low. Rightward H-Spread (/HL-T/ → [HHⓁT]) is rarer, and it is restricted to nouns with a /HL/ melody. Gbanu provides one additional case showing that the geographic and genetic extent of Leftward H-Spread is wider than previously thought. Besides Gbaya, it is also attested in Kwa, Gur, Bantu A, West Central Sudanic, and Nilotic.

Keywords. Typology; tone; floating tones; anticipatory spreading; Gbaya; Gbanu

1. Introduction. Hyman & Schuh (1974: 87–88) and Hyman (2007: 4–5) claim that rightward (left-to-right, perseverative, progressive) tone spreading is crosslinguistically more common and natural than leftward (right-to-left, anticipatory, regressive) tone spreading. They also claim that cases of leftward tone spreading are limited geographically to the Interlacustrine ("between lakes") Bantu region (Hyman 2007: 19–20), and that they only occur in accentual systems that have a H-Ø privative opposition. This would preclude an analysis that involves a floating Low tone.

In this paper, I present a case from Gbanu (Moñino 1981, 1995) in which a leftward tone spreading rule is more general than a rightward tone spreading rule in that language. The most straightforward analysis of this leftward spreading rule involves a floating Low, which indicates that the tonal opposition is equipollent. Furthermore, I show that this rule is not limited to Gbanu, but that it is attested across Africa, also occurring in Kwa, Gur, Bantu A, West Central Sudanic, and Nilotic.

Gbanu (ISO 639-3 code [gbv]) is spoken by about 95,000 people in the western part of Central African Republic. It is part of the Gbaya-Manza-Ngbaka (or more simply, "Gbaya") family.

I discuss Leftward H-Spread (the anticipatory process) in §2 and Rightward H-Spread (the perseverative process) in §3. I provide an example of the occurrence of both processes in a single phrase in §4, and I compare the two processes in §5. In §6, I discuss several issues related to this analysis. Finally, I provide some concluding remarks in §7.

2. Leftward H-Spread (LHS) in Gbanu. The first process we examine is *Leftward H-Spread* (LHS). This label highlights the contrast between this process and the rightward spreading process discussed in §3. Others have used the term *Plateauing* (e.g. Paster 2003, Roberts et al. 2016), which focuses on the fact that the output involves all surface High tones (albeit with downstep), perhaps to satisfy a crosslinguistically common *HLH constraint (Cahill 2008).

In LHS, an underlying /HLH/ tone sequence becomes [H$^{\downarrow}$HH] on the surface, as shown in (1a). In autosegmental terms (Goldsmith 1976), when there is a HLH sequence of tones, the Low is delinked from its tone-bearing unit (TBU) and becomes floating. Then, the following High

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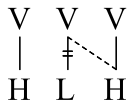
associates with the same TBU, effectively spreading the tone to the left, cf. (1b). The floating Low triggers a downstep, as is often assumed in the literature.

(1) a. /HLH/ → [Hꜜ**H**H] ꜜ = downstep

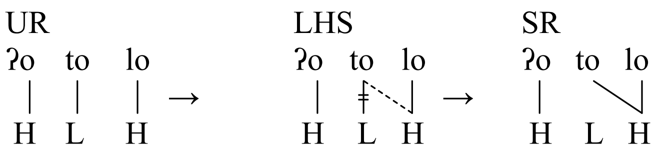
b. 

An example of the application of LHS involving a noun is shown in (2), cf. Moñino's (1995: 191) *règle b*, 1–5. When [nɛ̀] 'COM', with a Low tone, precedes [tòló] 'dog', the subsequent underlying LLH pattern is retained on the surface: [nɛ̀ tòló] 'with the dog'. However, if [ʔó] 'PL', with a High tone, precedes [tòló], the subsequent underlying pattern is HLH. This meets the structural description of LHS, resulting in [ʔó ꜜtóló] 'the dogs'. An autosegmental derivation of this phrase is given in (3).

(2) LHS with nouns (Moñino 1995: 191)

a. [tòló]	[_ –]	'dog'	note downdrift
[nɛ̀]	[_]	'COM'	comitative: 'with'
[ʔó]	[¯]	'PL'	plural

b. /nɛ̀ tòló/ →	[nɛ̀ tòló]	[_ _ –]	'with the dog'
/ʔó tòló/ →	[ʔó ꜜ**tó**ló]	[¯ – –]	'the dogs'

(3) 

'the dogs'

LHS also occurs on verbs, cf. Moñino's (1995: 191) *règle b*, 6–7. An example is given in (4). In Gbanu, the verb root is underlyingly toneless, and the tones that occur on the verb mark the tense-aspect-mood (TAM) category. For example, a /LH/ pattern marks perfective (PFV) aspect, while a /H/ pattern marks imperfective (IPFV) aspect. When a bisyllabic verb is preceded by a pronoun that bears a Low tone (e.g. [ʔà̰] '3SG'), a LLH sequence (PFV) or LHH sequence (IPFV) results. In neither case is the structural description of LHS met, so the underlying patterns surface as such. The first two examples in (4b) show this.

(4) LHS with verbs (Moñino 1995: 190–191)

a. [ʔà̰]	[_]	'3SG'	Moñino: '*il*'
[mí]	[¯]	'1SG'	Moñino: '*je*'
[ɲɔŋɔ]		'eat'	verbs are underlyingly toneless
[kàm]	[_]	'ball (of dough)'	e.g. cassava ball
/H/	[¯]	'IPFV'	imperfective (Moñino: *inaccompli*)
/LH/	[_ ¯]	'PFV'	perfective (Moñino: *accompli*)

b. /ʔà̰ ɲɔ́ŋɔ́ kàm/ →	[ʔà̰ ɲɔ́ŋɔ́ kàm]	[_ ¯ ¯ _]	'S/he eats (cassava) ball.'
/ʔà̰ ɲɔ̀ŋɔ́ kàm/[1] →	[ʔà̰ ɲɔ̀ŋɔ́ kàm]	[_ _ ¯ _]	'S/he ate (cassava) ball.'
/mí ɲɔ́ŋɔ́ kàm/ →	[mí ɲɔ́ŋɔ́ kàm]	[¯ ¯ ¯ _]	'I eat (cassava) ball.'
/mí ɲɔ̀ŋɔ́ kàm/ →	[mí ꜜ**ɲɔ́**ŋɔ́ kàm]	[¯ – – _]	'I ate (cassava) ball.'

[1] The word for 'eat' exhibits some unexplained vocalic variation.

Now let's consider the case where a bisyllabic verb is preceded by a pronoun bearing a High tone (e.g. [mí] '1SG'). If the verb is in the imperfective aspect, a HHH sequence results, which surfaces unchanged. On the other hand, if the verb is in the perfective aspect, a HLH sequence results, which meets the structural description of LHS, so it surfaces as H$^{!}$HH. This is the case in the last example of (4b).

LHS also occurs within monomorphemic words, cf. Moñino's (1995: 191) *règle a*. For example, the word /kpélèŋé/ 'Burkea africana'[2] surfaces with a [H$^{!}$HH] pattern: [kpé$^{!}$**lɛ́**ŋé] (Moñino 1995: 191). Note that a [HLH] surface melody occurs in cognates from most of the other Gbaya languages, and the HLH melody was reconstructed for the Proto-Gbaya form: *kpéŋèĺé (Moñino 1995: 636). Several more monomorphemic cases of LHS are provided by Moñino (1995: 191).

Several observations are in order. First, as we saw earlier, LHS occurs with both nouns and verbs. Second, the data are limited, but there appear to be exceptions to LHS. Moñino (1995) provides a handful of cases on p. 192. So, while LHS usually applies when it can, we cannot say definitively that LHS applies across the board. More research is necessary on this point. Third, among the roughly 15 Gbaya languages, LHS only occurs in Gbanu. This raises the question of how the process arose. There is a diachronic rule *LH>M in the Gbaya language Suma [sqm] that resembles LHS, but without the initial High (Bradshaw 1994: 414, Olson 2026). Plus, the West Central Sudanic language Vale [vae] has a post-lexical version of LHS (Olson 2024: 465–467, his "*HLH Plateauing*"). Both languages are relatively close to Gbanu geographically, so an explanation involving contact is possible.

3. Rightward H-Spread (RHS) in Gbanu. Now we turn our attention to the second process we'll look at, which I call *Rightward H-Spread* (RHS). This label focuses on the fact that the direction of tone spreading is the opposite of LHS. However, as we'll see, it should not be construed as the mirror-image of LHS in Gbanu.

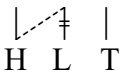
In RHS, when a noun with an underlying /HL/ tone pattern is immediately followed by another tone, the tone pattern on the noun changes to [HH], cf. (5b, c). If the following tone is Low, the surface pattern becomes [HHL], as shown in (5b). If on the other hand the following tone is High, a downstep occurs [HH$^{!}$H], as shown in (5c). Note that if the noun is spoken in isolation or is in phrase-final position, the underlying pattern of the noun emerges on the surface [HL], cf. (5a).

The change of the Low to High on the noun, combined with the emergence of a downstep, suggests a spreading process with a floating Low. The autosegmental rendering of the rule in (5d) shows both properties.

(5)

a.	/HL/ →	[HL]	in isolation or phrase-final
b.	/HL-L/ →	[H**H**L]	before L
c.	/HL-H/ →	[H**H**$^{!}$H]	before H

d.

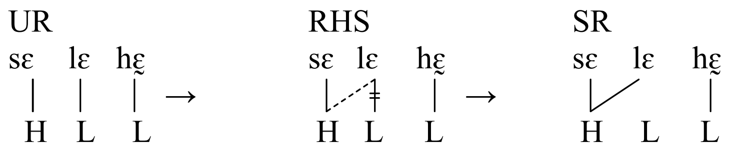


An example of the application of RHS is shown in (6). When [sɛ́lɛ̀] 'assegai' occurs in phrase-final position, as in /ʔa̰ bá sɛ́lɛ̀/ 's/he takes an assegai', the tones on the noun remain un-

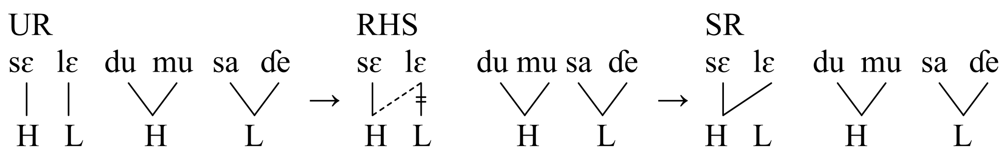
[2] A deciduous flat-top tree that grows in sub-Saharan Africa.

changed: [ʔà̰ bá sɛ́lɛ̀]. When [hɛ̰̀] ‘DEM’, with a Low tone, follows [sɛ́lɛ̀] ‘assegai’, the underlying pattern /HLL/ changes to [HHL], i.e. /sɛ́lɛ̀ hɛ̰̀/ → [sɛ́**<u>lɛ́</u>** hɛ̰̀] ‘this assegai’. An autosegmental derivation of this phrase is given in (7). When [dúmú] ‘pierce (IPFV)’, with High tones, follows [sɛ́lɛ̀] ‘assegai’, the underlying pattern /HLH/ changes to [HH$^{\downarrow}$H], e.g. /sɛ́lɛ̀ dúmú sàɗɛ̃̀/ → [sɛ́**<u>lɛ́</u>** $^{\downarrow}$dúmú sàɗɛ̃̀] ‘The assegai pierces the animal’, cf. Moñino’s (1995: 193) *règle d*. An autosegmental derivation of this phrase is given in (8).

(6)	a. [hɛ̰̀]	[_]	‘DEM’		demonstrative
	[ba]		‘take’		verb roots are toneless
	[dumu]		‘pierce’		verb roots are toneless
	[sɛ́lɛ̀]	[¯ _]	‘assegai’		type of spear
	[sàɗɛ̃̀]	[_ _]	‘animal’		
	/H/	[¯]	‘IPFV’		imperfective (*inaccompli*)
	b. /ʔà̰ bá sɛ́lɛ̀/ →		[ʔà̰ bá sɛ́lɛ̀]	[_ ¯ ¯ _]	‘S/he takes an assegai.’
	/sɛ́lɛ̀ hɛ̰̀/ →		[sɛ́**<u>lɛ́</u>** hɛ̰̀]	[¯ ¯ _]	‘this assegai’ – cf (7)
	/sɛ́lɛ̀ dúmú sàɗɛ̃̀/ →		[sɛ́**<u>lɛ́</u>** $^{\downarrow}$dúmú sàɗɛ̃̀]	[¯ ¯ – – _ _]	‘The assegai pierces the animal.’ – cf (8)

(7)


‘this assegai’

(8)


‘The assegai pierces the animal.’

Several observations are in order. First, in contrast with LHS, RHS only occurs with nouns, and these nouns are limited to those that have an underlying /HL/ melody. Second, RHS is not attested within monomorphemic words. Third, RHS requires the presence of a following tone to apply. This tone can be either a High or a Low tone. Fourth, Olson (2025) provides examples where RHS appears to have been generalized in other Gbaya languages so that it applies to *all* nouns with a /HL/ melody, regardless of whether there is a following TBU. In Mbodomo [gmm], a sound change caused all nouns with a *HL melody in Proto-Gbaya to become HH in the extant language. In Bhofi [bff] and Southeast Bhogoto [bdt], a synchronic rule that spreads a High to the right applies across the board to all underlying /HL/ nouns. Finally, the geographically close West Central Sudanic language Nduga [ndy] has a rightward spread rule reminiscent of (5d) (Olson, forthcoming), so contact may have been involved in its genesis.

4. Example: Both rules in one phrase. Both LHS and RHS can occur in the same phrase. Moñino provides an example of this that we will examine in this section, shown in (9). Note that there are four downsteps in the example.

The phrase includes the word, /gbà-tṵ́ṵ̀/, which Moñino (1995) glosses as ‘*buffle*’. This may be a synonym of /yélè/ ‘buffalo’ (# 698, p. 607). The word is apparently a compound comprised of /gbà/ ‘large’ (# 294, p. 531) and /tṵ́ṵ̀/ ‘greater spot-nosed monkey (cercopithecus nictitans)’ (# 706, p. 608). Moñino glosses the latter as ‘*cercopithèque hocheur*’.

(9) Example phrase with both LHS and RHS (Moñino 1995: 190, 193)

/dé	gbà-tṷ̀ṷ̀	kɔ́m	kpàkáná	ɗìé/
[dé	ˈ**gbá**-tṷ́**ṷ́**	ˈkɔ́m	ˈ**kpá**káná	ˈ**ɗ̃í**é]
˥	˥ ˥˥	˦	˩ ˩ ˩	˩˩
good	buffalo sp.	1SG.POSS	eight	only

'I only have eight good buffaloes.'

A derivation of the phrase is given in Example (10). The underlying representation (UR) is given in (10a). I assume that RHS applies first, in (10b), followed by LHS in (10c), with the surface representation (SR) in (10d).

The word /gbà-tṷ̀ṷ̀/ 'buffalo' is followed by /kɔ́m/ '1SG.POSS'. This juxtaposes a noun having a /HL/ underlying tone melody with a following word bearing a High tone. The resulting /HLH/ sequence satisfies the structural decription of RHS, yielding [gbà-tṷ́**ṷ́** ˈkɔ́m], shown in autosegmental notation in (10b).

In (10c), we see that the three-remaining underlying /HLH/ sequences in the phrase all trigger the application of LHS. The resulting surface representation shown in (10d) includes four floating Low tones, which correspond to the four downsteps in (9).

(10) a. UR

de	gba-tuu	kɔm	kpakana	ɗie
H	L H L	H	L H	L H

b. Rightward H-Spread (RHS)

de	gba-tuu	kɔm	kpakana	ɗie
H	L H L	H	L H	L H

c. Leftward H-Spread (LHS)

de	gba-tuu	kɔm	kpakana	ɗi e
H	L H L	H	L H	L H

d. SR

de	gba-tuu	kɔm	kpakana	ɗi e
H	L H L	H	L H	L H

Given the limited data in Moñino, it is not clear if LHS would apply to /gbà-tṷ̀ṷ̀ kɔ́m/ given the opportunity. More research is necessary to evaluate the ordering of RHS and LHS.

5. Comparison of the two rules. Here we pause briefly to review what we have seen so far. First, we have seen that LHS occurs with both nouns and verbs, whereas RHS only occurs with nouns. Second, RHS has the additional limitation of occurring only with nouns having a /HL/ underlying tone melody. Third, LHS can occur within monomorphemic words, but RHS does not. Fourth, because of the fewer restrictions on its structural description, LHS occurs more often than RHS in Gbanu. All these factors move us towards the conclusion that LHS is a more general and common rule than RHS in Gbanu.

6. Discussion. In this section, I discuss issues related to the analysis of tone spread in Gbanu. First, I discuss the geographic distribution of LHS. Second, I provide evidence that LHS involves a floating Low tone. Third, I clarify that RHS is independent of a presumed tonal /H/ morpheme.

6.1. GEOGRAPHIC EXTENT OF LEFTWARD H-SPREAD. A cursory glance at the literature shows that LHS occurences are relatively common across Africa. Twelve languages are listed in Table 1, stretching from Kwa in West Africa to Nilotic in the east.

Language	ISO	Country	Family	Source
Ga	[gaa]	Ghana	Kwa	Paster (2003: 21)
Akan	[aka]	Ghana	Kwa	Dolphyne (1988: 60–61)
Foodo	[fod]	Benin	Kwa	Plunkett (2009: 132–133)
Gichode	[acd]	Ghana/Togo	Kwa	Keith Snider, p.c.
Kɔnni	[kma]	Ghana	Gur	Cahill (2007: 312)
Kabiye	[kbp]	Togo	Gur	Roberts et al. (2016: 121)
Kusuntu	[bqg]	Togo	Gur	Schrader (2025: 7)
Mokpwe	[bri]	Cameroon	Bantu A	Marlo & Odden (2007: 23)
Eton	[eto]	Cameroon	Bantu A	Van de Velde (2008: 61–62)
Vale	[vae]	CAR	W. Central Sudanic	Olson (2024: 463–468)
Gbanu	[gbv]	CAR	Gbaya	Moñino (1995)
Tanzanian Maa	[mas]	Tanzania	Nilotic	Payne (2012: 50)

Table 1. Some African languages with LHS

LHS is not identical in all these languages. In some cases, it refers to morphological information (e.g. Foodo), and in some languages, it is accompanied by a mirror image process of RHS (e.g. Gichode). What ties these cases of LHS together is an analysis involving a floating Low accompanied by the leftward spread of a following High.

As we see from Table 1, LHS occurs over a large geographic region comprised of a variety of language families. There are several possible ways to interpret this finding: (1) LHS is an areal feature that crosses language family boundaries as it spreads by contact, (2) LHS is prone to arising spontaneously and has arisen independently in these various families, (3) some of the languages share an inherited feature (e.g. in Kwa or Gur), or (4) some combination of the above. A more detailed study of LHS in Africa would be necessary to understand this further.

Interestingly, it appears that it is only this one type of leftward tone spreading that occurs across this large region. Other types of leftward tone spreading, particularly those where there is a H-∅ privative opposition, appear to be limited to Interlacustrine Bantu, as noted by Hyman & Schuh (1974) and Hyman (2007).

6.2. PRIVATIVE (H-∅) VS. EQUIPOLLENT (H-L) OPPOSITION. Nearly all the sources in §6.1 above assume an analysis that involves the delinking of a Low, accompanied by the anticipatory spread of the following High. A floating Low means that the Low plays an active role in the phonology, and consequently the High-Low opposition cannot be construed as privative (H-∅).

But employing a floating Low is an analytical choice, and it is possible to analyze LHS without resorting to it. Hyman (1979: 14; 2007: 3, 18) does just this, by suggesting the following analysis: First, /HLH/ becomes HL$^{\downarrow}$H by downdrift, Then, the Low raises to the same level as the following High via vertical assimilation, yielding H$^{\downarrow}$HH on the surface.

The advantage of Hyman's analysis is that it obviates the need for a floating Low in the analysis, opening the possibility of an analysis with a privative (H-∅) opposition. The disad-

vantage is that it loses the generalization that downstep typically involves a floating Low, regardless of whether it results from an anticipatory or a perseverative process. This approach is particularly useful for languages which have both processes, such as Gichode.

6.3. TONAL /H/ MORPHEME. Moñino (1995: 69, 180, 196) posits a tonal /H/ morpheme that associates a determiner with its head noun. This is one of two types of determiner-noun relationships that he posits for the Gbaya languages (cf. p. 69). Samarin (1966: 34, 44, 47) calls the tonal /H/ morpheme in the related language Gbeya [gbp] a "relational morpheme." The effect this proposed /H/ morpheme has on some of the tonal behavior of Gbanu resembles the tonal behavior of RHS.

In this section, I provide an overview of the tonal behavior that results from this proposed /H/ morpheme and show that, while in some respects it is similar to the tonal behavior that results from RHS, it is not the same, and hence the two phenomena are distinct.

It should be noted that what Moñino considers to be a "determiner" has a broader sense than what is typically supposed elsewhere, such as for English (cf. Bloomfield 1984: 203–206).[3] For Gbanu, Moñino notes that the /H/ morpheme occurs in associative constructions, with locative prepositions, with qualifying adjectives derived from adverbs, and even with verbs in the perfective aspect (pp. 196–197).

Most examples that Moñino provides come from associative (genitive, possessive) constructions. Such tonal associative morphemes are common in Africa (Cahill 2000), so on the surface the /H/ morpheme is not an unreasonable hypothesis for Moñino to make.

Example (11) shows the tonal behavior that results when head nouns with various underlying tone melodies occur in associative constructions. In (11a), the tone on a head noun with a /H/ underlying melody remains High. In (11b), a head noun with a /HL/ underlying melody becomes [HH] before another tone. This resembles RHS. In (11c), a head noun with a /L/ underlying melody becomes [LH] before a following Low. The raising of the tone appears to be motivated by dissimilation. And in (11d), a head noun with a /LH/ underlying melody becomes [LL] before a following High. This also appears to be a case of dissimilation, but in the opposite direction.

(11) a. /H/ (no change)

/nú ˊ wíwílì/ →	[nú wíwílì]	'mouth of man'
/nú ˊ tòɔ̀/ →	[nú tòɔ̀]	'door (lit. mouth of house)'

b. /HL/ → [HH] / __T *RHS?*

/záà ˊ dóm/ →	[zá**á** dóm]	'horn of kob'
/záà ˊ sàdɛ̀/ →	[zá**á** sàdɛ̀]	'horn of animal'

c. /L/ → [LH] / __L *Dissimilation (Raising)*

/dòm̀ ˊ gɔ́/ →	[dòm̀ gɔ́]	'tail of snake'
/dòm̀ ˊ sàdɛ̀/ →	[dò**ḿ** sàdɛ̀]	'tail of animal'

d. /LH/ → [LL] / __H *Dissimilation (Lowering)*

/ndàlá ˊ tɛ̀/ →	[ndàlá tɛ̀]	'skin of body'
/ndàlá ˊ nú/ →	[ndà**là** nú]	'lips (lit. skin of mouth)'

As seen in (11b) above, the tonal behavior that results from the proposed /H/ morpheme attaching to a head noun with an underlying /HL/ melody resembles the behavior we would expect

[3] Moñino refers to a determiner as a "*déterminant*" and its head noun as a "*déterminé*". "*La détermination*" is the function performed by determiners.

from RHS. If the following tone is Low, the tonal behavior is the same as with RHS, i.e. the tone on the second syllable changes from Low to High (e.g. /záà ´ sàdɛ̀/ → [zá**á** sàdɛ̀] 'horn of animal')

If, however, the following tone is High, the tonal behavior is slightly different from what we expect with RHS. The tone on the second syllable does change from Low to High, but unlike with RHS, there is no accompanying downstep (e.g. /záà ´ dóm/ → [zá**á** dóm] 'horn of kob').

Given the data in (11b), it is not clear if (1) RHS applies and the /H/ morpheme causes additional modification of the tones, or (2) the /H/ morpheme *replaces* the Low on the second TBU so that RHS does not apply. More research is necessary on that.

Consider the examples in (12), which all have a head noun with a /HL/ underlying tone pattern. In (12a), /tṵ́ṵ̀ kpóm/ → [tṵ́**ṵ́** ꜜkpóm] 'one greater spot-nosed monkey' is a simple noun phrase. It meets the structural description of RHS (HL-T, where T=H), so downstep occurs. On the other hand, the associative construction /záà ´ dóm/ → [zá**á** dóm] 'horn of kob' (repeated from 11b), does not exhibit downstep, despite the fact that a rightward spread appears to have occurred. Note that the underlying tone patterns of the two phrases are the same except for the presence of the /H/ morpheme in the latter.

(12)	a.	/tṵ́ṵ̀ kpóm/ →	[tṵ́**ṵ́** ꜜkpóm]	'one greater spot-nosed monkey'	p. 193
		/záà ´ dóm/ →	[zá**á** dóm]	'horn of kob'	p. 196
	b.	/tṵ́ṵ̀ kpàkáná/ →	[tṵ́**ṵ́** kpàkáná]	'eight greater spot-nosed monkeys'	p. 193
		/záà ´ zàmbɛ́lɛ́/ →	[zá**á** ꜜz**á**mbɛ́lɛ́]	'horn of bushbuck'	p. 196

In (12b), /tṵ́ṵ̀ kpàkáná/ → [tṵ́**ṵ́** kpàkáná] 'eight greater spot-nosed monkeys' is a simple noun phrase. It includes an underlying HL-T (T=L) pattern, so RHS applies, but in this case the tone on the first TBU of the second word is Low, so downstep does not occur. In contrast, the associative construction /záà ´ zàmbɛ́lɛ́/ → [zá**á** ꜜz**á**mbɛ́lɛ́] 'horn of bushbuck' *does* have downstep, presumably the result of LHS triggered by the presence of the /H/ morpheme. Once again, the underlying tone patterns of the two phrases are identical except for the presence of the /H/ morpheme in the latter. In other words, the difference between the two surface tone patterns results from the presence of the proposed /H/ morpheme.

Moñino does not provide a formal analysis of the tonal /H/ morpheme. This is also beyond the scope of the current paper, but a comment is in order.

It is conceivable that a /H/ morpheme attaching to the end of the head noun could be construed to account for some of the tone patterns in (11). But (11d) is particularly problematic. It is not clear how the attachment of a /H/ morpheme could motivate the *lowering* of a final High to Low. Samarin (1966) goes so far as to say, "this alternation [11d] is completely independent of the phonemic changes involved with the occurrence of the relational morpheme" (p. 34). Moñino prefers to treat all four processes as one for the sake of economy and functional unity (p. 180), but the lack of a formal analysis leaves unanswered the question of *how* the processes are structurally unified.

To sum up, the key takeaway from this section is that RHS and the tonal /H/ morpheme are distinct phenomena in Gbanu. RHS is an independent process that occurs when its structural description is met.

7. Conclusion. In this paper, I have provided an example from the Gbanu language in which a leftward spreading process is more general than a rightward spreading process. I've also shown that one particular type of leftward spreading has a broader geographic reach than previously thought. Despite these observations, it does appear that the general claim of Hyman & Schuh

(1974) and Hyman (2007) that rightward spreading is more common crosslinguistically than leftward spreading still holds.

There are several areas of further research that could grow out of this paper. First, I have just scratched the surface in my crosslinguistic study. There are likely many more languages in Africa that exhibit LHS. While many of the cases are likely due to borrowing, it would be good to investigate to what extent shared inheritance and innovation play a role.

Second, it would be good to examine in detail the types and the degree of exceptions to Leftward H-Spread, as mentioned in §2.

Third, as mentioned in §6.3, Moñino did not provide a formal analysis of his tonal /H/ morpheme. It would be valuable to see if such a formal analysis is possible, and to see how the examples in that section would be formalized.

Fourth, Hyman (2007: 18, 20) suggests that anticipatory spreading processes only occur under "special circumstances," such as the presence of edge effects. On the other hand, some authors (e.g. Schrader 2025) have indicated that LHS is post-lexical in some languages, occuring everywhere that it can occur. A more in-depth study could shed light on what additional requirements, if any, are necessary for the presence of anticipatory spread.

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