The distribution and function of "noun class" morphology in Shupamem

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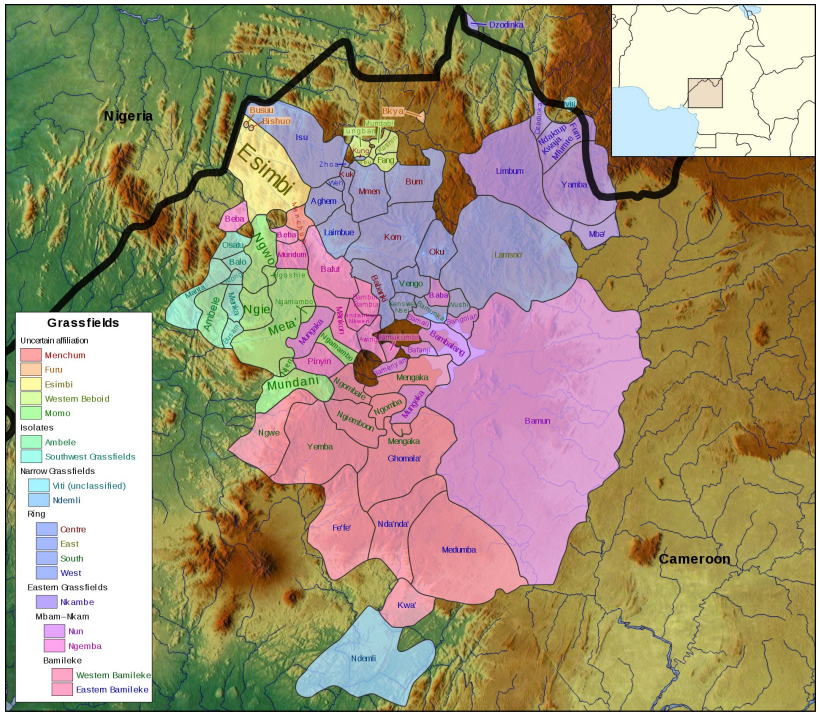
Introduction

- Shupamem (ISO 639-3 bax; also 'Bamum') is a Grassfields language of Cameroon
- Described in Nchare (2012)
- Data presented here based on original fieldwork with A.L. Nchare, 02/2019–present



Grassfields languages

Roadmap

- Background on noun class systems
- Shupamem morphology sensitive to noun class
  - Prefixes beginning with /m/ and /p/
  - Prenasalization
  - Tonal replacement and reduplication
  - Zero-marking
  - Agreement
- Building a noun class paradigm
- Comparison with other noun class/gender systems

Noun classes

- Most subgropus of Niger-Congo have been described as having "noun classes"
  - "Traces of noun classes have been observed in virtually all of the postulated sub-branches of Niger-Congo, with the possible exception of Mande." (Hyman et al., 1970, 185)
  - Noun class system reconstructed to Proto-Bantu Meinhof (1906, 6–27), and to Proto-Benue-Congo (de Wolf, 1971, 51–59), which includes Grassfields.
- Groups of nouns are marked with distinctive morphology
  - Often corresponds to semantic classes

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Building a noun class paradigm

Comparison with other noun class/gender systems

/m-/ and /p-/

Two lexical items always co-occur with the bare consonants /m-/ and /p-/ in the singular and plural respectively:

(1) *m-ɨ̀n* ‘person’; pl. *p-ɨ̀n*

(2) *m-ɔ́n* ‘child’; pl. *p-ɔ́n*

/mə-/ and /pə-/

Other lexical items always co-occur with /mə-/ in the singular and /pə-/ in the plural:

(3) *mə̀-^{m}bà* ‘man’; pl. *pə́-^{m}bà*

(4) *mə̀-^{ŋm}gbíə* ‘woman’; pl. *pə́-^{ŋm}gbīə*

(5) *mə́-sì* ‘bird’; pl. *pə̂-sì*

Two or four morphemes?

- It is possible that the *m-* in *m-ɨ̀n* ‘person’ and the *mə-* in *mə̀-^{m}bà* ‘man are allophones of a single prefix *m(ə)-*. (And likewise for *p(ə)-*.)
- No native Shupamem vowel-initial roots other than *ɨ̀n* ‘person’ and *ɔ́n* ‘child’.
- Schwa-epenthesis elsewhere in Shupamem:

(6) a. /bâːŋk/ ‘bank’ → [bâːŋk]

b. /bâːŋk-ʃá/ ‘bank-1sg’ → [bâːŋ.kə̀.ʃá]

Semantic content

- All *m(ə)-/p(ə)-* nouns presented so far are animate.
- All are classes of humans except *mə́-sì* ‘bird’, which may be marked to avoid homophony with *sí* ‘black’ etc.

Other uses

- *m(ə)-/p(ə)-* is also used productively to form the diminutive:
  - *ɲí* ‘machete’; pl. *ɲí*
  - *mə́-ɲì* ‘knife’; pl. *pə́-ɲì*
- Additionally, there are two words for which *m(ə)-/p(ə)-* is optional:
  - *mə̀-ᵐᵑvǐ* ‘goat’; pl. *pə́-ᵐᵑvì* or *ᵐᵑvǐ*
  - *mə̀-ᵐᵑvɨ́* ‘dog’; pl. *pə́-ᵐᵑvɨ̀* or *ᵐᵑvɨ́*
  - The non-prefixed forms were translated by the speaker as plurals; whether the singular can also be non-prefixed is uncertain.

Ø- and *pà-*

- The most common sg./pl. noun pattern is unmarked singular and *pà* in the plural:

(7) *wă* 'father'; pl. *pà-wă*

(8) *tɨ́tɨ́* 'tree'; pl. *pà-tɨ́tɨ́*

(9) *mɨ̀t* 'husband'; pl. *pà-mɨ̀t*

(10) *jăʔfú* 'leaf'; pl. *pà-jăʔfú*

(11) *gbájì* 'lion'; pl. *pà-gbájì*

(12) *kə̀pú* 'pig'; pl. *pà-kə̀pú*

(13) *ɣɛ́ːn* 'thief'; pl. *pà-ɣɛ́ːn*

(14) *kám* 'crab'; pl. *pà-kám*

(15) *jáː* 'disease'; pl. *pà-jáː*

(16) *jàː* 'viper'; pl. *pà-jàː*

Usage of *pà-*

- Words that take *pà-* do not seem to form any semantic class.
- So pervasive that it may be the 'default' pluralization strategy.
- Limited to 1/2-syllable words.
- Loanwords take *pà-* if under 3 syllables; tone change only if 3+ syllables:

(17) *lóːtà* 'doctor'; pl. *pà-lóːtà* (2σ; *pà-*)

(18) *ɔ̀dìnàtə̂* 'computer'; pl. *ɔ̌dínátə̂* (3σ; LHL)

Singular Ø- with plural N-

- Words that are unmarked in the singular and take a prenasalized onset (/N-/) in the plural fall into a few semantic classes:

Weapons/tools

(19) *kùː* ‘spear’; pl. *ᵑkùː*

(20) *kɛ́t* ‘arrow’; pl. *ᵑkɛ́t*

Other hard objects

(21) *wə́* ‘rock’; pl. *ᵑgʷə́*

(22) *pùm* ‘egg’; pl. *ᵐbùm*

Body parts

(23) *pɛ̀* ‘thigh’; pl. *ᵐbɛ̀*

(24) *sùː* ‘tooth’; pl. *ⁿsùː*

(25) *pàpʃə̀* ‘wing’; pl. *ᵐbápʃə̀*

(26) *pùə* ‘arm’; pl. *ᵐbùə*

(27) *lí* ‘eye’; pl. *mí*

Singular /N-/ with plural Ø-

- Words that have a prenasalized onset (/N-/) in the singular and are unmarked in the plural generally refer to social roles:

(28) ^{n}*sún* ‘friend’; pl. *sún*

(29) ^{n}*zɨ̀ːm* ‘witch’; pl. *pá-rɨ̀ːm*

(30) ^{n}*tɛ̀sɨ́* ‘chief’; pl. *tɛ̀sɨ́*

(31) ^{ŋ}*gɨ̀ːn* ‘stranger/guest’; pl. *ɣɨ̀ːn*

(32) ^{ŋ}*gàː* ‘someone’; pl. *ɣǎ*`

HL tonal replacement

- A number of nouns surface with changed tones in the plural.
- These nouns do not form any obvious semantic class.
- The most common pattern is an HL melody which replaces the lexical tone:

(33) *lɛ̀rwà* ‘book’; pl. *lɛ́rwà*

(34) *ᵑgi̋ᵑgà* ‘grass’; pl. *ᵑgíᵑgà*

(25) *pàpʃə̀* ‘wing’; pl. *ᵐbápʃə̀*

Reduplication and tonal alignment

- Monosyllables that surface with HL plurals are reduplicated.
- Stems with short vowels or diphthongs (/iə/ /ɨə/ /uə/) surface with H.L:

(35) $^{n}sɨ́m$ ‘farm’; pl. $^{n}sɨ́m^{n}sɨ̀m$

(36) $^{n}dàp$ ‘house’; pl. $^{n}dáp^{n}dàp$

(37) *síə* ‘tomb’; pl. *síəsìə*

- Stems with long vowels surface with HL.LL:

(38) *vɨ́ːt* ‘hole’; pl. *vɨ̂ːtvɨ̀ːt*

- Some exceptions exist:

(39) *pɛ́t* ‘liver’; pl. *pɛ̂tpɛ̀t* (Expected: *pɛ́tpɛ̀t*)

(40) $^{n}dɔ̀ːn$ ‘sin’; pl. $^{n}dɔ́ːn^{n}dɔ̀ːn$ (Expected: $^{n}dɔ̂ːn^{n}dɔ̀ːn$)

Domain of tonal replacement

- HL tonal replacement can affect a domain larger than the stem.
- For example, it can apply across a compound word:

(41) a. ᵑkə̀p ᵑkɛ̀
bank water
'beach'

b. ᵑkə́p ᵑkɛ̀
HL/bank water
'beaches'

LHL tonal replacement

- Some nouns show up with an LHL melody in the plural:

(42) *ᵐvɬ̂əŋàm* ‘gorilla’; pl. *ᵐvɬ̌əŋàm*

(43) *ᵐfùᵐfù* ‘lung’; pl. *ᵐfǔᵐfù*

- Like with HL-tonal replacement, monosyllables with LHL are reduplicated:

(44) *ᵐfỳt* ‘feather’; pl. *ᵐfỳ̌tᵐfỳt*

(45) *sɛ̀ːt* ‘magic’; pl. *sɛ̌ːtsɛ̀ːt*

- There is one exception:

(32) *ᵑgàː* ‘someone’; pl. *ɣǎ˴* (not *ɣǎɣà*)

Tonal alignment: HL vs. LHL

- HL is aligned to the first two morae of the phonological word, L spreading from the second to last morae:

(38) *vɨ́ːt* ‘hole’; pl. *vɨ̂ːtvɨ̀ːt*

- However, the second L of LHL shifts to the end of the word, and the H spreads to the right:

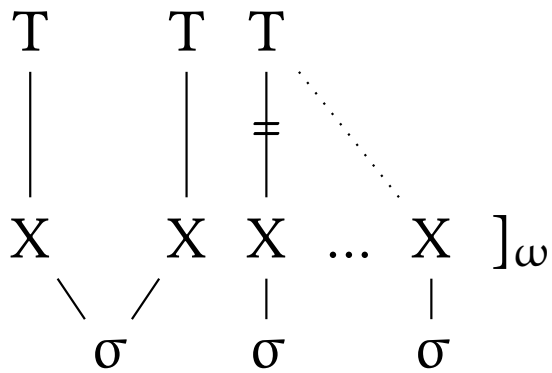
(46) *kəfə̀kə̀* ‘curse’; pl. *kəfákə̀* (not *kəfə̀kə̀*)

(18) *ɔ̀dìnàtə̂* ‘computer’; pl. *ɔdínátə̂* (not *ɔdìnàtə̀*)

LHL cannot be derived from HL

- While the sequence HL is contained within the LHL melody, LHL cannot be derived from L+HL.
- Since the L in LH**L** shifts while the L in H**L** does not, a shift rule would have to be sensitive to the number of tones on the preceding syllable:

(47) "Three's a Crowd"



Tone shift is not a general rule

- A rule shifting any T_3 to T_X in $T_1T_2.T_3...T_X$ does not hold across Shupamem.
- If it were, the L on the diminutive in (48a) would shift (48b):

(48) a. *ᵑʃǔt mə̀-ⁿdà sí*
mouth DIM-door black
'door$_i$ of the little house$_j$, that is black$_{i,j}$'

b. * *ᵑʃǔt mə́-ⁿdà sí*
mouth DIM-door black
Intended: 'door$_i$ of the little house$_j$, that is black$_{i,j}$'

- Therefore, we do not analyze LHL as L+HL, but as a separate melody.

Note on additional tonal melody

- Nchare (2012, 99) describes an additional tonal melody, on what he calls Classes 9/10 LL (sg.)/LH.H (pl.):

(49) *ʃìrə́* [sic] 'bicycle'; pl. *ʃǐrə́*

- Upon re-elicitation, Nchare (p.c.) gives us *ʃǐrə̀* for 'bicycles'.
- Therefore, we count this as part of our LHL category.
- (We find no evidence of an LL melody for singular nouns aside from /L/ lexical tones.)

Zero-marked singular and plural

- Many vocabulary items are zero-marked in both the singular and plural:

(50) *kʷàt* ‘fight(s)’

(51) *sɔ́ːt* ‘sickle(s)’

(52) *lìʔ* ‘place(s)’

(53) *və̀m* ‘belly/bellies’

(54) *lɔ́m* ‘dumb child(ren)’

(55) *l̀ːt* ‘beard(s)’

- This is in addition to mass nouns with no plural form:

(56) *pɛ́ːn* ‘fufu’

(57) *vý* ‘ash’

/N-/ in both singular and plural?

- Some words in Shupamem are nasal-initial in both the singular and plural:

(58) *ŋᵐgbɛ̀ːn* ‘stick(s)’

(59) *ŋə̀m* ‘hour(s)’

(60) *mɨ́t* ‘month(s)’

(61) *ŋgʷə́ʔ* ‘physically strong head(s)’

- In this case it’s impossible to tell if the nasality is part of the stem or a fusional prefix (like sg. /N-/ and pl. /N-/).
- Some languages have been analyzed as having a singular /N-/ alternating with a plural /N-/. For example, Shona classes 9/10 (Déchaine et al., 2014):

(62) *N-shùmbá* ‘lion’; pl. *N-shùmbá* (Shona)

One case of sg. /N-/ + pl. /N-/

- There is one stem (*kpɛ̀ːn* ‘slave’) that can be more easily argued to combine with both the singular /N-/ of social roles and the plural /N-/ of instruments.
- This stem appears without a nasal prefix whenever a plural possessive suffix is added. (This is not the case with other sg. /N-/ or pl. /N-/ nouns!)

(63) a. *ŋᵐkpɛ̀ːn* ‘slave’; pl. *pə̀-ŋᵐkpɛ̀ːn*

b. *ŋᵐkpɛ̀ːn-à* ‘my slave’

c. *Ø-kpɛ̀ːn-p-á* ‘my slaves’

Possessive *-p-*

- Most nouns are marked for possession by *-ʃ-* followed by a personal suffix:

(64) *pà-búʃí* ‘cats’ → *pà-búʃí-ʃ-á* ‘my cats’

(65) *lɛ́rwà* ‘books’ → *lɛ́rwá-ʃ-á* ‘my books’

- A number of human nouns take *-p-* in place of *-ʃ-*:

(66) *p-ɔ́n* ‘children’ → *p-ɔ̀n-p-á* ‘my children’

(67) *tɛ́sɨ̀* ‘chief’ → *tɛ́sɨ̀-p-á* ‘my chiefs’

(68) *sún* ‘friends’ → *sún-p-á* ‘my friends’

(69) *pà-ɣɨ̀ːn* ‘guests’ → *pà-ɣɨ̀ːn-p-á* ‘my guests’

Possessive *-p-* not predictable

- Possessive *-p-* is only used with human nouns.
- However, it is not used with all human nouns, and is not predictable from other noun class morphology:

(70) *pá-rɨ̀ːm* ‘witches’ → *pá-rɨ̌ːm-ʃ-á* ‘my witches’

(71) *pà-ɣɛ́ːn* ‘guests’ → *pà-ɣɛ́ːn-ʃ-á* ‘my guests’

Complementizer agreement

- There is also a pair of plural complementizers *ʃ-uə* and *p-uə*.
- Words that take possessive *-p-* use *p-uə*; others use *ʃ-uə*:

(72) *p-ɔ́n* *p-ùə* *ᶮʒɨ́ən* *nə̀*
pl-child P-COMP TOP/see COMP
'the children that I saw'

(73) *pá-rɨ̀ːm* *ʃ-úə* *ᶮʒɨ́ən* *nə̀*
pl-witch SH-COMP TOP/see COMP
'the witches that I saw'

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Noun classes in Niger-Congo

- Noun classes in other Niger-Congo languages can have a one-to-many correspondence of sg./pl. markers.
- For example, in Anaguta (Kainji, Nigeria), there exist alternations between:
  - Sg. Ø- and pl. *ha-*
  - Sg. Ø- and pl. *an-*
  - Sg. *u-* and pl. *an-*
  - Sg. *u-* and pl. *tu-*
  - …

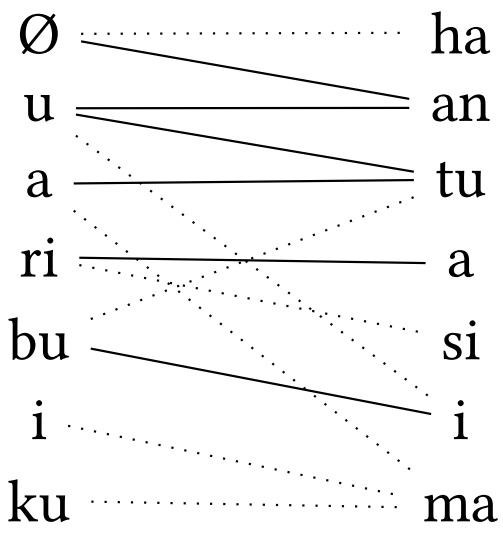


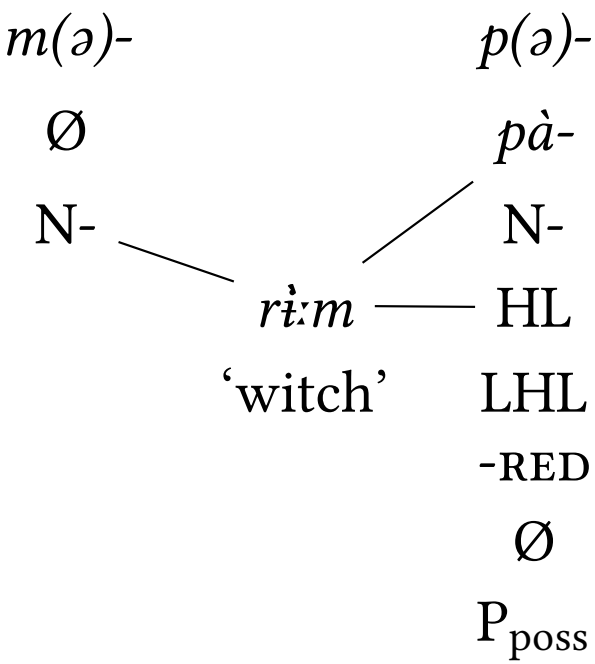
Figure: Noun classes in Anaguta, reproduced from de Wolf (1971, 69), based on Bouquiaux (1967, 139–142).

Noun classes in Shupamem

- In other Niger-Congo languages, nouns select one singular/plural marker at a time.
- Shupamem nouns can be multiply-marked, for example *pá-rɨ̀ːm* 'witches' is marked both by *pà-* and HL.
- Because agreement does not correlate to the nominal prefixes, agreement patterns also create more 'classes' of nouns that behave uniquely in the morphology.

Multiply-marked nouns in Shupamem

(74)



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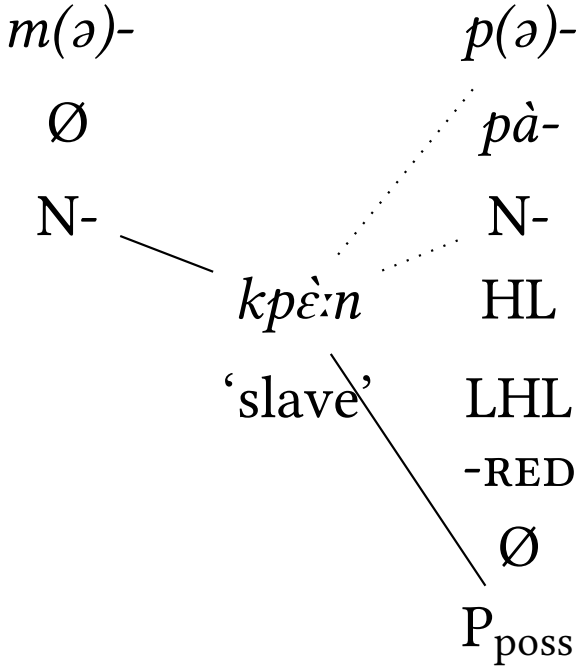

How many noun classes are there?

- Because nouns in Shupamem select so many different combinations of morphology, it is difficult to sort nouns into discrete classes.
- Possibly 25(!) ‘noun classes’.
- Decreases by 8 if prenasalisation in sg./pl. is counted as part of the stem (not widely done in Niger-Congo).
- Decreases by 2 if *-p-* is counted as separate from nominal morphology.
- This gives a range of 15–25 ‘noun classes’ if each combination of selected morphology is a noun class.

Attested “noun classes”

m(ə)-	p(ə)-	N_{sg}-	N_{pl}-	pà-	HL	LHL	-RED	P_{poss}	Example
+	+	?	?	-	+	-	0	-	ᵑᵐgbíə ‘woman’
?	?	?	?	-	+	-	0	0	ᵑgə́p ‘chicken’
+	+	-	-	-	+	-	-	+	ɔ́n ‘child’
?	?	-	-	-	+	-	0	0	sì ‘bird’
-	+	+	+	-	-	-	0	+	kpɛ̀ːn ‘slave’
-	-	+	-	+	+	-	0	-	rɨ̀ːm ‘witch’
-	-	+	-	+	-	-	0	+	ɣɨ̀ːn ‘guest’
-	-	+	-	-	-	-	-	+	sún ‘friend’
-	-	+	-	-	+	-	0	+	tɛ̀sɨ́ ‘chief’
-	-	+	-	-	-	+	-	?	ɣà: ‘someone’
-	-	?	?	+	-	-	0	0	ⁿdú: ‘horn’
-	-	?	?	-	+	-	+	0	ⁿtɨ́m ‘message’
-	-	?	?	-	+	-	0	0	ᵑgɨ̀ᵑgà ‘grass’
-	-	?	?	-	-	+	+	0	ᵑᵑfɨ̀t ‘feather’
-	-	?	?	-	-	+	0	0	ᵑᵑfùᵑfù ‘lung’
-	-	?	?	-	-	-	-	0	ᵑᵐgbɛ̀ːn ‘stick’
-	-	-	+	-	+	-	0	0	pàpʃə̀ ‘wing’
-	-	-	+	-	-	-	-	0	pɛ̀ ‘thigh’
-	-	-	-	+	+	-	0	0	tà: ‘insect’
-	-	-	-	+	-	-	-	0	kám ‘crab’
-	-	-	-	-	+	-	+	0	lɔ̀t ‘throat’
-	-	-	-	-	+	-	0	0	lɛ̀rwà ‘book’
-	-	-	-	-	-	+	+	0	sɛ̀ːt ‘magic’
-	-	-	-	0	-	+	0	0	kəfə̀kə̀ ‘curse’
-	-	-	-	-	-	-	-	0	sɔ́ːt ‘sickle’

Table 1: Attested combinations of nominal morphology selected by Shupamem nouns

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25-class system unlikely

- 15–25 noun classes would be a relatively large system.
  - Bantu languages generally have 15–16 classes counting sg./pl. prefixes separately (Maho, 1999).
- Especially considering it can be decomposed to 6–9 morphemes (8–11 including sg. Ø- and pl. Ø-).

Multiply-marked nouns

- Shupamem allows multiple pluralization strategies on nouns simultaneously.
  - Multiply-marked nouns are also possible in the singular if counting the diminutive *m(ə)-*.
- Aikhenvald (2000, 63) describes cases in Bantu of multiply-marked nouns.
  - Generally, one is a diminutive/augmentative/locative.
- Multiply-marked nouns in Bantu: both contribute to the semantics.
- In Shupamem, multiple pluralization strategies do not contribute more than one 'plural' meaning.
  - *pà-* (pl.) + HL (pl.) + *rɨ̀ːm* 'witch' = *pá-rɨ̀ːm* 'witches', not 'groups of witches'

Multiply-marked nouns outside of Niger-Congo

- Maay (Cushitic, Somalia) optionally double-marks plural nouns, with no change in semantic meaning (Paster, 2010).
- Swedish pluralization strategies include umlaut, suffixation, umlaut+suffix. Umlaut+suffix only contributes one 'plural' meaning.
  - Umlaut alone: *man* 'man'; pl. *män*
  - Suffix alone: *katt* 'cat'; pl. *katt-er*
  - Umlaut+suffix: *hand* 'hand'; pl. *händ-er*
- May be more common when plural morphemes do not carry additional 'class' information.

So what happened here?

Factors likely to have facilitated the current synchronic system of nominal morphology:

- Many pluralization strategies do not correspond to an obvious semantic class, leaving no semantic clash when nouns are multiply-marked.
- Tonal pluralization strategies easily combine with segmental affixes.
- Near-total syncretism of agreement system fails to reinforce discrete “noun class” categories.
- Loss of correlation between agreement and nominal morphology creates complexity in the “noun class” system.

Conclusion

- Pluralization strategies and agreement have been used to diagnose noun class systems in Niger-Congo languages.
- This approach leads to a system where as few as 6 nominal morphemes lead to as many as 25 “noun classes” in Shupamem.
- Syncretism of the agreement system and incorporation of tonal melodies into pluralization have facilitated the increase in complexity in Shupamem.
- Perhaps a more sensible approach is to stipulate that some nominal morphemes provide more semantic content than others: some like pl. /N-/ (for tools/hard things/body parts) signal both a semantic class and pluralization, while others like HL signal only plurality (however redundantly).

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