

## THE NON-EXISTENCE OF "INTERNAL-*a*" PLURALS IN HAUSA

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### 1. Introduction

In a 1955 article entitled "Internal *a*- plurals in Afroasiatic (Hamito-Semitic)", Joseph Greenberg documents a nominal plural type which is widespread in Afroasiatic and hence, presumably reconstructable as one of the plural formation patterns for the proto-language. This plural type involves insertion of an *-a-* in the plural which is not found in the singular. Greenberg distinguishes five types of internal-*a* plural: *intercalation* of *-a-* where there was no vowel in the singular, *replacement* of some other vowel which appeared in the singular, *dissimilation* of an *-a-* in the singular to another vowel when a plural *-a-* is inserted elsewhere, *general* replacement of all singular vowels by *-a-*, and *reduplicatory* addition of *-aC* (where C is the final root consonant). These internal changes are sometimes accompanied by suffixation. An example of each of these types from Semitic and/or Berber languages respectively is seen in (1):

(1) <b>Intercalation:</b>	(Arabic)	ibn, banūn	'son'
	(Berber)	none	
<b>Replacement:</b>	(Hebrew)	ben, banīm	'son'
	(Tamazhaq)	əfus, ifassən	'hand'
<b>Dissimilation:</b>	(Arabic)	rajul, rijāl	'man'
	(Tamazhaq)	ǧga dir, igudar	'wall'
<b>General:</b>	(Arabic)	'uḏun, 'āḏān	'ear'
	(Tamazhaq)	eḡəs, yaḡan	'day'
<b>Reduplicatory:</b>	(Akkadian)	šamu, šamamu	'sky'
	(Berber)	none	

Internal *-a-* plurals exist in Chadic. Examples in (2) are from Ron of West Chadic A, Bade of West Chadic B, Podoko of Central Chadic A, Kotoko of Central Chadic B, and Bidiya of East Chadic B. (These examples are drawn from Newman (1990:37-44), who provides much more extensive documentation than was available to Greenberg in 1955.)

(2) <b>Ron (Dafo):</b>	sàkúr, sakʷáàr	'leg'
<b>Bade:</b>	dəm, dàm	'wood'
<b>Podoko:</b>	dəhələ, dahali	'girl'
<b>Logone:</b>	ʃin, ʃan	'tooth'

<b>Bidiya:</b>	míisò, maasi	‘thief’
	marno, maràn	‘rope’
	liise, lisás	‘tongue’

One Chadic language which Greenberg (1955) cited as having internal-*a* plurals was Hausa, based on examples such as those in (3):

(3) <b>Hausa:</b>	falkē (< *fatké), fatākē	‘trader’
	tumkiyā, tumākī	‘sheep’
	miji, mazā	‘male, husband’

Greenberg assumed, and the general assumption since Greenberg wrote his article has been that plurals of the types exemplified in (3) represent retention of a reconstructable feature of proto-Afroasiatic morphology.

In this paper I wish to call this assumption into question, i.e. although proto-Afroasiatic can be reconstructed as having had an internal vowel change to *a* as one method of marking noun pluralization and although Hausa indisputably does have “internal-*a*” plurals, I will claim that this plural type in Hausa does not represent a direct retention of the Afroasiatic pattern. I will use two types of argument to support this contention. First, I will claim that the prototypical internal-*a* plural involves vowel *replacement*, which Hausa never uses. Second, I will present an analysis of the Hausa nominal plural system in which the apparent “internal-*a*” plurals fit into larger patterns where internal changes *per se* play no role.

## 2. The Nature of Afroasiatic Internal-*a* Plurals

Greenberg distinguished five types of internal-*a* plurals. However, these can be reduced to at most two significant types, viz. *intercalation* and *replacement*. The types he referred to as *dissimilation* and *general* are really just subtypes of *replacement*, in that both involve replacement of at least one non-*a* vowel of the singular form by *-a-*. *Intercalation* could likewise be considered a type of replacement—*absence* of a vowel in the singular is replaced by a vowel. What is significant about *replacement* and *intercalation* (if the latter is viewed as a separate type) is that they both operate internal to the root, a striking aspect of Afroasiatic morphology not shared in any general way by other African language families. Greenberg’s fifth type of internal-*a* plural, *reduplication*, does not fit this pattern. Reduplication is basically a pattern of affixation, found not only in functions other than pluralization in Afroasiatic, but also as a common process in African languages in general. The fact that Afroasiatic reduplicative affixes may include a vowel *-a-* may be of some significance, but this pattern should surely not be considered a subtype of root internal processes.

On examination of internal-*a* plurals in Chadic, and indeed, in Berber and Semitic, it turns out that *replacement* (by which I include also Greenberg’s “dissimilation” and “general”) is overwhelming more common than *intercalation*. Intercalation does not exist in Berber, clear examples appear to be rare in Semitic, and as far as I can determine, it is almost non-existent in Chadic outside of East Chadic B. The major exception to this generalization about Chadic is Hausa, for in Hausa, *all* examples of internal-*a* plurals are of the intercalation type (the single exception is *miji/mazā* ‘husband’, which appears to be nothing more than a single sporadic case of assimilation of the singular vowel to the plural ending *-ā*).

It may well be the case that Hausa has extended an originally rare pattern and that Hausa internal-*a* plurals are, after all, a reflex of the Afroasiatic pattern. However, the analysis of Hausa plurals in the next section suggests strongly that if this is the case, Hausa has

incorporated the internal-*a* pattern into its plural morphology in a way not found elsewhere in Afroasiatic.

### 3. The Hausa Nominal Plural System

Every descriptive and pedagogical grammar of Hausa provides some sort of categorization of Hausa nominal plurals. These categorizations universally list a number of disparate classes and subclasses, bewildering in their number and providing few clues to cross-class generalizations. There is no question that Hausa nominal plurals are complex in a way not found in any other Chadic language that I know of, but I wish to outline a system which is quite simple and which encompasses all but a small number of plurals. This schema also provides considerable predictability of the plural from the singular, but a full discussion of this issue would go beyond the scope of this paper.

Table 1 on the next page gives an overview of the system I propose. This table shows that there are just two major classes of plurals: *Final Vowel Change* plurals and *Suffixed* plurals. There are five plural vowel endings (-*ii*, -*uu*, -*aa*, and -*ai*) and four suffixes. The suffixes can be collapsed along two parameters: the overall pattern (-*uCa* vs. -*aCi*) or the consonant of the suffix (-*k*- or -*n*-).

	- <i>k</i> - in suffix	- <i>n</i> - in suffix
- <i>uCa</i>	<i>tsānukā</i>	<i>dākunā</i>
- <i>aCi</i>	<i>gōnākī</i>	<i>wāsānī</i>

The overall pattern is more significant in predicting plurals from singulars in Hausa, but from the point of view of Chadic reconstruction, only the two consonants are reconstructable as plural suffix types (Newman 1990).

A central aspect of this analysis of Hausa plurals is that plurals involving reduplication are not a separate type but are a subtype of either Final Vowel Change or Suffixed classes. Consider first the Final Vowel Change class. It seems hardly an accident that the inventory of plural vowels in the Final Vowel Change class is the same as the inventory in reduplicated nouns which do not add suffixes. The one apparent difference is the *wurī/wurārē* type, which ends in -*ee* rather than -*ai*, as it does in *birī/birai*. However, I would reconstruct this plural as terminating in -*aiCai*, the form still used in some dialects, e.g. *wurāirai*.

The generalization which this schema reveals and which is most relevant to this paper is the fact that the forms of Final Vowel Change plurals are in complementary distribution depending on the number of root consonants. In particular, with one major exception, *there are no roots with three or more consonants that reduplicate one of the root consonants..* (The major exception is plurals of the “-*oCi*” type, e.g. *rījiyā/rījiyōyī* ‘well’. I will return to this below.) For roots with 3+ consonants, the root final consonant is used as if it were a reduplicative suffix. Taking just the final -*ii* class, we thus have the following pattern:

(4)	“Unaugmented”		“Reduplicated”	
2 C's	<i>zābō/zābī</i>	‘Guinea fowl’	<i>tufā/tufāfi</i>	‘clothes’
3+ C's	<i>tābarmā/tābārmī</i>	‘mat’	<i>tumki-yā/tumākī</i>	‘sheep’
			* <i>tumkākī</i>	

Table 1. MAJOR HAUSA NOMINAL PLURAL TYPES

			“Unaugmented”	“Reduplicated”	“Geminated”
FINAL VOWEL CHANGE	2 root C's	-ii	<i>zâbô, zâbî</i> ‘Guinea fowl’	<i>tufâ, tufâli</i> ‘clothes’ <i>sâbô, sâbbi</i> (< <i>sâbâbî</i> ) ‘new’ all “-oCi” plurals	<i>kâtô, kâtî</i> ‘huge’
		-uu	<i>mâshî, māsū</i> ‘spear’	(?), <i>duwâwū</i> ‘buttocks’	
		-aa	<i>kujê, kudâ</i> ‘fly’	( <i>kanê</i> ), <i>kanânâ</i> ‘small’ <i>zôbê, zôbbâ</i> (< <i>zôbâbâ</i> ) ‘ring’	
		-ai	<i>birî, birai</i> ‘monkey’	<i>wurî, wurârê</i> ‘place’	<i>tudû, tûddai</i> ‘hill’
	3+ root C's	-ii	<i>tâbarmâ, tâbarmî</i> ‘mat’	<i>tumkiyâ, tumâkî</i> ‘sheep’ <i>tsarkiyâ, tsarôkî</i> ‘bowstring’	
		-uu	<i>zâkarâ, zâkarû</i> ‘rooster’	<i>gurgû, gurâgû</i> ‘lame’	
		-aa	(no non-derived nouns of this type)	<i>siřdî, siřâdâ</i> ‘saddle’	
		-ai	<i>lâbârî, lâbârai</i> ‘news’	<i>kaskô, kasâkê</i> ‘clay bowl’	
SUFFIX	2 root C's	-unâa	<i>dâkî, dâkunâ</i> ‘hut’	<i>bâkâ, bakunkunâ</i> ‘bow’	<i>dami, dammunâ</i> ‘bundle’
		-ânii	<i>wâsâ, wâsânî</i> ‘game’	(no plurals of this type?)	( <i>wâsâ, wâsânnî</i> ) ‘game’
		-ukâa	<i>tsânî, tsânukâ</i> ‘ladder’ <i>kûnnê, kunnuwâ</i> ‘ear’	<i>gârî, garûruwâ/garurrukâ</i> ‘town’	<i>zanê, zannuwâ</i> ‘wrapper’
		-akii	<i>gônâ, gônâkî</i> ‘farm’	<i>sûnâ, sûnânnakî</i> ‘name’	
	3+ root C's	-uCâa	<i>gâtari, gâturâ</i> ‘axe’	<i>shagâlî, shagulgulâ</i> ‘party’	<i>takôbî, takubbâ</i> ‘sword’ ( <i>aikî, ayyukâ</i> ) ‘job’
		-aCii	<i>gârmâ, garêmani</i> ‘plow’	<i>shâwarâ, shâwarwarî</i> ‘advice’	
			<i>tařwadâ, tařêwadî</i> ‘catfish’		

It is the large group of nouns with 3 or more root consonants which I classify as “Final Vowel Change, Reduplicated” which have been referred to as “internal-*a*” plurals in Hausa. However, setting them aside as a separate group not only loses the generalization of identical vowel inventory with Final Vowel Change plurals, it also fails to explain the absence of plurals with reduplicated final C in 3+ C roots. It could be that these are actually reflexes of the Afroasiatic internal-*a* pattern, reassigned to fill this gap in the plural system, but this still does not explain the final vowels found with these plurals. Much more likely is a suggestion which Newman (1990:148) traces to Lukas and Meinhof that plurals of this type are a reduction of what were at one time true reduplicated plurals, e.g. *gulbī/gulābē* < \**gulbâbē*.

Turning to Suffixed plurals, we find a type of complementarity similar to that found with Final Vowel Change plurals, but here the complementarity applies not only to the Reduplicated subtype, but also to what I refer to as the “Unaugmented” subtype. Thus, while roots with two consonants in the Unaugmented subtype add a suffix of the form *-uCa*, roots with three consonants never do. Rather, their plurals take on the overall shape of the *-uCa* plural, but with the final C of the root as the final C of the plural, not an extra suffixal consonant. In the Reduplicated type, 2 C roots add a reduplicant of the form *-CuC-*, formed from the final root consonant and the suffix consonant, whereas 3+ C roots use the last two root consonants:

(5)	“Unaugmented”		“Reduplicated”	
2 C's	<i>dāki/dākunā</i>	‘hut’	<i>bākā/bakunkunā</i>	‘bow’
3+ C's	<i>gātari/gāturā</i> * <i>gātarunā</i>	‘axe’	<i>shagāli/shagulgulā</i> * <i>shagalullunā</i>	‘party’

The one exception to the generalization that 3+ C roots do not add extra consonants, either through reduplication or suffixation, are 3 C roots which take the *-aCii* suffix. Here, the Unaugmented type does add a suffix *-anii*, e.g. *gārmā/garēmanī* ‘plow’ (these plurals also add an internal *-ee-*, for which I have no explanation at the moment). Note, however, that roots with *four* consonants do not add a suffix, e.g. *taṙwadā/taṙēwadī* ‘catfish’. Likewise, 3 C plurals of this type which are reduplicated do not add a suffix, e.g. *shāwarā/shāwāṙwāṙī* ‘advice’.

Clearly, the tables in (4) and (5) express a single generalization, viz. when a root has three or more consonants, pluralization processes impose a plural template on the word, using the root consonants as part of the template in place of added consonants. Were internal-*a* plurals considered a special type, distinct from plurals which change the final vowel or add a suffix, this generalization, as well as those mentioned above would be missed.

Table 1 includes a third subtype, which I refer to as “Geminated” and which has tokens in both the Final Vowel Change and the Suffix major types. In the Geminated subtype, a root or suffix consonant is geminated in the plural. In general, this subtype follows the pattern of the others in not adding additional consonants when the root has 3+ consonants (see *takōbī* ‘sword’). However, this subtype does not have tokens in the full range of root types (at least in the Kano dialect, where we have the best documentation), so it is more difficult to draw generalizations than in the others. It may turn out that this is merely a variant of the “Reduplicated” subtype. Indeed an example like *kātō/kātti* ‘huge’ is “ambiguous”: it could derive from a pattern of gemination, as the classification in

Table 1 suggests, or from reduplication with syncope (*\*kâtâtî > kâtî*) as in cases like *\*zôbbâbâ > zôbbâ* ‘rings’.<sup>1</sup>

#### 4. Plural Types in Modern Hausa

Table 1 purports to be an outline of the classification of Hausa nominal plurals. But does this classification account for modern Hausa pluralization? A number of the slots in the table are filled with archaic plurals or types which are not productive in Hausa. On the other hand, there are existing plurals which find no home in this table. Some of these are suppletive or highly irregular and would have to be listed separately in any system, e.g. *bâbba/mânyâ* ‘big, important’, *mâcê/mâtâ* ‘woman’, *sâniyâ/shânû* ‘cow’, *yârô/yârâ* ‘child’, *kibiyâ/kibau* ‘arrow’. There are also a few fairly regular types which are not listed, but which would fit as further subtypes of the types listed, e.g. *fiffikêl/fikâfikai* ‘wing’, *diddigê/digâdigai* ‘heel’. However, there are two major types conspicuous by their absence, viz. plurals ending in *-âayee*, where the system in Table 1 would predict that the plural ending should contain a root consonant rather than *-y-*, and “*-oCi*” plurals of words with more than three root consonants:

(6) <i>-âayee</i> : <i>kūrâ, kūrâyē</i>	‘hyena’
<i>baunâ, baunâyē</i>	‘buffalo’
<i>guntū, guntâyē</i>	‘stub, short’ <sup>2</sup>
<i>-ooCii</i> : <i>tâmbayâ, tâmbayōyī</i>	‘question’
<i>tsirkiyâ, tsirkiyōyī</i>	‘bowstring’ (cf. <i>tsirôki</i> )
<i>asibiti, asibitōci</i>	‘hospital’

These two types represent, along with the *-uCa* Suffix type, the most productive types in modern Hausa. From the point of view of tone/vowel template, *-âayee* is a Final Vowel Change plural of the Reduplicated subtype. However, it is probably now best viewed as a type of suffixed plural in that *-âayee* can be added to words which, from historical

<sup>1</sup>The purpose of this paper is to give a broad overall scheme of Hausa pluralization. There are many cross-class generalizations, a full discussion of which is beyond the scope of this paper. One is “polarization” of root “weight” and “weight” of plural marking. Thus, for the Final Vowel Change Reduplicated type, if the root vowel is long (“heavy”) the vowel in the reduplicant is short (“light”), as in *zôbbê/\*zôbbâbâ*, subsequently sycopated to give *zôbbâ*, whereas if the root has a short vowel, the vowel in the reduplicant is long, as in *wurî/wurârê*. Newman (1972:317-318) notes a correlation of root weight and plural formation in the suffixed type, viz. in general if the root syllable is heavy, a suffixed plural will not be reduplicated, as in *dâki/dâkunâ*, but if the root syllable is light, the plural will be reduplicated, as in *bâkâ/bakunkunâ*. (Newman (1972:313-316) also has an account, which I do not find convincing, involving syllable weight for the Final Vowel Change Reduplicated type. He does not mention the correlation noted here between the *zôbbâ* vs. *wurârê* types.)

<sup>2</sup>This word, with three root consonants, looks as if it should take the Hausa Final Vowel Change Reduplicated plural, i.e. *\*gunâtê*. This type of plural is an example of another cross-class generalization, viz. in CVN syllables, where N is a nasal homorganic to the following consonant, N is not treated as a separate root consonant. Newman (1972:316) went so far as to consider this N to bear the feature [+vocalic], though current theories of moraic phonology would provide less counterintuitive analyses. The *-âayee* plural seen in (6) is used with roots that have either a long vowel in the initial syllable or that have a CVN root syllable. The generalization regarding CVN syllables applies to other plural patterns as well. Thus, in *mânzô/mânzânnî* ‘messenger’, the plural is of a type otherwise found only with 2 consonant roots which have a long root vowel, such as *wâsâ/wâsânnî*. Likewise, the word *guntū* has an alternative plural of the Suffixed Reduplicated type, *guntâtakî*, with the suffix *-akî* added rather than with reduplication involving the root consonants, i.e. *\*gunâtnatî*, which would be parallel to *shâwarâ/shâwâfwarî*.

perspective, should not have this plural type, e.g. *àgògò/agògàyē* ‘clock, watch’, a word with a three-syllable singular and a non-level singular tone pattern.

The “-oCi” type used with roots of 3+ consonants “violates” the constraint that reduplication of final C never takes place with roots of more than 2 root consonants. Clearly in modern Hausa, this constraint, which leads to certain complexities in deciding what plural pattern to use, is giving way to a simpler strategy of reduplication without regard for root structure.

## 5. Conclusion

I have claimed that although Hausa does have a type of plural pattern which involves insertion of *-aa-* into a root and is thus, technically speaking, an “internal-*a* plural”, the Hausa pattern is not a reflex of the well-attested internal-*a* plural reconstructable for proto-Afroasiatic. The Hausa pattern does not fit the Afroasiatic prototype, which involves vowel *replacement* rather than *insertion*. Probably more revealing than this typological difference, however, is a consideration of the overall system of nominal plurals in Hausa, which shows that the number of consonants in a root is a major determinant of the overall shape of a plural. Thus, in both the Final Vowel Change type with reduplication and the Suffixed type (with or without reduplication), when there are three or more consonants in the root, the final root consonant is used in place of an “added” consonant, whether that added consonant be in a reduplicant or a suffix. A historical derivation of Hausa internal-*a* plurals from the Afroasiatic pattern obscures this generalization of the way Hausa nominal plurals “use” root consonants.

Although many Hausa plurals, probably a majority, find a place in the proposed system, it represents a reconstructed system of pluralization for an earlier stage of Hausa as much or more than it does a modern categorization. As universally happens in complex patterns of morphology, the Hausa system of pluralization is moving toward new patterns of regularity, exploiting some patterns and abandoning others. This presumably works toward a system more efficient for the speakers of Hausa, but a system which causes consternation for both the descriptive and the historical linguist.

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