AGENTIVE NOUNS AND DERIVED VERBS IN HAUSA

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Linguistics 105 Sample Paper

1. Background on the Hausa Language

Hausa is a language of the Chadic family, one of the branches of the Afroasiatic phylum, which also includes the Semitic, Berber, and Cushitic families as well as the Egyptian language. Hausa is the first language of perhaps 30 million people in northern Nigeria and southern Niger, but it is spoken as a second language by virtually everyone in the northern half of Nigeria and all of Niger. And because the Hausas have had a dual calling as traders and purveyors of Islam, there are large Hausa communities in every city in West Africa, and Hausa serves as a lingua franca among Muslim communities in northern Ghana, Togo, and contiguous areas.

This paper will explore two morphological processes in Hausa and their interaction. The first process is formation of agentive nouns from verbs, as in bugà ‘beat’ → ma-búg-i ‘beater (e.g. one who is threshing corn)’. The second is the derivation of verbs from nouns, as in gàyyà ‘invitation (to communal work)’ → gàyy-atà ‘invite’. An agentive can be formed only from a verbal base. Thus, to derive an agentive ma-ròw-àc-i ‘miser’ from the noun ròwà ‘miserliness’ one requires an intermediate verb *ròw-ata, which does not exist independently.

Data comes from my own experience with Hausa, from Newman (2000), and from the two great Hausa dictionaries, Bargery (1934) and Abraham (1962). Hausa citations are in the standard orthography, supplemented with marking of tone and vowel length. The main orthographic conventions to note are the following: sh = IPA [ʃ], y = IPA [j],
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\(j = \text{IPA} \ [d] \), \(c = \text{IPA} \ [t] \), \(ts = \text{an ejective alveolar affricate} \), \(r = \text{IPA} \ [\tau] \), \(\tilde{r} = \text{Spanish-type alveolar tap} \). Long vowels are marked with a macron (\(\ddot{\text{a}}\)), low tone is marked by a grave accent (\(\grave{\text{a}}\)), high tone is unmarked.

2. Verbs, Agentives, Gender, and Verb Derivation

Hausa has morphologically marked agentive nouns with verbal bases, illustrated in Table 1:

<table>
<thead>
<tr>
<th>Table 1. Verbs with corresponding agent nouns</th>
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<tbody>
<tr>
<td>1. nêmà seek</td>
</tr>
<tr>
<td>2. hàifâ progenitor, bear</td>
</tr>
<tr>
<td>3. kařàntå read, study</td>
</tr>
<tr>
<td>4. nômë farm, cultivate</td>
</tr>
<tr>
<td>5. tâshi stand up, arise</td>
</tr>
<tr>
<td>6. kitsè braid (hair)</td>
</tr>
</tbody>
</table>

The agentive form consists of a prefix ma- and suffixes marking number/gender of the agent: -î masculine, -iyā feminine, -ā plural. The masculine and plural tone patterns are HL…H and the feminine tone pattern is H…LH, regardless of the tones of the verbal base. I will mark tone in examples but will not discuss it further in this paper. Most words in Hausa end in a vowel and most suffixes consist of a vowel or have the form 1

1 There are two other noun patterns in Hausa using a ma- prefix: instrument nouns like magirbi ‘harvesting tool’ from girbê ‘harvest grain’, which end in -î and have all high tones, and place nouns like mafità ‘exit’ from fita ‘go out’, most of which end in -à and have all high tones (a few place nouns, such as mazaunì ‘living quarters’ from zaunà ‘sit, stay’ end in -ì). See Newman (2000:Chapter 7) for discussion of all ma- derived nouns.
-VCV. With one possible exception, the (first) vowel of a suffix replaces the final vowel of the base, as in the case of the final vowels of the base verbs in Table 1 being replaced by the gender/number marking agentive suffixes.\footnote{An alternative would be for both the verbs and the agentives to be derived by addition of final vowels to vowelless bases. This might be plausible for verbs, but for nouns, final vowels must be lexically specified, yet they undergo the same replacement process, e.g. \textit{rigà} ‘gown’, plural \textit{rigunà}, \textit{kògt} ‘river’, plural \textit{kògunà}.} I propose a convention applying to all suffixing in Hausa:

\textbf{SUFFIX V REPLACEMENT CONVENTION:} \( V \rightarrow \emptyset / \_\_\_ \)\_base \([V…]\)suffix (delete the final vowel of a base when adding a suffix that begins with a vowel)

The one possible exception to the \textbf{SUFFIX V REPLACEMENT CONVENTION} is the \(-iyā\) feminine suffix, which historically is the masculine suffix \(-ī + -ā\) (Newman 1979). There is evidence, however, that in modern Hausa the \(-iyā\) feminine suffix can be treated as a unit, and I will consider it such in this paper. Finally, the data in Table 1 illustrates one general morphophonemic alternation in Hausa:

\textbf{PALATALIZATION:} \(/ t, d, s, z/ \rightarrow [c, j, sh, j] / \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/\)

(non-glottalized alveolar obstruents become the alveopalatal counterparts before front vowels)

This alternation is seen, for example, in the masculine vs. plural forms of the agentives ‘student’ and ‘adolescent’.

Newman (2000:53) notes, “Morphologically, the agent derivation is extremely regular. In principle, one could morphologically create an agent noun from almost any verb. \textbf{In fact, its occurrence is lexically quite restricted … .}” (my emphasis—RGS). Thus, many agentives that would seem natural are not used, e.g. \textit{*madàfi} ‘cook, chef’ from \textit{dafà} ‘cook’. In addition, though the gender/number distinctions are morphologically regular, for some agentive formations one or another of these are not used, as exemplified by starred items in Table 1. Some gaps of this type have cultural explanations. For ex-
ample, the absence of *\text{manömiyä} ‘(female) farmer’ may result from the fact that traditionally a woman would not own a farm (though women do do farm work), and no man would ever braid hair, explaining the absence of *\text{makìtsī} ‘(male) hair braider’. However, there is no obvious reason why *\text{matåshiyyä} ‘(female) adolescent’ should not exist. This latter example, brings in the issue of compositionality (computing meaning from the meanings of the component morphemes). Agentive formation is morphologically regular, and for the most part, the meanings of agentives are compositional, but there are a few like ‘adolescent’ which are not, or which have a more restricted meaning than reference to the meaning of the base would suggest, e.g. \text{mariỳ} ‘a child’s guardian’ from \text{rikè} ‘hold, grasp; take good care of’ where the agentive carries only the last sense.³

In short, we need some way to account for the restricted productivity of agentive formation. Before addressing this issue, I turn to another derivational pattern that potentially feeds the formation of agentive nouns.

Table 2. Nouns with associated verbs and agent nouns

<table>
<thead>
<tr>
<th>No.</th>
<th>Noun (gender)</th>
<th>Verb (gender)</th>
<th>Agentive Noun (gender)</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>\text{tsôrò}</td>
<td>\text{fear}</td>
<td>\text{tsôratà}</td>
<td>matsôrìcì, matsôrìciyà, matsôrìtä, mayùnwàcì, mayùnwaciyà, mayùnwàtä, matsègùnçì, matsègùnciyà, matsègùntä, makàrìyàcì, makàrìyaciyà, makàrìytä, ma’aikàcì, ma’aikaciyà, ma’aiktä</td>
</tr>
<tr>
<td>8.</td>
<td>\text{yunwà}</td>
<td>\text{hunger}</td>
<td>\text{yùnwàtà}</td>
<td>matsùrìcì, matsùrìciyà, matsùrìtä, mayùnwàcì, mayùnwaciyà, mayùnwàtä, matsègùnçì, matsègùnciyà, matsègùntä, makàrìyàcì, makàrìyaciyà, makàrìytä, ma’aikàcì, ma’aikaciyà, ma’aiktä</td>
</tr>
<tr>
<td>9.</td>
<td>\text{tsègùmì}</td>
<td>\text{gossip}</td>
<td>\text{tsègàntä}</td>
<td>matsùrìcì, matsùrìciyà, matsùrìtä, mayùnwàcì, mayùnwaciyà, mayùnwàtä, matsègùnçì, matsègùnciyà, matsègùntä, makàrìyàcì, makàrìyaciyà, makàrìytä, ma’aikàcì, ma’aikaciyà, ma’aiktä</td>
</tr>
<tr>
<td>10.</td>
<td>\text{kàryà}</td>
<td>\text{a lie}</td>
<td>\text{kàryàtì}</td>
<td>matsùrìcì, matsùrìciyà, matsùrìtä, mayùnwàcì, mayùnwaciyà, mayùnwàtä, matsègùnçì, matsègùnciyà, matsègùntä, makàrìyàcì, makàrìyaciyà, makàrìytä, ma’aikàcì, ma’aikaciyà, ma’aiktä</td>
</tr>
<tr>
<td>11.</td>
<td>\text{aıkì}</td>
<td>\text{work(ing)}</td>
<td>\text{aıkàtäß}</td>
<td>matsùrìcì, matsùrìciyà, matsùrìtä, mayùnwàcì, mayùnwaciyà, mayùnwàtä, matsègùnçì, matsègùnciyà, matsègùntä, makàrìyàcì, makàrìyaciyà, makàrìytä, ma’aikàcì, ma’aikaciyà, ma’aiktä</td>
</tr>
</tbody>
</table>

³ Hausa fills the gaps left by the non-productivity of the \text{ma}- agentive with a pair of clitics, \text{mài}… ‘one who does…’ (m. or f.) and \text{maśu}… ‘ones who do…’, e.g. \text{mài dafàwà} ‘one who cooks/s cooking’, \text{mài hùshi} ‘one who is angry’ (cf. item 16). This formation is completely productive and compositional.
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12. bařà alms-seeking  bārātā seek alms  mabārācī alms-seeker (m)
   mabařāciyā  mabārātā alms-seeker (f)  mabārātā alms-seekers

Hausa has many nouns such as those in the left-hand column of Table 2 that indicate an action or a condition of being. I will refer to these as action nouns, though many refer to a state or condition rather than action. Many—perhaps most—of these nouns have related verbs with a suffix /–atä/ that mean ‘do the action of the noun, manifest the behavior or state of the noun’. Adding this suffix triggers suffix V replacement convention. With this convention applied the suffix has three allomorphs, distributed as follows:

VERBALIZING SUFFIX: (1) -tā / σ σ ]N___ (σ = syllable)  tsēgūmī → tsēgūntā
   (2) -atā / ō ]N___ (ō = heavy syllable)  karyā → karyátā
   (3) -atā / ō ]N___ (ō = light syllable)  bařā → bārātā
   (light syllable = C V where V is a short vowel; heavy syllable = C V or CVC)

As the examples in Table 2 show, agentive formation is dependent on verbalization because agentives can be formed only on verbal bases. Therefore, in order to form agentives from the bases of nouns such as those in the left-hand column of Table 2, one must first form a related verb, then form the agentive from that verb.

In addition to word families like those in Table 2, where an action noun, a related verb, and an agentive all exist, there are cases like those in Table 3, where there is an action noun and an agentive that looks as if it is derived from a verb based on the noun, but where the hypothetical verb does not exist.

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4 Nasal consonants always assimilate to the place of articulation of a following consonant in the “standard” dialect described here. Thus, the final m of the base becomes n before the t of the suffix.
5 There are a few agentives that seem to be formed directly from nouns, e.g. magūdiyā ‘woman who ululates during festivities’ from gūdā ‘ululation’ but no verb *gūdā ‘ululate’ or derived verb *gūdāta. such agentives are few in number and for the ones that I am familiar with, the noun has a form that could be a verbal noun, suggesting that the nouns originally may have had associated verbs on which the agentive was formed, with the verbal use later being lost.
Finally, to complete the picture, there are word families consisting of an action noun with an associated verb but no associated agentive, illustrated in Table 4.

Word families such as those in Table 3-4 raise at least two issues. One is that of productivity in general, which, as already mentioned above, also applies to agentives derived directly from basic verbs. In the case of both agentive formation and verbalization of action nouns, the morphological processes themselves are quite regular and the outcomes are usually compositional. How, then, can we account for the fact that they are not also fully productive?

The second issue raised by the data in Table 3 is the status of the “verbs” on which the agentives are formally based. In a morphological theory that generates words by rules of concatenation, we would expect the rules to generate forms that could, themselves, be lexemes, that is, the purpose of morphological rules would not be simply to create input for other rules—and certainly not in the case of verbalization, since verbs derived from adjectives are common. On the other hand, if we look at the meanings of morphologically complex words as being inferable from their component
parts and one of the components of an agentive is the verbal base, how do we get the meaning if that verbal base does not exist?

Finally, in a case related to those in Table 3, consider the word family karyā ‘a lie’, karyątā/karątā ‘contradict/turn out to be false’, makaryacī ‘liar’ from Table 2. Here there is derived verb, but the meaning of the agentive, ‘someone who lies’, seems to relate directly to the meaning of the noun. If it related to a verb, the expected meaning would be either “someone who shows others to be liars” or “someone who is caught in a lie”. In other words, if the meaning of the agentive is based on the meaning of a verb, it is not a verb that is in use—the way Hausa says, “He lied,” is yā yi karyā ‘he did a lie’.

3. Toward a Formalization

In a morpheme-based account with rules of concatenation, one could account for the data above with lexical entries such as the following:

Sample roots:

- dafà : V
  - Vstem
  - ‘cook’

- nè : ma :
  - Nstem
  - [+ma - Npref]
  - ‘look for’

- ts’ò : ro :
  - Nstem
  - [+ma - Npref]
  - ‘fear’

- zìna
  - Nstem
  - [+ma - Npref]
  - ‘adultery’

Affixes:

- ma - Npref
  - ‘agent of action’

- i : [HL...H]
  - Nphi suff
  - masculine noun

- -iya : [HL...H]
  - Nphi suff
  - feminine noun

- -a : [HL...H]
  - Nphi suff
  - plural noun

- -ata :
  - Vsuff
  - verbalizer

Rules of concatenation

- Vstem \rightarrow \begin{cases} Nstem \\ Astem \end{cases} Vsuff
- Nstem \rightarrow (Npref) \begin{cases} Nstem \\ Vstem \end{cases}
- Nphi-stem \rightarrow Nstem Nphi-suff

The diacritic feature [+ma- Npref] on some of the roots indicates that they can add the ma- agentive noun prefix. Since agentive formation is not productive and since most roots do not have associated agentives, the default is to lack this feature. Because ma- is
marked with the combinatory potential to be affixed only to verb stems, it cannot be added directly to a noun stem. A noun like tsörō ‘fear’ will thus first have to undergo the Vstem formation rule before it can take the agentive ma-. The category Nphi-suff is for suffixes that mark gender or number (Greek “Φ” is conventionally uses as a cover term for these features).

The derivational tree below shows how the grammar derives matsöràcĩ ‘coward’.

Category specifications, combinatory potentials, and diacritics combine to restrict the rules to producing only morphologically valid forms for the most part. There are a couple of problems, however. First, it is hard to see how to block formation of a verb like *zinātã (see example 14). We need to be able to apply the Vstem rule to zína to form the base for mazinācĩ ‘adulterer’ so we cannot use a diacritic like [- ata verbalizer] to prevent the Vstem rule from applying to zína, but there is no way to mark the output of a morphological rule as not being a valid lexical entry. Second, the grammar, which simply concatenates lexical entries, predicts that the output of the concatenation will also concatenate the meanings, i.e. the meaning will be compositional, but as we saw in the previous section, this is not always the case.

Haspelmath (2002:47ff.) proposes a word-based model for morphology that addresses some of these problems. In this model, all the words in use in a language, including all morphologically complex words, comprise independent lexical entries. Words that share
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morphological make-up are linked by word-schemas, which use variables in place of the non-shared aspects of those words. Morphological structures shown by word-schemas in turn are put into correspondence with each other. We can illustrate word schemas with underived verbs and ma- agentives in Hausa and a word-schema correspondence with the bi-directional relationship between these word-schemas.

\[
\begin{align*}
/X/ & \quad \equiv \quad [/ma - X - i : /s] \quad \text{nêmâ} \leftrightarrow \text{ma-nêm-ī} \\
\text{‘dox’} & \quad \equiv \quad \text{‘a male person who (habitually) doesx’} \\
\end{align*}
\]

\[
\begin{align*}
/X/N & \quad \equiv \quad [/X - ata : /v] \\
\text{‘manifestation of the behavior’} & \quad \equiv \quad \text{‘do the behavior manifested byx’} \\
\end{align*}
\]

Multi-dimensional correspondences between word-schemas are also possible. Thus, to show the morphological relationships between nouns, derived verbs, and agentives like those in Table 2, we can set up a correspondence set like the following

\[
\begin{align*}
/X/ & \quad \equiv \quad [/ma - X - ac - i : /N] \\
\text{‘manifestation of the behavior’} & \quad \equiv \quad \text{‘male person who (habitually) doesx’} \\
\end{align*}
\]

\[
\begin{align*}
 tsôrô & \quad \equiv \quad tsôr-atà \\
\text{‘fear’} & \quad \equiv \quad \text{‘be afraid’} \\
\end{align*}
\]

This system deals with the problem of non-existent verb bases like *zinâtà by establishing a direct correspondence between the /ma-X-ac-ī/ agentive schema and the base noun without requiring a derived intermediate step. That is, there is a correspondence between the word-schemas for all the word forms here, but there is no implication that for any given root, all the word forms are actually in use. We have seen cases above where potential verbs do not exist (Table 3) and where potential agentives do not exist (Table 4), and there are also word families that fit this pattern where it looks like the potential noun does not exist, e.g. bûkätà ‘need (V)’, mabûkâcî ‘one who needs’, but no *bûkà ‘need (N)’. Direct correspondence between the agent noun and the base noun
also takes care of the problem of **makaryài** ‘liar’, whose meaning is related to the meaning of the noun **karyá** ‘lie’, rather than the meanings of the derived verbs.

On the other hand, it is not clear how the word-based model would deal with non-compositionality. Word-schemas seem to lock meaning relationships between words in with the morphological relationships. Likewise, it is hard to see how this model would account for productive processes where new words are formed on the fly or how it would distinguish frozen though fairly transparent relationships like *wide/width* from common and quite productive relationships like *wide/wideness*.

The conclusion seems to be that morphology, from a linguist’s point of view, is probably messy, with speakers recognizing some morphological relationships just because they know enough individual words to spot those relationships, whereas in other cases speakers can form and/or parse new words by applying productive processes (“rules”) that combine morphemes to form words that have not just been memorized.

**REFERENCES**


