Ideophones in Barayin

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1. Introduction

Barayin is an East Chadic language spoken by approximately 5,000 people in the Guera region of the Republic of Chad. This paper is the first study of ideophones in the language.[2] Other aspects of the grammar of Barayin are documented by LOVESTRAND (2012, 2018b). The analysis of ideophones is primarily based on a corpus of 43 transcribed recordings totaling 26,413 words. Six texts are from field research in 2010 as a member of SIL. Phonetic transcriptions of these texts are available in the appendices of LOVESTRAND (2012). Eight unpublished texts were collected during doctoral fieldwork in 2015. 29 texts were transcribed in 2017 as part of a video documentation project.[3] Two of the texts are dialogues (in which there are no ideophones), the rest are monologues. All of the recordings are semi-spontaneous. The speaker was invited to speak for the recording, but generally allowed to choose their topic, and spoke with little or no advanced preparation. Eleven of the 41 monologues are traditional folktales, called *sidiki*. The rest are a mix of memories of historical cultural practices, recent historical events, current issues, and procedural texts. Nine of the texts are from female speakers, the other 34 are from male speakers. The corpus combines two very closely related dialects, Jalkiya and Giliya (LOVESTRAND 2011).

There are 125 unique ideophones in the corpus, plus thirteen from other sources. Ideophones have a distinctive semantic function that is easy to identify, difficult to define, and even harder to diagnose. In cross-linguistic discussions of ideophones, they are said, for example, to have "expressive and imaginistic semantics" (AMEKA 2001: 26), and to be "a verbalized imitation of extralinguistic events or situations" (KILIAN-HATZ 2001: 165). According

to DINGEMANSE (2011: 19), "a fundamental characteristic of ideophones is *depiction*". In other words, "they employ a mode of representation that invites people to experience them as iconic performances rather than as arbitrary descriptions" (DINGEMANSE 2017: 365; see also DINGEMANSE & AKITA 2017: 504-505).

A comparison with onomatopoeic words helps to illustrate the distinction between *depiction* and *description*. An English sentence like *The dog barked* is a description of what is depicted by the single word *woof*. Examples 1 and 2 illustrate how depiction works in Barayin. In example 1, the ideophone *cararara* depicts an event that is also described by the verb *kolga* 'go'. In example 2, the event of throwing spears is not described at all. Rather, it is depicted by the repetition of the ideophone *akala*.[4]

1. áttí   ná   ꜛ**cárárárárá**   kól-gà
    SO   BG   IDEO   go-PROG
    'So she ran away.' (bva091.89)

2. hìyá   **ákàlà**   **ákàlà**   **ákàlà**   **ákàlà**   ná   ní   d-àa   jē
    then   IDEO   IDEO   IDEO   IDEO   BG   SBJ.3PL   kill-PFV   PART
    'Then you throw the spears. You kill them.' (bva400.51)

In addition to their particular semantic function, ideophones are often said to be marked, in the sense of manifesting phonological or morphosyntacic patterns that are otherwise rare or absent in a given language. CREISSELS (2001: 75) writes that "ideophones generally have phonological properties that set them apart from other categories, and this is commonly viewed as the manifestation of a semantic feature of expressivity". Section 2 describes the ways that ideophones can be marked in Barayin. However, as BLENCH (2010) points out, "ideophones can be phonotactically, morphologically or syntactically marked, but this is not a necessary requirement". Despite the fact that markedness is a notable characteristic of ideophones in Barayin generally speaking, not every ideophone in the corpus is marked (for example, the second token of *yar* in example 5b). Conversely, there are words in Barayin that are marked in similar ways to ideophones, but which do not have the depictive semantic function of ideophones (Section 3). If not all ideophones are marked, and non-ideophones can be marked, then markedness is not a defining criteria of ideophones in Barayin.

Depictive semantics are difficult to objectively diagnose. It might be simpler to favor the formal criteria and group together all words in Barayin that are similarly marked into a single class. Section 3 presents some evidence for distinguishing ideophones from similarly-marked non-ideophones (many

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[4] Ideophones under discussion are marked in bold in the examples. The superscript up arrow (ꜛ) indicates a marked high prosody (Section 2.5).

of which are loan words). For example, there are many ideophones in the corpus (125), but they are relatively infrequent. Most only occur one time. This is presumably because each ideophone is semantically very specific, and can only occur in a limited number of contexts. Other marked words occur much more frequently in the corpus, and in a wide variety of contexts.

Section 4 looks at some of the most common and salient semantic types of ideophones in the corpus. Ideophones most commonly occur with verbs of motion and hitting. Section 5 gives a brief overview of some of the morpho-syntactic properties of ideophones. Ideophones are inflectionally invariable, and generally pattern in similar ways to adverbs. Section 6 is a brief con-clusion.

2. Marked words in Barayin

There are at least five ways that ideophones and other words can be phonologically and morphosyntactically marked in Barayin: rare phones, irregular phonotactics, lengthening, reduplication and prosody (including tone). The final three types of markedness are phonological alternations that can be thought of as a type of "expressive morphology" (ZWICKY & PULLUM 1987), or more generally, expressive marking. These alternations do not correlate with the expression of any specific semantic feature.

2.1 Rare phones

The standard set of phonemes in Barayin (those founds in verbs, nouns, pronouns, prepositions and adjectives, excluding loan words) are shown in Table 1.[5]

Table 1. Standard consonant phonemes in Barayin

	Labial	Alveolar	Palatal	Velar
Voiceless stop	p	t		k
Voiced stop	b	d	j	g
Fricative		s		
Nasal	m	n	ṇ	ŋ
Liquid	w	l	y	
Flap		r		

Most Chadic languages have a voiceless palatal plosive [c]. This sound is not a standard phoneme in Barayin, but it occurs in 22 of 138 ideophones (see example 1 above and examples 8, 11, 13 and 14 below). The voiceless palatal

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[5] Phones are represented orthographically. The graphemes correspond to IPA symbols with the exception of the palatal consonants: <ṇ> corresponds to IPA /ɲ/, <j> to /ɟ/, and <y> to /j/. The rhotic grapheme <r> represents two allophones, the flap [ɾ] and the trill [r].

is not exclusive to ideophones. It also occurs in loan words, such as those from Chadian Arabic, *cop* 'a little bit', *caka* 'yarn' (from /tʃaaka/), and in some names of places such as *Pancila* (a Barayin village) and *Cad* (the Republic of Chad). That is to say, the voiceless palatal sound is rare, but not restricted to ideophones.

A few ideophones use a voiced labio-dental fricative [v] or a labio-dental flap [ѵ] (example 3). "The labio-dental flap, a sound typical of Central Africa, recently recognised by the IPA, is more common in many languages in ideophones than in ordinary words" (BLENCH 2010). The labio-dental fricative [v] occurs in one French word in the corpus, *benevol* 'volunteer'. It is not clear how well-integrated this word is in Barayin, so it is reasonable to say that the labio-dental fricative, as well as the labio-dental flap are sounds that are restricted to ideophones.

3.   índá   gàndà   gùmà   **⬆hívíp**
      ???   inside   hole   IDEO
      '[The lion falls] inside the hole.' (bva082.124)

2.2 Irregular phonotactics

Ideophones in Barayin can be marked phonotactically by a plosive in a word-final position. The same is true of ideophones in Hausa (NEWMAN 2001: 262). In the Barayin corpus, 50 of 138 ideophones end in a plosive. This type of markedness is not restricted to ideophones. It is relatively common for loan words to have a word-final plosive, for example, from Chadian Arabic: *suk* 'market', *wakit* 'time', *kitap* 'book'.

Another peculiarity of the phonological structure of ideophones is that they have a strong tendency to use identical vowels in multisyllabic words. Of 138 ideophones, 62 are monosyllabic, 56 are disyllabic and 20 are trisyllabic (ignoring reduplication, Section 2.4). Among the 56 disyllabic ideophones, 50 have identical vowels in each syllable. Among the 20 trisyllabic ideophones, 14 have identical vowels in all three syllables, and the remaining six have two identical vowels of three. While the frequency of monovocalic words marks ideophones as a class, it is not a defining criteria, since some ideophones do not meet it, and some non-ideophones are also monovocalic, as would be expected.

2.3 Lengthening

Ideophones can be marked by a non-phonemic lengthening of a vowel or a sonorant coda in the final syllable.[6] In 191 tokens of ideophones in the corpus,

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[6] Both long vowels and long consonants are generally contrastive in Barayin. There are two other places where lengthening regularly occurs in Barayin. The first is to express interrogative mood by lengthening the final vowel of a sentence and adding a rising-falling tone

26 have a lengthened vowel or consonant. This lengthening (represented by repeated graphemes) is not obligatory. This can be seen in several cases where the same ideophone is used more than once, often by the same speaker in the same text, such as in examples 4 and 5. First, the speaker uses an ideophone with an exaggerated lengthening of the final syllable. The speaker then repeats the same ideophone, and does not lengthen the final syllable. The difference can clearly be seen in the waveform and spectrogram of 5b in Figure 1.

4.a. pàà-tú   téy   **dúgúlúúj**   téy   **dúgúlúúj**   téy
      big-SG.F   like.this IDEO   like.this IDEO   like.this
      '[A space that is] really big, huge like this, huge like this.'

4.b. kī   ŋ̀   pīd-ò-gètì   màlà pàà-tú   **dúgúlúj**
      SBJ.2SG.M   PREP take-INF-POSS.3SG.F   very big-SG.F IDEO
      'You take a really huge [space].' (bva041.57-59)

5.a. wōō gē   jápp-á   gī   pēt   ŋ̀   búk-í
      and REL   want-PFV   DEM   each PREP talk-INF
      'Whoever wants to speak will speak ...'

5.b. ŋ́   gīlīyáŋ   dē   ⬆**yárr**   dē   gīlīyáŋ   dē   **yār**   tì dì bàs
      ASOC Giliya   REL IDEO   REL Giliya   REL IDEO   DEM   only
      '… in pure Barayin. Pure Barayin only.' (bva086.7)

Figure 1. Waveform, pitch (75Hz-200Hz) and spectrogram of 5b, showing expressive lengthening and tone

      dē   ⬆**yárr**   dē   gīlīyáŋ dē   **yār**   tì dì bàs
      REL   IDEO   REL   Giliya   REL IDEO   DEM   only
      '… in pure [Barayin]. Pure Barayin only.' (bva086.7)
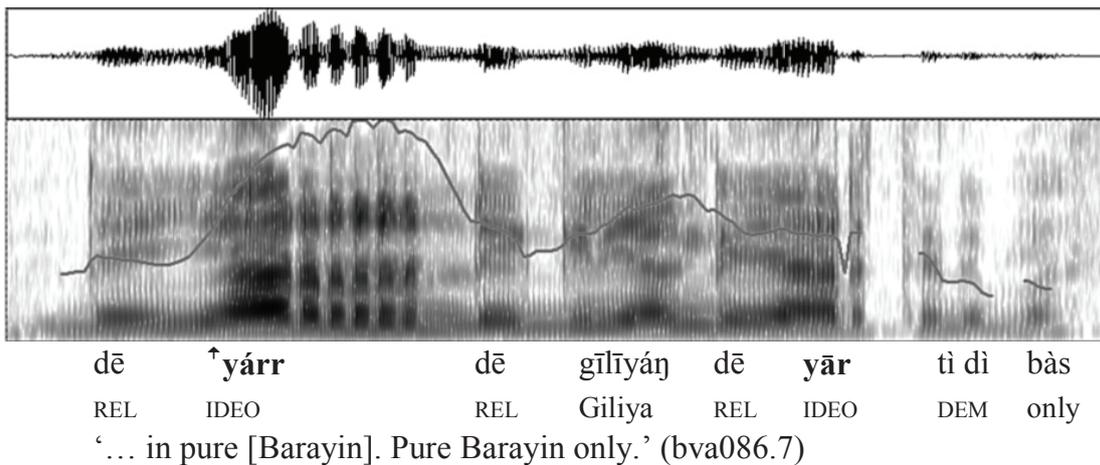
(LOVESTRAND 2012: 211). In the second case, the final vowel of the final word of a relative clause can be lengthened before a demonstrative marking the end of the relative clause (LOVESTRAND 2012: 67).

Optional lengthening is also attested in the word *kee* 'on and on' which is borrowed from Chadian Arabic, and has a durative meaning.[7] In 81 tokens, *kee* is lengthened well beyond the length of a standard long vowel at least 41 times. In one case, the vowel lasts for 1.6 seconds! Another word that regularly exhibits this type of expressive lengthening is the universal quantifier *paa-jiga* 'all'. In this case, the long vowel of the bound stem *paa-* is lengthened even further, but not the obligatory possessive suffix that follows.[8]

2.4 Reduplication

Ideophones are often marked by being repeated from two to six times in immediate succession, as in example 6 (see also example 2 above, and examples 14 and 16 below).[9]

6. mōt-ē **mák mák** ná
  die-PRF IDEO   BG
  'He died.' (bva082.131)

This is often called reduplication, although in some cases it might be better termed "iteration or repetition" (AMEKA 1999: 83; 2001: 32). This is a very common feature of ideophones: "That ideophonic words should be formed by reduplication is so commonplace that it hardly seems worth discussing" (NEWMAN 1989: 254). In the Barayin corpus, 59 of 191 tokens of ideophones are reduplicated in this way. Reduplication in Barayin generally maintains the same tonal pattern on each repeated word.

In addition to reduplication which repeats the whole word, there are also five ideophones that show partial reduplication, such as those in examples 7 and 8 (see also example 1 above). The second syllable for these words is repeated several times. The number of repetitions is somewhat arbitrary, as seen in the two different lengths of the ideophone in example 7.

7.a. **ràtàtàtàtà** ná īss-ā-jó   lúwá ràggà ná
  IDEO   BG pour-IPFV-DTRV above mat BG
  'Plop plop plop. It fell on the mat,

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[7] In Chadian Arabic, *kee* also has a general demonstrative meaning 'like that'. The word *kee* is not used with this meaning in Barayin, but only with the adverbial durative meaning.

[8] SCHUH (1998: 309) compares the universal quantifier in Miya (West Chadic) to ideophones since it has an irregular syllable structure and tonal pattern, and it can appear to function as a manner adverbial meaning 'completely'.

[9] Reduplication (or repetition) has very limited use in any other part of Barayin grammar. Repetition of a number (e.g., 'two two two') can be used to express distributed meaning ('two each') (cf. AMEKA 1999: 83). There are also names of animals that have repeated elements, such as *kindi-kindi* 'zorille' (compare with *kindi* 'pangolin'), but this is not a productive process.

7.b. ràggà   ārēyī   [↑]**rátátátátátá**
      mat   cry-IPFV   IDEO
      and the mat made a noise: plop plop plop.' (bva306.29)

8.   kà   ŋ̀   píll-ó-jì   [↑]**pácácácá**   ków
      SBJ.3SG.M PREP crap-INF-POSS.3SG.M IDEO   also
   'He defecated on himself.' (bva306.73)

There are also some non-ideophones that are regularly reduplicated: *cop* 'a little bit' is repeated in 6 of 22 tokens in the corpus, *tak* 'thoroughly' in 18 of 26, and *kee* 'on and on' in 15 of 81. Note that *kee* can be either repeated or lengthened (Section 2.3), but never both.

2.5. *Prosody and tone*

There are three contrastive levels of tone in Barayin: low tone (L), mid tone (M), and high tone (H). Ideophones generally do not participate in the use of contrastive tone. Instead there is a strong tendency to have the same monotonal pattern. Of 191 tokens of ideophones in the corpus, 130 have a similar H or super high tone. Ideophones are also often pronounced with a higher intensity than the rest of the utterance.

In cases of expressive marking such as reduplication or lengthening, the pitch can rise even higher to a level well beyond the range used in the rest of the utterance. This is marked in the transcriptions by a superscript up arrow ([↑]) before the ideophone. An example of rising pitch with reduplication is shown in Figure 2. The ideophone *kap* is repeated four times. The first instance is already at a relative H tone level, and each repetition is raised to an even higher level.

Figure 2. Waveform and pitch (75Hz-200Hz) of bva091.68, showing rising pitch

kà   jēl-ēyī   [↑]**káp**   **káp**   **káp**   **káp**
he   put-IPFV   IDEO   IDEO   IDEO   IDEO
'He puts [the thorns] in.' (bva091.68)
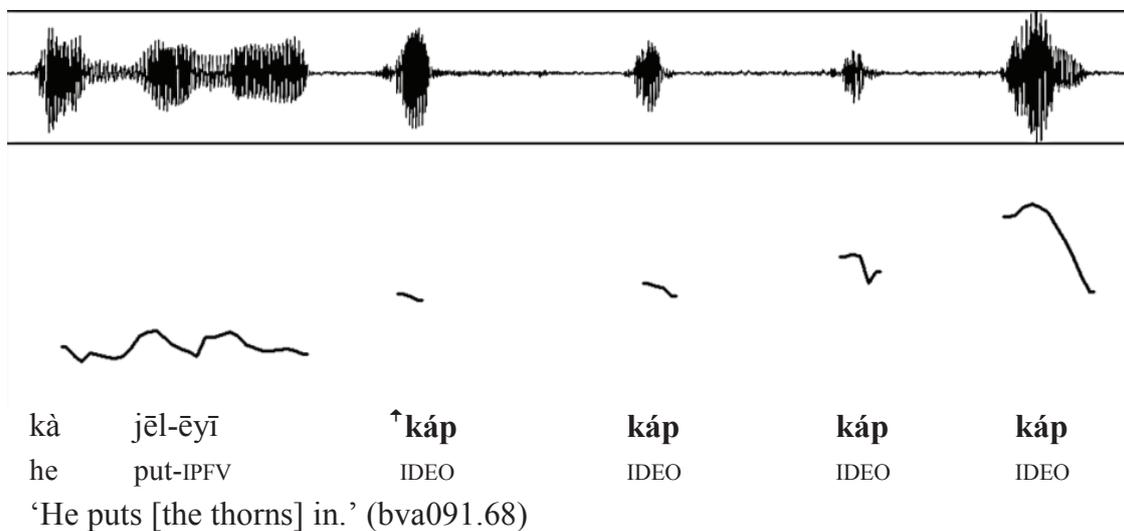
Similar patterns are reported in ideophones in Emai, a Niger-Congo language of Nigeria (EGBOKHARE 2001: 87), as well as in Japanese ideophones (DINGEMANSE & AKITA 2017: 508-509). In Ciluba (Bantu), it is reported that "ideophones predominantly use low-toned and lengthened vowels, [but] the speaker enjoys the freedom to use the tones and vowel quantity as he or she wishes in many of them" (KABUTA 2001: 153). There is some evidence that speakers of Barayin also have a certain amount of freedom in deciding what pitch to use for an ideophone, just as they do in lengthening and reduplication. There are several cases where the same speaker uses the same ideophone twice in the same text, each time with different tones. In example 9 the ideophone *dindir* has H tone. When the same ideophone is repeated in the same phrase later in the story, example 10, it has L tone. See also example 7 above. In some cases, the tonal variation correlates with a change in syntactic position and may be indicative of varying degrees of syntactic integration (Section 5).

9.   súné   dōw-gì   **díndír**
     oil   go.to.bed-IPFV   IDEO
     'The oil appeared!' (bva071.31)

10. páráṉ ná súné dōw-gì   **dìndìr**
     IDEO   BG oil   go.to.bed-IPFV IDEO
     'Smack! The oil appeared!' (bva071.51)

This marked prosodic pattern is not limited to ideophones. The same high-and-rising pitch pattern regularly occurs when the Chadian Arabic loan words *kee* 'on and on' and *tak* 'thoroughly' are reduplicated or lengthened.

3. Distinguishing ideophones from other marked words

If both ideophones and non-ideophones can be marked, this raises the question of how to identify ideophones. Like ideophones, many of the marked words discussed in Section 2 have no inflectional or derivational morphology. In principle, the distinction is primarily semantic. Ideophones are purely depictive. However, in the absence of a method for testing whether or not a word has such semantics, and without further fieldwork for applying such a test, the distinction between ideophones and superficially similar words will be made on other criteria, primarily their distribution across the corpus and their distribution across languages in the region.

According to BLENCH (2010), ideophones "usually have no clear etymologies" and "do not seem to be lexically cognate across languages". The marked non-ideophones, such as those listed in Table 2, are used in languages throughout the Guera, as well as by speakers of Chadian Arabic in other parts of the country. This cross-linguistic sharing distinguishes these marked words

from ideophones. Ideophones do not appear to have clear cognates, even in closely related languages.

Table 2. Expressive marking on non-ideophones

		Marked phonotactics	Expressive lengthening	Expressive reduplication	Expressive prosody	Loan word
kee	'on and on'	–	+	+	+	+
tak	'thoroughly'	+	–	+	+	+
cop	'a little'	+	–	+	–	+
rok	'again'	+	–	–	–	? [10]
pet	'each'	+	–	–	–	+
paajiga	'all'	–	+	–	–	–

The distinction between ideophones and other marked words can also be seen by their distribution across the corpus. Ideophones have some entertainment value, sometimes described as a "dramaturgic" function. This function correlates with a preference for ideophones in some genres over others (AMEKA 2001: 27, 33). The self-identified genre of Barayin folktales known as *sidiki* contains more ideophones on average than other genres in the corpus. The 11 folktales have an average of 12.5 tokens of ideophones (1.5% of words), while other genres have an average of four per recording (0.3% of words). In six of the non-folktale recordings, there are no ideophones.

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[10] The word *rok* is only reportedly used in the neighboring language Sokoro. Since Sokoro is closely related to Barayin, this may be a cognate word, or both languages may have borrowed it from a third source.

Figure 3. Frequency of ideophones across texts (0-30)
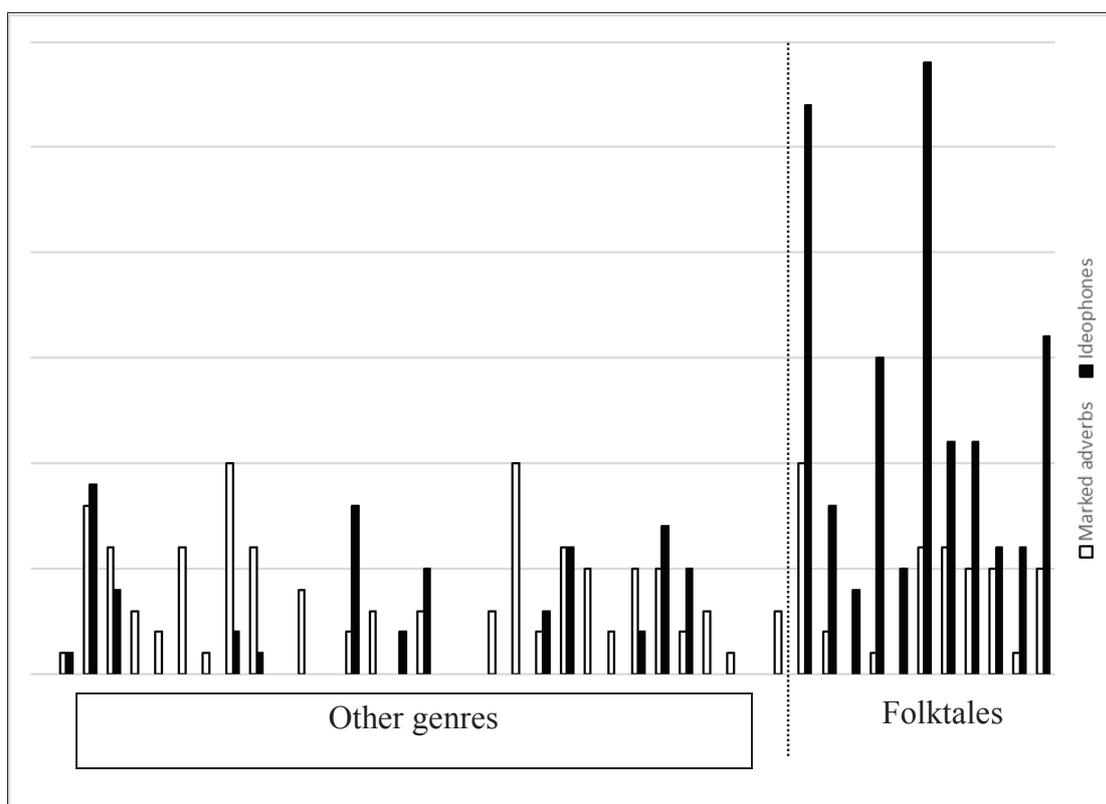
The distribution of the 125 ideophones in the corpus can be compared with that of five marked non-ideophones (the first five listed in Table 2). Whereas ideophones are much more frequent in folktales, other marked words occur at a similar frequency across genres. Folktales have an average of 4.5 tokens of these five words per recording, while other genres have an average of 3.9. This distributional tendency is shown in Figure 3. The solid black lines represent the number of tokens of ideophones in a text. The white bars outlined in black represent the number of marked non-ideophones.

Ideophones are also distinct from other commonly-marked words in terms of the frequency of individual ideophones in the corpus. There is a large number of ideophones, but each ideophone occurs infrequently. Table 3 shows how many ideophones occur how many times in the corpus. Of 125 ideophones in the corpus, 86 (69%) only occur one time. Another 23 occur twice. Fifteen of these twice-repeated ideophones occur in a single text, sometimes in the same sentence, as in examples 4, 5, 7, 9 and 10 above.

Other commonly-marked words are much more frequent. For example, *kee* 'on and on' occurs 81 times; *tak* 'thoroughly' occurs 26 times; and *cop* 'a little bit' occurs 22 times. This difference in frequency of tokens most likely indicates more general semantic content, as AKITA argues for Japanese "quasi-ideophones" (AKITA 2017: 322).

Table 3. Number of tokens of ideophones in the corpus

Number of tokens	Number of ideophones
1	86
2	23
3	9
4	3
5	3
6	1

4. Semantics of ideophones

This initial study of Barayin ideophones is based on a corpus without any other means of lexicographic investigation of the meaning of ideophones. For this reason, any detailed analysis of the semantics of ideophones will have to wait for future research. Nonetheless, without assuming a comprehensive taxonomy of semantic types, it is still possible to identify some of the functions of ideophones in the corpus.

The most common types of verbs accompanied by an ideophone are verbs of motion and contact such as hitting, breaking or falling. It is not always clear what aspect of the activity is modified by the ideophone (e.g., type of agent, size of agent, speed, sound). Only a few ideophones are used frequently enough to make any reasonable judgments about their semantics based on context alone. For example, the ideophones *cara*, *carat*, and *karat* are typically used when a small animal (almost always a squirrel) goes through a narrow passage. (See also example 1 above).

11. kà   gùs-ēyī   **càràt**
    SBJ.3SG.M   go.out-IPFV   IDEO
    'It [aardvark] comes out of the hole.' (bva029.54)

12. **↑kárát**   tōp-ó-gètì   ŋ̀   gùmà-gètì
    IDEO   enter-INF-POSS.3SG.F   PREP   hole-POSS.3SG.F
    'She [squirrel] enters her hole.' (bva091.267)

There is a set of ideophones that modify adjectival words, listed in example 13. They are comparable to "adjectival intensifiers" in Hausa (NEWMAN 1968: 109) or "colour intensifiers" (BLENCH 2013). In Barayin, these have mostly

been elicited (TYLER et al. 2014). Most can only modify one specific adjectival word, giving it the sense of increased intensity or concentration of that quality. The ideophone immediately follows the word it modifies.[11]

13.   *poor-o* **kar kar**   'bright white'
      buur-o **cu**   'bright red'
      kolm-o **lit lit**   'dark black'
      messi **sirik**   'very green'
      giriŋ-gu **cededi**   'very sweet'
      kul-gu **lakak**   'very bitter'
      sita **cakaka**   'very spicy'
      sili-gu **cakaka**   'very salty'
      paniŋ **lik lik**   'only one' (from recordings, three instances)
      paa-tu **duguluj**   'very big' (from recordings, three instances)

Example 14 lists a set of ideophones elicited in TYLER et al. (2014) which are said to specify the type of animal moving (akin to *trot*, *gallop*, and *waddle* in English). TYLER et al. (2014) report that the ideophone *cibak* indicates a camel running. However, in a recording (bva305.51), *cibak* is used with a hyena, which does not seem similar to a camel! This casts some doubt on how precisely the speakers' intuitions in elicitation capture the range of use of a particular ideophone.

14.   *Lokuma gor-eyi* **cibak cibak**.   'The camel runs.' (Long-legged animal)
      Willi gor-eyi **celek celek**.   'The gazelle runs.' (Thin, fast animal)
      Kulum goreyi **kivbiw kivbiw**.   'The warthog runs.'
      Kuma d-eyi **dikilik dikilik**.   'The baboon walks.' (Stocky animal)
      Patal d-eyi **koyor koyor**.   'The turtle walks.'

A few ideophones are onomatopoeic for the vocal sounds animals make.

15.   **kaŋ**   dog barking
      ay   dog yelping in pain
      woy   scared/surprised dogs

In one text, there are two examples of the type of ideophone that BLENCH (2010) calls "insultatives". The ideophones *jopol* and *judum judum* in example 16 are clearly meant to be insults. The former refers to the size or shape of a person's forehead.

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[11] Head words ending in *-o* are infinitival verbs (verbal nouns). Those ending *-gu* or *-tu* are adjectives. Those without a suffix are nouns or a number.

16.a.   kíllà   òpp-ò   **jópól** má béd-àgò   péésí
       2SG.M forehead-POSS.2SG.M   IDEO who give-DAT.2SG.M   horse
       'You bighead! Who gave you a horse?'

16.b.   kíllà   **jùdúm júdùm**   má béd-àgò   péésí
       2SG.M   IDEO   who give-DAT.2SG.M   horse
       'You slob! Who gave you a horse?' (bva406.10-11)

Some ideophones have similar phonetic forms and similar semantics. For example, the three forms, *lekeŋ*, *leŋ* and *loko-lokoŋ*, all seem to make the same semantic contribution, 'loosely', when modifying the verb *woono* 'attach'. The same is true of *cara*, *carat* and *karat* which all refer to a small animal moving through a small passageway. There are at least two possible interpretations of these patterns. One interpretation is that these ideophones have a flexible phonological structure with no semantic change correlating with the variations in form. This is reported to be the case for some ideophones in Ciluba (KABUTA 2001, p. 142) and Gbeya (SAMARIN 1971). However, in several other languages, variations on a skeletal form are said to correlate with semantic differences (e.g. BLENCH 2010; CHILDS 2001: 61; DIFFLOTH 1972; JARVA 2001: 114). It is possible that the semantic differences in Barayin are "so subtle that they are hard to capture" (AMEKA 2001: 31).

5. Morphosyntax of ideophones

Cross-linguistically, ideophonic words are integrated into the morphosyntax to varying degrees in different languages (AMEKA 2001: 26; VOELTZ & KILIAN-HATZ 2001). Varying levels of syntactic integration occur both cross-linguistically and intra-linguistically. One area of current research on ideophones is looking for evidence to support a cline of grammaticalization (or "deideophonization") that can account for this variability (AKITA 2017; DINGEMANSE 2017; DINGEMANSE & AKITA 2017; DWYER & MOSHI 2003).

In Barayin, there is not yet any clear evidence of variation in syntactic integration among ideophones, but it is possible that further research into prosodic variation and grammatical structures will reveal that some tokens of ideophones are less integrated than others. For example, 130 of 191 tokens of ideophones have a marked prosodic pattern (Section 2.5). A possible explanation for the 61 tokens that lack this clear prosodic foregrounding is that they are more syntactically integrated. More research is needed to determine if any morphosyntactic feature correlates with unmarked prosody.

Generally speaking, ideophones in Barayin have morphosyntactic characteristics that overlap with adverbs in such a way that ideophones can be considered a subclass of adverbs, as is also the case in Hausa (NEWMAN 1968) and many other African languages. Adverbs are the only major class of words that do not take any affixes. Ideophones also do not take any affixes. Standard Barayin word

order is SVO. Adverbs typically appear in either a position following the verb (and direct object, if present) or in a clause-initial position before the subject. Ideophones are found in the same syntactic positions as adverbs.

Barayin regularly uses non-verbal predicates of all classes such as nouns, adjectives and prepositional phrases. There is no copular morpheme in the language. Ideophones (unlike non-ideophonic adverbs) can be regularly used as a non-verbal predicate. Example 17 is a particularly clear case of a predicational use of an ideophone. The ideophone is in the standard predicate position, preceded by its subject. The standard clause-final negation marker is at the end of the clause and takes scope over the ideophone. Note that if the word *tal* was being used as a verb here, it would be expected to take an obligatory verbal suffix, just like is done when loan words are used as verbs. Likewise, if *tal* were an adjective, it would be expected to take an obligatory adjectival suffix agreeing with the person and gender of the subject (LOVESTRAND 2012: 82).

		SUBJECT	PREDICATE	NEGATION
17.	tō	déé-gó	**tál**	dō
	COND	father-POSS.2SG.M	IDEO	NEG

‘If your father is irresponsible …’ (bva024.73)

ALPHER (2001: 13) reports that in some Australian languages, ideophones are inherently focused: “Ideophones in the three languages illustrated in texts here are forms whose semantic contribution is largely a matter of presentation of New information, or focus …” In contrast, ideophones in Barayin are information-structurally neutral. The marker *ná* in Barayin marks an utterance-initial constituent as background information (LOVESTRAND 2018a). Inherently-focused constituents, such as interrogative pronouns, cannot be marked by *ná*. Ideophones can occur in a *ná*-marked utterance-initial position, as shown in examples 7a and 10 above. Therefore, ideophones are not inherently focused. Conversely, when all of an utterance except for one constituent is backgrounded, the single element following *ná* is in a focus position. This is called “maximal backgrounding” (GÜLDEMANN 2016). Ideophones can be focused in this way, as in example 18. In summary, ideophones can occur in both focused and non-focused positions.

18.a	bàrkà-jáŋ-jáŋ	ná	wōón-ē-tì	í-jì	ná
	BJJ	BG	attach-PRF-OBJ.3SG.F	mother-his	BG

‘BJJ tied up his mother …

18.b	**léŋ**	**léŋ**	tēy	bās
	IDEO	IDEO	like.this	only

… loosely.’ (bva031.8)

Ideophones can occur in negated sentences, as in examples 17 and 19, and in a non-indicative mood, as in example 19. There are no examples of ideophones in an interrogative sentence in the corpus, but this may be due to the relative infrequency of interrogative sentence in a corpus largely composed of monologues.

19. mìjjó gī tēy jóó kól-ú **kóŋgúló** dō
    person DEM like.this FOC go-SBJV IDEO NEG
    'Nobody should go astray.' (bva022.65)

6. Conclusion and further research

Ideophones in Barayin are morphologically invariable depictive words which are often marked by rare phones, unusual phonotactics and expressive marking such as reduplication, lengthening and high-pitched prosody. In the genres included in the corpus examined in this study, ideophones are commonly used with a verb expressing motion and contact. Other semantic types of ideophones have also been identified such as adjectival modifiers and insultatives. Further research is still needed to be able to produce a more fine-grained understanding of the specific semantic contribution of each ideophone. Investigation of the meaning of ideophones would also need to look at how co-speech gestures potentially guide the interpretation of ideophones (DINGEMANSE 2013). Another area for further investigation of ideophones in Barayin is whether there is any evidence of "deideoph-onization". In other words, do any particular morphosyntactic structures correlate with the absence of expressive marking.

There are several words that are marked in the same way as ideophones, but which do not have a depictive function. The least interesting of these are *rok* 'again' and *pet* 'each', which are only marked by their phonotactics and not subject to expressive marking. This type of markedness can be understood as the result of borrowing with no further explanation required. Other commonly-marked words, such as *kee* 'on and on', *tak* 'thoroughly' and *cop* 'a little bit', are regularly subject to expressive marking. In this sense these words behave like ideophones, but they are clearly distinct in terms of their distribution in the corpus and across the languages of the region. They allow the expressive marking associated with the expressivity of ideophones, but do not appear to have the depictive semantics of ideophones. In addition, they are borrowed words, common to all or most languages in the area.

These marked non-ideophones are worthy of further research in their own right. Like "quasi-ideophones" in Japanese (AKITA 2017: 322) and Siwu (DINGEMANSE 2011: 107), these words can mostly be thought of as types of

quantifiers.[12] Is there a cross-linguistic tendency for quantifiers to exhibit expressive marking? Are these a type of ideophone, or are these words better thought of as a separate class with independent motivation for expressive marking?

This is a particularly interesting question in the Guera region where there is close contact between languages of several phyla across Chadic, Semitic, Nilo-Saharan and Adamawan languages. It would seem that same expressive marking of these types of quantifiers is common to the area. Why did these marked words spread through the region, but ideophones apparently do not spread through contact?

7. Abbreviations

Glossing abbreviations are as follows:

ASOC associative preposition, BG background marker, COND conditional marker, if/when, DAT dative/indirect object, DEM demonstrative, DTRV detransitivizer, F feminine, FOC focus, IDEO ideophone, INF infinitive/verbal noun, IPFV imperfective, M masculine, NEG negation, PART particle, PFV perfective, PL plural, POSS possessive, PREP oblique preposition, PROG progressive, PRF perfect, REL relative clause marker, SBJ subject, SBJV subjunctive, SG singular, 2 second person, 3 third person.

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[12] AKITA re-analyzes NEWMAN's (1968: 110–111) "verbal intensifiers" in Hausa as another example of "quasi-ideophones" which also have quantifier semantics.

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