Intensifying ideophones in three Luhya languages

Margit Bowler (UCLA) & John Gluckman (UCLA)

1   Introduction[1]

- This talk addresses ideophones in Llogoori, Lunyore, and Lutiriki, three languages in the Luhya subfamily (Bantu, Kenya).[2] (We also include examples of Lubukusu ideophones in Appendix A from Wasike and Diercks 2016.)

- **Ideophones** have been described as "marked words that depict sensory imagery" (Dingemanse 2011, 25) and words that are "depictive rather than descriptive" (Essegbey 2013, 235). The most frequently cited definition comes from Doke (1935, 118), who described ideophones as "A vivid representation of an idea in sound. A word, often onomatopoeic, which describes a predicate, qualificative or adverb in respect to manner, colour, sound, smell, action, state or intensity."

(1)   The pie hit the wall *splat*!

KISI (NIGER-CONGO) (Childs, 1988, 178-179):

(2)   *ò   kwé déὲὲ...*
      PRO go   IDEO
      'She went *déὲὲ* (slowly).'[3]

(3)   *kòòwáng mà fùlú   bììlììlììlìì...*
      blood   PRO leave IDEO
      'The blood gushed out.'

---

[2]The Luhya subfamily (Guthrie: JE.32) consists of 23 (or so) languages spoken in western Kenya and northwestern Tanzania. There are approximately 5 million speakers of Luhya languages, with a relatively high degree of mutual comprehension between speakers of different languages (Ethnologue).

[3]We use the following abbreviations in this handout:

1-20: noun class	FUT : future	PRT : particle
1/2/3: 1st/2nd/3rd person	FV : final vowel	REC : reciprocal
AC : anticausative	IDEO : ideophone	REFL : reflexive
ASP : aspect	NEG : negative	SG/PL : singular/plural
CAUS: causative	POSS : possessive	TNS : tense
COP : copula	PRO : pronoun	
EXPR : expressive	PROG : progressive	

- Ideophones have been argued to occur across the world, including in the languages of Europe (Antuñano 2016, Basque), Asia (Hamano 1994, Japanese), Australia (Alpher 1994, Yir-Yoront), and the Americas (Henderson 2016, Tseltal). Some authors, including Voeltz and Kilian-Hatz (2001), argue that ideophones are universal and occur in every language.

- Dingemanse and Akita (2016) argue that ideophones occur along scales of **expressiveness** and **grammatical integration**, which are inversely correlated with each other.

- Here and elsewhere in the talk, unless specified, we do not use the term "expressive" in the Pottsian sense. Instead, we use it as a conceptual description found in the ideophone literature.

- Dingemanse and Akita (2016) describe expressiveness and grammatical integration as follows (in accordance with common properties of ideophones described by other authors, including Antuñano 2016, Childs 1994, and Doke 1935):

Expressiveness
- Intonational foregrounding through marked prosody, lengthened vowels, etc.

- Unusual phonation (e.g. breathy voice, creaky voice, etc.)

- Unusual tones or phonemes not found elsewhere in the language

- Accompaniment by iconic gesture

Grammatical integration
- Syntactic optionality; optional items are less grammatically integrated
- Linear position; peripheral items are less grammatically integrated
- Embedding in morphosyntactic structure; less deeply embedded items are less integrated
- Ability to stand alone as a complete utterance
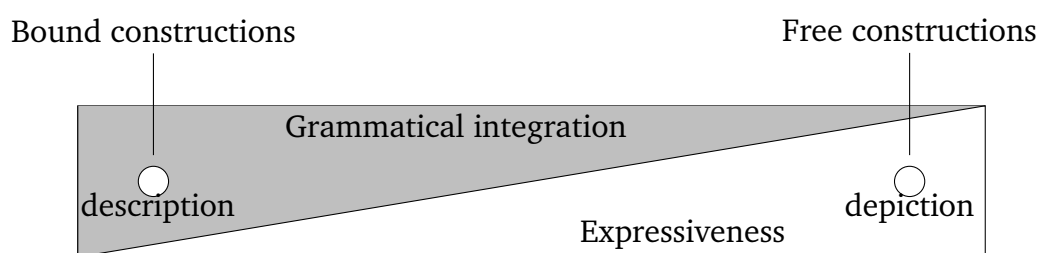
Figure 1: Inverse correlation between grammatical and expressive properties of ideophones (Dingemanse 2017, 133).

- In this talk, we show data from Llogoori, Lunyore, and Lutiriki and argue that the Luhya ideophones diverge from many other described ideophone systems in that they purely **intensify lexical items within a given semantic class**, rather than independently supplying depictive/lexical information. They are relatively grammatically integrated, with a corresponding relatively low degree of expressiveness.

- We give a degree-based account of the Luhya ideophones, and suggest that the ideophones do not introduce any non-truth conditional content.

2   Basic data

- We give basic examples of ideophones in Llogoori (LG), Lunyore (LN), and Lutiriki (T) in (4)-(6). The ideophone provides an "intensified" reading of the lexical item that it combines with:[4]

(4)   a. *amaaze ni   ma-hiu pa.*
         6.water COP 6-hot   IDEO
         'The water is very hot.'   (LG)

   b. *ri-awa   ni   ri-akanyu khai.*
      5-flower COP 5-red   IDEO
      'The flower is very red.'   (LG)

(5)   a. *maatsi   ne   ma-hiu pa.*
         6.water COP 6-hot   IDEO
         'The water is very hot.'   (LN)

   b. *e-sausi   ne   i-nzakanyu kha.*
      9-sauce COP 9-red   IDEO
      'The sauce is very red.'   (LN)

(6)   a. *matse   ni   ma-hiu pa.*
         6.water COP 6-hot   IDEO
         'The water is very hot.'   (T)

   b. *i-ntso   ni   y-amuchi kha.*
      9-house COP 9-red   IDEO
      'The house is very red.'   (T)

- Luhya ideophones can combine with adjectives, as above, and verb phrases and nouns, as below.[5]

(8)   *Sira   yi-zuriz-i ki-koombe du.*
      1.Sira 1-fill-FV 7-cup   IDEO
      'Sira filled the cup to the brim.'   (LG)

(9)   *n-v-ey-e   na   ma-hooru mno.*
      1SG-COP-ASP-FV with 6-longing IDEO
      'I really miss you.' (lit. 'I am with intense longing.')   (LG)

- Luhya ideophones select for a semantic class of lexical items that they can combine with. (See Appendix A for a complete list of ideophones.) These items all have similar meanings, as shown in the following table for Llogoori (note that these are not exhaustive lists of all the lexical items a given ideophone can combine with):

---

[4]The voiceless velar fricative *kh* in (4b) is an uncommon phoneme in Llogoori, although it is frequent in many of the closely related Luhya languages.

[5]Luhya ideophones almost always combine with stative predicates. However, a very small number of ideophones given to us by our Lunyore consultant can combine with eventive predicates:

(7)   a. *e-saal'a si-mekukh-il-e   piap.*
         9-stick 9-break-TNS-FV IDEO
         'The stick broke *piap*.'   (LN)

   b. *ya-khu-pak-il-e   pap.*
      1-ASP-hit-TNS-FV IDEO
      'He just hit me *pap*.'   (LN)

Unlike the other Luhya ideophones that we've discovered, our speaker reported that *piap/pap* is the sound that breaking and hitting make; that is, they are iconic. These ideophones, like the others, are limited to combining with a particular semantic class: *pap* can only describe a hitting event, whereas *piap* can only describe a breaking event.

We ultimately choose to exclude these ideophones from our analysis. We suspect that they are borrowings from a Luo language; our Lunyore consultant also speaks fluent Luo, is married to a Luo speaker, and regularly uses Luo in her daily life. Furthermore, these ideophones resemble typical Nilotic ideophone data (Mark Dingemanse, p.c.).

Ideophone	Lexical item	Meaning
mno[6]	*kuyaanza* (verb)	'to be happy,' 'to like'
	na mahooru (adjective)[7]	'with longing'
	ndugi, noru (adjective)	'sweet'
pa	*hiu* (adjective)	'hot'
	kuhia (verb)	'to be hot'
	roro (adjective)	'spicy,' 'bitter'
zi	*zilu* (adjective)	'cold,' 'still'
	chinganu (adjective)	'quiet'
ti	*mwamu* (adjective)	'black'
	chafu (adjective)	'dirty'

- Luhya ideophones cannot occur with lexical items outside of their semantic class. For instance, *du* can describe extreme "fullness" in the sense of a cup, room, matatu, etc. (10a), but cannot describe a person's sensation of being very full (10b):

(10) a. *ki-koombe ki-ikwizor-a du.*
           7-cup   7-full-FV   IDEO
           'The cup is very full.'   (LG)

      b. *Sira y-a-ku-i-goot-a   (*du).*
           Sira 1-TNS-ASP-REFL-sate-FV IDEO
           Intended: 'Sira is (very) full.'   (LG)
           (literally: 'Sira just sated himself.')

- Ideophones are not the only strategy that these languages have to express such intensification; they also have canonical intensifying morphemes like *saana* 're-ally.'[8] (All of the languages in our study have cognate forms of this morpheme; we return later to the question of how it differs from the ideophones.)

(11) *amaaze ni   ma-hiu saana.*
       6.water COP 6-hot   really
       'The water is really hot.'   (LG)

2.1   Syntactic distribution/grammatical integration of the Luhya ideophones

- The Luhya ideophones are often, but not always, at the right edge of the clause, and are always syntactically optional.

(12) *(*pa) ki-biribiri ni   (*pa) ke-roro (pa).*
       IDEO 7-pepper   COP IDEO 7-spicy IDEO
       'The pepper is (very) spicy.'   (LG)

---

[7]Mike Marlo (p.c.) notes that in Swahili, *muno* is a canonical degree intensifier (like English *really*) that is not restricted to any lexical class. While Llogoori *mno* is likely a borrowing from Swahili, its distribution differs from Swahili in that it is in fact subject to lexical restrictions. This could be a point of variation across Luhya: in Lutiriki, *mno* appears to pattern more like Swahili.

[7]We discuss in section 3.3.1 why we treat *na mahooru* 'with longing' as an adjective.

[8]Unlike English *really*, Luhya *saana* lacks any usage akin to *Jack really hit that baseball!* We choose to gloss *saana* as 'really' rather than 'very' to reflect the fact that it can combine with VPs as well as APs.

- The Luhya ideophones cannot occur without any associated lexical item; that is, they cannot stand alone as predicates, as in (14). The Llogoori data in (14) contrasts with the Ewe (Niger-Congo) example in (13); Ewe permits ideophones to occur as predicates:

(13) EWE (NIGER-CONGO) (Ameka 2001, 27):

   é-wɔ   legbee.
   3SG-do IDEO

   'It is *legbee* (long).'[9]

(14) *amaaze ni   *(ma-hiu) pa.*
   6.water COP 6-hot   IDEO
   Intended: 'The water is very hot.'   (LG)

- The ideophones also cannot stand alone as complete utterances, as in (15)-(16).[10]

(15) Context: You run a bath. You touch the bathwater and discover that it's extremely hot.
   a.   * *pa!*
        IDEO
   b.   ɬɬ↓ha̦!
        EXPR
        'Ouch!'[11]

(16) Context: Imali makes you some tea and asks how sweet it is.
   a. *ichai i-v-ey-e   na   uvunoru   vuri?*
      9.tea 9-COP-ASP-FV with 11.sweetness how.much
      'How sweet is the tea?'   (LG)
   b. i. * *mno!*
             IDEO
       ii. *ni   i-noru   mno!*
            COP 9-sweet IDEO
            'It is very sweet!'   (LG)

- Luhya ideophones generally can only combine with the most local lexical item from their semantic class, as shown in the following coordination constructions. (However, this may be a point of variation between languages.)

---

[9] *wɔ* 'do' is a copula in Ewe.

[10] We note, however, that triplicated ideophones (subsection 2.2) have some kind of special status in Lunyore and Llogoori. The triplicated ideophones can be uttered in isolation in these two languages; in Lunyore, they can be used as interjections. For instance, if a Lunyore speaker dips their hand in very hot water, they can say *papapa!* This is not available in Llogoori or Lutiriki; we currently lack the data for Lubukusu.

[11] Here we use the Extended IPA symbol ↓ to represent ingressive airflow during the production of the lateral fricative. So far, we have collected approximately 15 Llogoori expressives that are akin to English expressions like *ouch* and *oops*. These morphemes pattern very differently from the Luhya ideophones; they can stand alone as complete utterances, and they necessarily precede the proposition they co-occur with.

(17)   *maaze   ni   ma-chiringanu na   ma-zilu zi.*
        6.water COP 6-quiet   and 6-cold   IDEO

    a.   * 'The water is very quiet and very cold.'

    b.   'The water is quiet and very cold.'   (LG)

(18)   *maaze   ni   ma-mwamu ti   na   ma-zilu zi.*
        6.water COP 6-black   IDEO and 6-cold   IDEO

    'The water is very black and very cold.'   (LG)

- If the element that the ideophone combines with is in an attributive position, the ideophone occurs next to it, not at the end of the clause. (We are not yet able to discern if Luhya attributive adjectives involve relative clauses.)

(19)   a.   *maaze   ma-hiu pa   ga-v-ey-e   mu ki-koombe.*
        6.water 6-hot   IDEO 6-COP-ASP-FV in   7-cup

        'The very hot water is in the cup.'   (LG)

    b.   * *maaze   ma-hiu ga-v-ey-e   mu ki-koombe pa.*
        6.water 6-hot   6-COP-ASP-FV in   7-cup   IDEO

        Intended: 'The very hot water is in the cup.'   (LG)

- The Luhya ideophones are typically unable to combine with complementizers, quotative markers (QM), or light verbs. The Llogoori data in (21) differs in this respect from the Wolof (Niger-Congo) example in (20).

(20)   WOLOF (NIGER-CONGO) (Baglini, 2016):
        lamp b-i   dafa   jégjég   ne ràyy.
        lamp CL-DEF do.3SG suddenly QM IDEO
        'The lamp suddenly flashed like *ràyy*.'

(21)   * *maaze   ni   ma-hiu kuresia/ndee pa.*
        6water COP 6-hot   like/COMP   IDEO
        Intended: 'The water is hot like *pa*.'   (LG)

- Finally, the ideophones differ from Luhya adverbs in their syntactic distribution. For instance, as shown in (22)-(23), adverbs can be clefted, while ideophones cannot.

(22)   *geraha ni   sia Sira y-izur-iz-i   ki-koombe.*
        slowly COP how 1.Sira 1-fill-CAUS-FV 7-cup
        'Slowly is how Sira filled the cup.'   (LG)

(23)   * *du   ni   sia Sira y-izuriz-i ki-koombe.*
        IDEO COP how 1.Sira 1-fill-FV 7-cup
        Intended: '*Du* is how Sira filled the cup.'   (LG)

2.2 Ideophone reduplication and triplication in Llogoori

- To our knowledge, all Luhya ideophones can be reduplicated.[12] When reduplicated, the reading associated with these ideophones is even more intense:

---

[12] The sole disyllabic ideophone in Llogoori, *gada*, can only be reduplicated as *gadagada*.

(24) *amaaze ni   ma-hiu pa   pa.*
      6.water COP 6-hot   IDEO IDEO
      'The water is boiling hot.'   (LG)

- A small set of ideophones can also undergo **triplication**.

- When triplicated, the Llogoori ideophones can then be clefted, contrary to the data in (23)/(25b):

(25) a. *dududu ni   sia Sira   y-izuriz-i ki-koombe.*
          DUDUDU COP how 1.Sira 1-fill-FV   7-cup
          '*Dududu* is how Sira filled the cup.'
          (i.e., Sira filled the cup to the brim)   (LG)
      b. * *du   ni   sia Sira   y-izuriz-i ki-koombe.*
          IDEO COP how 1.Sira 1-fill-FV   7-cup
          Intended: '*Du* is how Sira filled the cup.'   (LG)

- The clefting data in (25a) is only available in Llogoori; it is unavailable in Lutiriki and we do not have the relevant data for Lubukusu or Lunyore (but see footnote 10).

- We propose that the triplication data in (25a) involves the formation of (non-degree intensifying) adverbs through triplication. These adverbs then freely distribute like other adverbs. As shown in (22), adverbs can be clefted.

- Triplicated ideophones also pattern like adverbs in their ability to stand alone as complete utterances, unlike the non-triplicated ideophones. For instance, triplicated ideophones are felicitous as responses to questions.

(26) *Sira y-izuriz-i kikombe ndi   nang'ga?*
      Sira 1-fill-FV   7cup   how in.what.sense
      'How did Sira fill the cup?'   (LG)
      a. *Geraha.*
          'Slowly.'
      b. *Dududu.*
          DUDUDU
          'To the brim.'
      c. **Du.*
          IDEO

2.3   Expressiveness of the Luhya ideophones

- The Luhya ideophones display a relatively low degree of expressiveness (in the sense of Dingemanse and Akita 2016).[13]

---

[13]Mark Dingemanse (p.c.) notes that ideophones are among the first lexical items/constructions lost when speakers are no longer immersed in their language. Our main Llogoori consultant lives in a predominantly English-speaking environment, and several of our other consultants live in regions where their Luhya language is not widely spoken. This could contribute to why we have not found many features of expressive speech. Alternately, it could simply be the case that Luhya ideophones are not highly expressive.

- The Luhya ideophones only occasionally display marked phonation or intonation, and are only occasionally accompanied by iconic gestures (Mike Marlo, p.c.). Furthermore, our Llogoori consultant reports that it is possible to use the ideophones in written language.

- Speakers do not report that the Luhya ideophones are interpreted iconically; one possible exception to this is *pa*, which may be interpreted as the sound of water boiling.

- The Luhya ideophones are not "productive;" speakers cannot spontaneously coin new ones, unlike reports of spontaneous ideophone generation in e.g. Semai (Mon-Khmer) (Diffloth 1972).

- Furthermore, the ideophones are not inherently associated with either negative or positive evaluations. That is, (27) is felicitous in contexts in which the water being very hot is a good thing, a bad thing, or neither.

(27) *amaaze ni   ma-hiu pa.*
      6.water COP 6-hot   IDEO

      'The water is very hot.'   (LG)

2.4   Why do we call these morphemes ideophones?

- Like other described ideophone systems, the Luhya ideophones:

  1. Are constrained in their distribution by the semantic class of the lexical item they combine with
  2. Can undergo reduplication to express additional intensification
  3. (Almost always) have a fixed number of syllables
  4. Have a consistent syllable shape (that is, they are almost always open syllables)
  5. Contain phonemes rarely found elsewhere in the languages
  6. Denote "exaggerated" shades of meaning (i.e., *extremely hot*, not *lukewarm*)

- With respect to the various properties of ideophone systems described by Dingemanse and Akita (2016), we find that Luhya ideophones pattern similarly to languages like Somali (Cushitic) in having "non-expressive" ideophones (Dhoorre and Tosco 1998). That is, they are relatively grammatically integrated, with a corresponding low degree of expressiveness.

- Other languages have similarly non-expressive ideophones; in (28), the Siwu (Niger-Congo) ideophone *futut... futututu* patterns like the Luhya ideophones in effectively contributing redundant information.[14] (Newman 1968 gives similar data from Hausa (Chadic)).

---

[14]Dingemanse and Akita (2016) observe that within a single language, some ideophones may be more expressive than others. Indeed, it is sometimes the case that a single ideophone can be more or less expressive in different contexts. (28) therefore shows an example of a less expressive Siwu ideophone, although on the whole Siwu's ideophones tend to be more expressive.

(28)　Siwu (Niger-Congo) (Dingemanse 2017, 123)

　　　i-tì　　　*si i-fudza-ɔ*　　　　↑*futututututu*↑.
　　　c.i-head if s.i-be.white-2sg.o ideo.pure.white.em4

　　　'That your head may become white ↑*futututututututu*↑ [pure white].'[15]

- We propose that the Luhya ideophones can be placed on the far left edge of Dingemanse (2017)'s scale of grammatical integration and expressiveness:
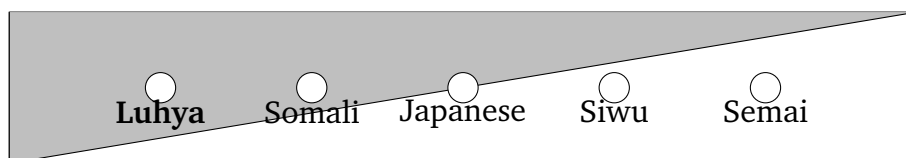

Figure 2: Approximation of different ideophone systems on a scale of grammatical integration/expressiveness; adapted from Dingemanse (2017, 136).

3　Towards an analysis

- The use of the ideophones to intensify the predicate that they combine with suggests that they could be treated as degree modifiers, making a semantic contribution that is similar to English *very*, *really*, etc.

- This could easily account for their distribution in combination with adjectival predicates, since the ideophone-hosting adjectives that we have found are all adjectives that are typically associated with degree scales (*hot, cold, sweet,* etc.).[16]

- We note also that the contribution of the ideophones can be targeted by negation, suggesting that they contribute part of the propositional content. (Sentential negation is marked clause-finally in Luhya; in constructions in which ideophones and negation co-occur, the ideophones precede negation):

(30)　*i-chai ni　i-noru　mno daave.*
　　　9-tea cop 9-sweet ideo neg
　　　'The tea is not very sweet. (It's just sweet.)'　　　　　　　　　　(LG)

(31)　*matse　ka-heere pa　mba.*
　　　6.water 6-hot　　ideo neg
　　　'The water is not very hot. (It's just hot.)'　　　　　　　　　　(T)

- This data raises two main questions for us:

---

[15]Dingemanse (2017) uses arrows ↑ to indicate general prosodic foregrounding.

[16]An apparent possible counterexample to this is the ability of the ideophone *zi* to combine with the verb *kukuzila* 'to be cold'/colloquially, 'to be dead.' In these cases, we assume the gradable meaning of 'to be cold' as the basic meaning of *kukuzila*. Our Llogoori consultant reports that such uses of *zi* are a colloquialism meaning 'to be dead':

(29)　*i-mbwa yakuz-il-a　　zi.*
　　　9-dog　9.cold-appl-fv ideo
　　　'The dog is dead as a doornail.'　　　　　　　　　　(LG)

1. **How do the Luhya ideophones differ from canonical Luhya degree intensifiers like *saana* 'really'?** (We assume *saana* has the same basic semantics as English *really*.)

2. **How can we account for the ability of the ideophones to co-occur with nominal and verbal predicates**, i.e., predicates that are not typically associated with degrees?

- We provide a brief background on degrees, and then address these two questions in turn.

3.1   Degrees

- **Degree theories** of gradable adjectives argue that adjectives combine with both a degree argument ($d \in D_d$) and an individual argument ($x \in D_e$), and assert that the adjective holds of the individual x to degree d (following Bartsch and Vennemann 1972, Cresswell 1976, Heim 2001, among many others):

(32)   ⟦hot⟧ $= \lambda d \lambda x.$ hot(x,d)   ("x is hot to degree d")

- Intensifiers like *very*, *extremely*, and so on contribute the meaning that the degree of the adjective with respect to the individual is above some contextual standard. We give a basic denotation for the English degree intensifier *really* in (33a) below, and assume that the Luhya degree intensifier *saana* 'really' has the same denotation:

(33)   a.   ⟦really/*saana*⟧ $= \lambda G_{<d<et>>} \lambda x.$ ∃d: G(x,d) & d > standard
         b.   ⟦really/*saana* hot⟧ $= \lambda x.$ ∃d: hot(x,d) & d > standard

- In utterances without any degree intensifier or measure phrase, we assume that the predicate combines with some phonologically null morpheme that contributes the meaning that the individual that the predicate combines with "stands out" with respect to the property denoted by the predicate (Kennedy 1999, Rett 2008).

3.2   Differences between the ideophones and *saana*

- We propose that the Luhya ideophones all share a common semantic denotation, given below:
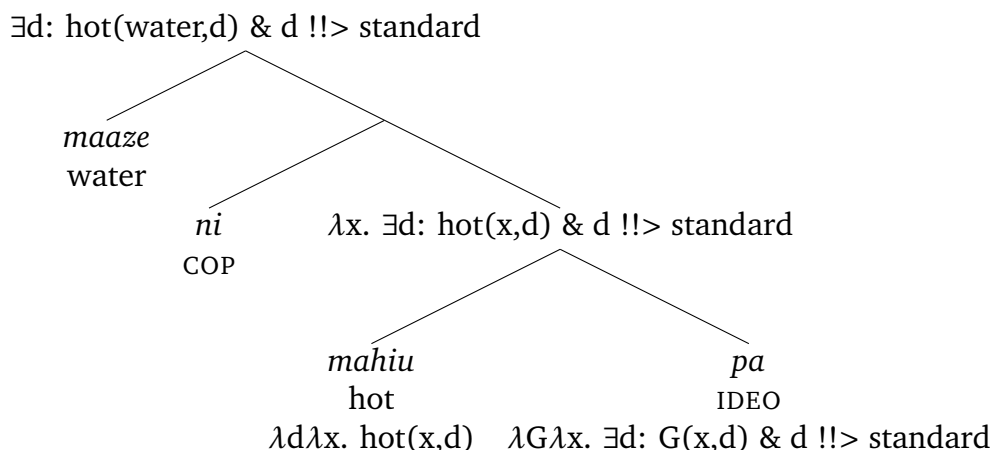
(34)   ⟦IDEO⟧ $= \lambda G_{<d<et>>} \lambda x.$ ∃d: G(x,d) & d !!> standard

- Given this denotation, ideophones contribute the meaning that the degree of the predicate with respect to the individual **greatly exceeds** the contextual standard. We use the notation *!!>* to indicate "greatly exceeds," c.f. Kennedy and McNally (2005, 373)'s treatment of *much*.

(35)   ⟦hot IDEO⟧ $= \lambda x.$ ∃d: hot(x,d) & d !!> standard

(36)   *maaze   ni   ma-hiu pa.*
         6.water COP 6-hot   IDEO
         'The water is very hot.'   (LG)

∃d: hot(water,d) & d !!> standard

maaze
water

ni
COP

λx. ∃d: hot(x,d) & d !!> standard

mahiu
hot

pa
IDEO

λdλx. hot(x,d)   λGλx. ∃d: G(x,d) & d !!> standard

- Unlike *saana*, the ideophones are lexically specified for the class of items that they can combine with.[17]

- The "standard" Luhya degree intensifier *saana* is unmarked; its distribution is determined by the scale structure of the adjective it combines with, rather than any lexical specification. (*saana* patterns identically to English *really* in this respect, c.f. Kennedy and McNally 2005's work on adjective scale structure.)

3.3   The Luhya ideophones as cross-categorial degree modifiers

- As we noted previously, a degree analysis of the ideophones can easily account for their ability to co-occur with adjectival predicates. All of the adjectives that the ideophones co-occur with are uncontroversially associated with degree scales.

- In the following subsections, we address how we can extend this proposal to account for the ability of the ideophones to co-occur with nominal and verbal predicates.

3.3.1   Ideophones in combination with nominal predicates

- Luhya languages in general do not have very many canonical attributive adjectives (that is, lexical items that combine with adjectival concord prefixes). Instead, these languages frequently use the strategy *be with N*, where N is a nominal.[18]

---

[17]We note that a small set of English adjectives combine with similarly lexically restricted intensifiers; these include *jet black* and *bitter cold*, among others. However, these English intensifiers (i) occur elsewhere in the language as lexical items, (ii) are not subject to any syllable restrictions, (iii) do not contain any phonemes not found elsewhere in English, and and (iv) do not have any iconic component. This suggests to us that while the Luhya ideophones may share some commonalities with English *jet, bitter*, and so on, the latter lexical items are not in fact ideophones.

[18]This construction is used to express *be with N* as well as *have N*:

(i) *Kageeha   a-ve   na   i-mbwa.*
    1.Kageeha 1-COP with 9-dog
    1. 'Kageeha is with a dog.'
    2. 'Kageeha has a dog.'   (LG)

(37) *m-v-ey-e*   *na   mahooru mno.*
      1SG-COP-ASP-FV with 6.longing IDEO
      'I really miss you.' (lit. 'I am with intense longing.')   (LG)

- We propose that in such *be with N* constructions, the complex *na N* 'with N' constituent is semantically equivalent to a predicative adjective. That is, in examples like (37), 'with N' denotes something of type $< d < e, t >>$ that ideophones can combine with.

- We furthermore assume that a subset of nouns like *ma-hooru* '6-longing,' *vu-yaanzi* '15-happiness,' and *i-nzala* '9-hunger' themselves include degrees in their denotations.

- Several authors have proposed including degrees in nouns; these include Morzycki (2009) and Bochnak (2013). Here, we follow Bochnak (2013)'s proposal for verbal nominalizations in Luganda (Bantu).[19]

- Bochnak (2013), following Nicolas (2004) and Moltmann (2009), proposes that nominalized gradable predicates are relational: that is, they denote relations between individuals and degrees. We follow this analysis for the relevant Luhya nominals, which we also term "relational."

(38) $[\![mahooru]\!] = \lambda x \lambda d.\ \text{longing}(x) \geq d$

- We then in turn are forced to assume two different types for *na* 'with,' one with and one without degrees.[20]

- We give a denotation for *na* 'with' with degrees below; we use *R* to refer to predicates of type $< e < d, t >>$ (i.e., the relational nouns):
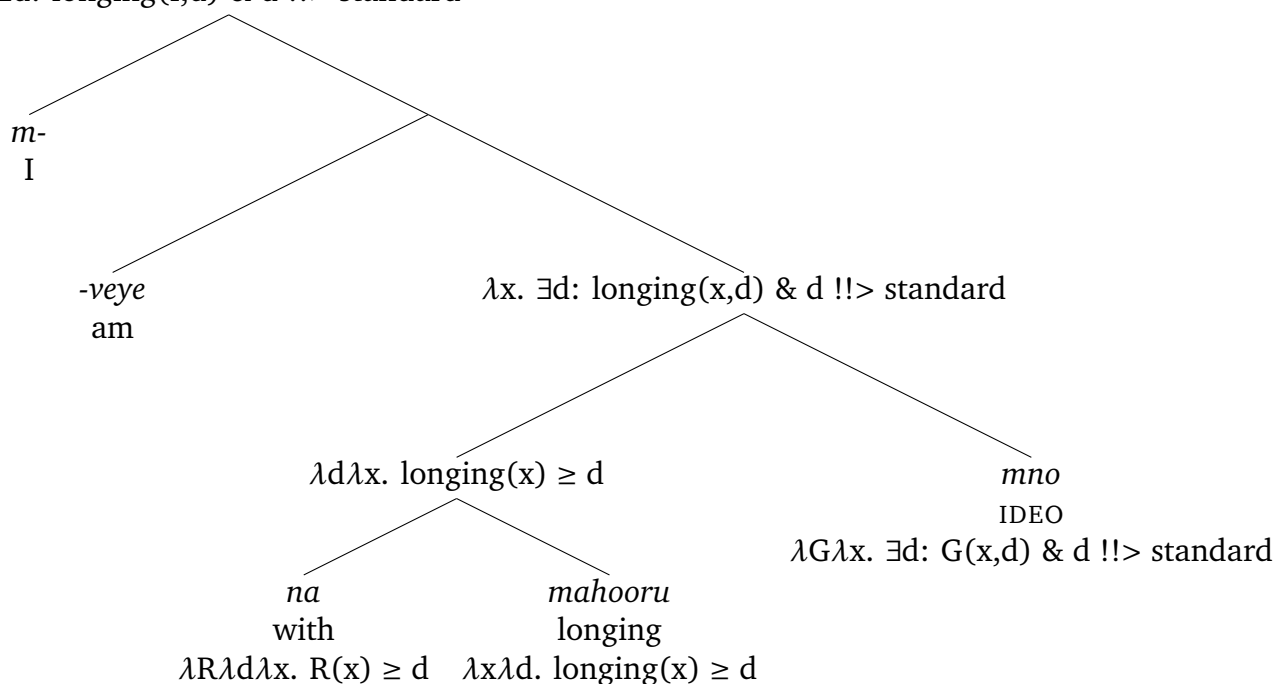
(39) $[\![na]\!] = \lambda R \lambda d \lambda x.\ R(x) \geq d$

(40) *m-v-ey-e*   *na   mahooru mno.*
      1SG-COP-ASP-FV with 6.longing IDEO
      'I really miss you.' (lit. 'I am with intense longing.')   (LG)

---

[19]Francez and Koontz-Garboden (2015) give a very interesting proposal for how to account for what they term "property concept" lexemes like *happiness*, *dirtiness*, etc. based on similar data from Ulwa (Misumalpan). They give a mereological account in which property concept lexemes denote mass substances. They rely on contextual domain restriction of an existential quantifier over portions of the property (= substance) that the individual possesses in order to account for the context-sensitivity of such predicates. This analysis is relevant to our data, since constructions like in (37) are used to express possession as well as predication. However, since at present we are committed to a degree-based analysis of the ideophone data, and Francez and Koontz-Garboden's proposal does not utilize degrees, we set their proposal aside for now.

[20]Indeed, *na* has multiple uses in Llogoori outside of its conjunctive use.

∃d: longing(I,d) & d !!> standard

m-
  I

      -veye   λx. ∃d: longing(x,d) & d !!> standard
      am

             λdλx. longing(x) ≥ d   *mno*
                                          IDEO
                                   λGλx. ∃d: G(x,d) & d !!> standard

        na   *mahooru*
        with   longing
   λRλdλx. R(x) ≥ d   λxλd. longing(x) ≥ d

- We note that canonical Luhya degree intensifiers like *saana* 'really' can also combine with *na N* 'with N' predicates, in support of the introduction of degrees into the denotation:

(41)   *m-v-ey-e*   *na* *inzala* *saana.*
        1SG-COP-ASP-FV with 9.hunger really
        'I'm really hungry.'   (LG)

3.3.2 Ideophones in combination with verbal predicates

(42)   *Sira*   *yi-tsurits-a shi-koombe tu.*
        1.Sira 1-fill-FV   7-cup   IDEO
        'Sira filled the cup to the brim.'   (T)

- All of the verbs that can co-occur with ideophones have an adjectival core, including *kumwama* 'to blacken,' *kunyika* 'to be tight,' and so on. As shown in (33), it is not problematic to treat the ideophones as degree modifiers of gradable adjectives.

- Abusch (1986) and Kennedy and Levin (2008), among others, give semantic proposals for English degree achievement verbs (e.g. *cool, widen*) that refer to their adjectival cores. They typically propose that this adjectival core is how degrees are introduced into the denotations of these verbs.

- Kennedy and Levin (2008) propose that the semantic core of degree achievement verbs is not identical to the gradable adjectives. Instead, it is a derived measure of change function that measures the degree to which an object changes along a scalar dimension as the result of participating in an event.[21]

---

[21]This measure of change function $m_\triangle$ is defined formally as follows (Kennedy and Levin 2008, 18):

- We set aside the precise formal implementation of this theory for now. We note simply that a proposal along these lines that either includes or introduces degrees in the denotations of degree achievement verbs could account for the observed data in (42).

- If we follow Kennedy and Levin (2008)'s proposal, the paraphrased meaning of (42), including the ideophone, would be something like "Sira filled the cup to a degree that greatly exceeds the contextual standard of what counts as 'full.'"

4   Conclusion

- In this talk, we described the distribution and interpretation of ideophones in Llogoori, Lunyore, and Lutiriki. We sketched a preliminary proposal to treat Luhya ideophones as cross-categorial intensifying morphemes, assuming the inclusion of degrees in the Luhya semantic ontology.

- The Luhya languages demonstrate the heterogeneity of ideophone systems cross-linguistically, patterning very differently from other described ideophone systems in Africa.

- Unlike the typically highly depictive Niger-Congo ideophone systems, the Luhya ideophones are not expressive (in the Pottsian sense, or in the sense of Dingemanse and Akita 2016).

- We observe also that there are cognate ideophones in many (distantly) related Bantu languages (Samarin 1971). Further exploration of these systems could give us a better understanding of how ideophone systems are established diachronically/areally, or how expressiveness might be gained/lost over time.

<div align="center">Thank you!</div>

References

Abusch, D. (1986). Verbs of change, causation and time. In *Technical Report CSLI*, pages 86–50. Center for the Study of Language and Information, Stanford University.

Alpher, B. (1994). Yir-Yoront ideophones. In Hinton, L., Nichols, J., and Ohala, J., editors, *Sound Symbolism*, pages 161–177. Cambridge University Press.

Ameka, F. (2001). Ideophones and the nature of the adjective word class in Ewe. In Voeltz, F. and Kilian-Hatz, C., editors, *Ideophones*, volume 44 of *Typological Studies in Language*, pages 25–48. John Benjamins.

---

(43)   For any measure function m, $m_\triangle = \lambda x \lambda e.\ \text{m}\!\uparrow_{m(x)(init(e))}(x)(\text{fin}(e))$,
        where *init(e)* and *fin(e)* refer to the initial and final temporal intervals of an event, and $\text{m}\!\uparrow_d$ is a difference function that takes an individual and returns the difference between the individual's projection on a degree scale and the (arbitrary) comparative standard.

Antuñano, I. I. (2016). Basque ideophones from a typological perspective. University of Zaragoza, manuscript.

Baglini, R. (2016). The semantics of quotative ideophones. Handout, Semantics and Linguistic Theory 26.

Bartsch, R. and Vennemann, T. (1972). The grammar of relative adjectives and comparison. *Linguistische Berichte*, 21:168–185.

Bochnak, R. (2013). *Cross-linguistic Variation in the Semantics of Comparatives*. PhD thesis, University of Chicago.

Childs, T. (1988). The phonology of Kisi ideophones. *Journal of African Languages and Linguistics*, 10(2):165–190.

Childs, T. (1994). African ideophones. In Hinton, L., Nichols, J., and Ohala, J., editors, *Sound Symbolism*, pages 178–204. Cambridge University Press.

Cresswell, M. (1976). The semantics of degree. In Partee, B., editor, *Montague Grammar*, pages 261–292. Academic Press, New York.

Dhoorre, C. S. and Tosco, M. (1998). 111 Somali ideophones. *Journal of African Cultural Studies*, 11(2):125–156.

Diffloth, G. (1972). Notes on expressive meaning. In *Chicago Linguistic Society 8*, pages 440–447.

Dingemanse, M. (2011). *The Meaning and Use of Ideophones in Siwu*. PhD thesis, Radboud University Nijmegen, Nijmegen.

Dingemanse, M. (2017). Expressiveness and system integration: On the typology of ideophones with special reference to Siwu. *STUF – Language typology and universals*.

Dingemanse, M. and Akita, K. (2016). An inverse relation between expressiveness and grammatical integration: On the morphosyntactic typology of ideophones, with special reference to Japanese. *Journal of Linguistics*, pages 1–32.

Doke, C. (1935). *Bantu Linguistic Terminology*. Longmans, Green.

Essegbey, J. (2013). Touch ideophones in Nyagbo. In Orie, O. O. and Sanders, K., editors, *Selected Proceedings of the 43rd Annual Conference on African Linguistics*, pages 235–243, Somerville, MA. Cascadilla Proceedings Project.

Francez, I. and Koontz-Garboden, A. (2015). Semantic variation and the grammar of property concepts. *Language*, 91(3):533–563.

Hamano, S. (1994). Palatalization in Japanese sound symbolism. In Hinton, L., Nichols, J., and Ohala, J., editors, *Sound Symbolism*, pages 148–157. Cambridge University Press.

Heim, I. (2001). Degree operators and scope. In Féry, C. and Sternefeld, W., editors, *Audiatur vox sapientiae*, pages 214–239. Akademie-Verlag, Berlin.

Henderson, R. (2016). Pluractional demonstrations. Handout, Semantics and Linguistic Theory 26.

Kennedy, C. (1999). *Projecting the Adjective: The Syntax and Semantics of Gradability and Comparison*. Garland, New York.

Kennedy, C. and Levin, B. (2008). Measure of change: The adjectival core of degree achievements. In McNally, L. and Kennedy, C., editors, *Adjectives and Adverbs: Syntax, Semantics, and Discourse*. Oxford University Press.

Kennedy, C. and McNally, L. (2005). Scale structure and semantic typology of gradable predicates. *Language*, 81(2):345–81.

Moltmann, F. (2009). Degree structure as trope structure: a trope-based analysis of positive and comparative adjectives. *Linguistics and Philosophy*, 32:51–94.

Morzycki, M. (2009). Degree modification of gradable nouns: size adjectives and adnominal degree morphemes. *Natural Language Semantics*, 17:175–203.

Newman, P. (1968). Ideophones from a syntactic point of view. *Journal of West African Languages*, 2:107–117.

Nicolas, D. (2004). The semantics of nouns derived from gradable adjectives. In Meier, C. and Weisgerber, M., editors, *Proceedings of Sinn und Bedeutung 8*, pages 197–2017.

Rett, J. (2008). *Degree Modification in Natural Language*. PhD thesis, Rutgers, The State University of New Jersey.

Samarin, W. J. (1971). Survey of Bantu Ideophones. *African Language Studies*, 12:130–168.

Voeltz, F. and Kilian-Hatz, C., editors (2001). *Ideophones*. John Benjamins Publishing Company.

Wasike, A. and Diercks, M. (2016). Lubukusu adverbial syntax. Handout, Annual Conference on African Linguistics 47.

Appendix A: Llogoori, Lubukusu, Lunyore, and Lutiriki ideophones

Llogoori

Ideophone	Semantic class
du	full
gada	tough, stiff, dry
khai	red
kham	empty
mno	sweet, to like, to miss
pa	hot, spicy, bitter
pe	empty, complete
ti	black, dirty
zi	cold, quiet, still

Lubukusu

Ideophone	Semantic class
ti	black, dirty
chwe	white, clean
pe	red
para	dry
chi	cold
tata	tight
tibo	lost, disappeared
chakichaki	broken

Lunyore

Ideophone	Semantic class
ka	tight, hard
kha	red
mno	bitter
pa	hot, spicy
pe	empty, complete
po	to shine, to like
ti	black, dirty
tswe	white, clean
tu	full
twa	broken, smashed
zi	cold, quiet, still

Lutiriki

Ideophone	Semantic class
kha	red
mno	sweet, bitter
pa	hot, bitter
pe	complete
tsi	cold, quiet
tu	full