1. Introduction

1.1 Data

12 sessions were recorded with a single speaker-linguist of Kinande/Luyiira (Benue-Kwa JD 40), cf. Muwiriri & Malhinga (2004). Total corpus size = 150 MB. 5 of the 12 sessions are now edited as an archive and are publicly available in preliminary form. The last 2 two sessions are posted (minus audio) at http://people.bu.edu/manfredi/research.html (scroll down the page). Collaboration with the speaker is ongoing, and other corpora from the same speaker are in progress (MIT 24.942, Spring ’06-’07; BU LX501, Fall ’07-’08).

1.2 Theory

Linguistically significant pitch is not recoverable from audio in terms of strictly paradigmatic units (Dilley & Brown 2006). If this problem arises even for the interpolation of lexical tones (Dilley 2005), it applies a fortiori to effects like spreading, polarization, (anti)downstep, and catathesis. The theoretical response has been either to save the paradigmatic assumptions of autosegmental phonology with an add-on component of intonational “realization” (Connell & Ladd 1990, cf. Laniirn & Clements 2003), or else to reduce the analytic load of tonal categories by including relational metrics within the phonology itself (Bamba 1991; Manfredi 1993, 1995; Akinlabi & Liberman 2001). A third option would be to replace tonemic targets with metrics altogether (Manfredi 2003, 2004).

Other syntagmatic pitch effects arguably depend on elements of narrow-syntax like c-command (Odden 1990) or on grammatically-coded focus assertion (Byarushengo et al. 1976; Kenesei 2005). These are amenable to grammar-external analysis only by resort to OT procedures (Truckenbrodt 1995; Szendro, K. 2001; Zerbian 2005), however the cognitive price of OT is high because it rejects underlying forms in favor of a notion of output candidate set which has yet to be operationalized. Given the foregoing, it would be dogmatic to insist that “intonation… has a phonological organization” (Ladd 1996, 163, 1, original emphasis, cf. Pierrehumbert 1980), or equivalently that “prosodic phonology” recapitulates morphosyntactic domains as arbitrary phonological chunks (Nespor & Vogel 1986). Instead it may be more productive to collect linguistically significant generalizations over pitch tracks, and expect traditional views of phrase structure to ‘give’ in favor of simpler prosody. This alternative is especially plausible where heavily underanalyzed languages are concerned, on the one hand, and where the interface between syntax and phonetics is (Chomsky 2001).

1.3 Benue-Kwa

A prime example of the foregoing tradeoff is the phenomenon of Nuclear Stress (Chomsky & Halle 1968). This can be understood as a prosodic echo of phrasal recursion (Bresnan 1971; Wagner 2005), rather than a specifically phonological rule, if one is prepared to consider a revised view of sentence structure in Germanic and Romance (Cinque 1991; Zubizarreta 1998). Similarly in Benue-Kwa (BK), although many of these languages have been analyzed with templatic morphosyntax (Guthrie 1948; Baker 1988; Odden 1996; Carstens 2001), this has been challenged on both syntactic and phonological grounds in favor of something closer to recursive phrase structure of the Germanic and Romance type (Keach 1986; Myers 1988; Kinyalolo 2003; Manfredi 2007). The observations supported by the accompanying pitch tracks are by no means unique in the literature.

2. Focus-related p-a effects [discussion notes]

2.1 NSR effects

The 9 tracks on pp. 2-4 illustrate phrasal effects which are well described in the literature (Bbemo 1982; Valinande 1984) and which are arguably assimilable to the NSR. Note the appearance of a domain-final pitch accent—what AM phonology following structuralists pioneers like Sharman & Meussen (1955) calls a grammatical (lexically spurious) H tone—in three environments: the grammatical subject (03.02a), a subject of secondary predication (08.03c) and a nonbranching VP (03.02b and 03.02c). The absence of this accent in (03.02bb) needs more study but seems related to the obligatory definiteness/topicality of the by-phrase ‘by the kids’, in contrast to its indefiniteness in (03.02b, 03.02c). If these are phonology their joint appearance is an accident—impossible to disprove, hence the syntactic view merits consideration. More plausibly phonological is the penultimate accent (realized with falling pitch probably explained by an independent process of penultimate lengthening) which occurs in any utterance-final noun that is lexically accented on neither the root (in syntax, ‘big N’) nor the prefix, e.g. (‘little n’, cf. Lowenstamm 2005); e.g. (03.02b). Disclaimer: the standard view of noun accentuation (Hyman 1990) is phonological and non-accentual except insofar as privative H qualifies.

2.2 Absence of phrasal H in defocalized domains

Across several tenses, the pitch accent that normally falls on the inflectional aux (10.02c-d; 11.06b-c, 11.10a-b, 11.08a-b, 11.09a-b) fails to appear just in case the subject is contrastively focused (10.04c=11.07c, 11.06d, 11.10c, 11.08c, 11.09c). Although rules of this type are well known, e.g. as reviewed by Hyman (1999), a morpho–phonological and tonal account loses the generalization of the shared context.

3. The comparative prosody of Benue-Kwa


Notes

* Correspondence: <manfredi@bu.edu>. Thanks to P. Mujomba and the other participants in MIT 24.942 (Spring 2007) as well as to A. Akinlabi, M. Bamba, A. Bachrach, A. Kahinemuyipour, K. Kinyalolo, M. Liberman, A. Nevins, F. Oyèèbade and M. Wagner.
(03.02a) Ába-aná ba-ká nz-a amá-śabu.  
'The kids like [the] milk' (generically)

(03.02b) Amá-śabu a-ká nz-aw-á na bá-ána.  
'The milk is liked by kids'

(03.02bb) Amá-śabu a-ká nz-aw-a ná bá-ána.  
'The milk is liked by the kids'

(03.02c) Amá-śabu a-ká nz-á bá-ána.  
'The milk is liked by kids' (contrastive focus)
(08.01a)  o-hú-gáño  'story, tale'

(08.01aa)  o-lú-gánó  lu-ágé  'my story'

(08.03c)  o-hú-gánó  lu-ágé  lu'  okó  ma-ñwáá  'my story about/on the war'
(08.04a) o-ũ-ganó ũ-éwe (phonetically, […lwèèwe])

('her/his story')

(08.04b) o-ũ-ganó ũ-éwe huoko ma-lwàà

('her/his story about/on the war')
(10.02c) Tu kà gul-a e-syó-mbeene.  'We’re buying goats'

(10.04d) Itwà tu kà gul-a e-syó-mbene.  'Us, we’re buying goats'

(10.04c) Itwà tí ka gul-a e-syó-mbene.  'We’re buying goats'

(11.07c) Itwà tí ka gul-a e-syó-mbene.  'It’s us who buy/are buying goats'
(11.06b) Mó tú á gúl-a e-syó-mbene. ‘We bought some goats (long ago)’

(11.06c) Itwé mó tú á gúl-a e-syó-mbene. ‘Us, we bought some goats (long ago)’

(11.06d) Itwe tú a gul-a e-syó-mbene. ‘It’s us who bought goats (long ago)’
(11.10a) Abandu mó bá á gul’-e-syó-mbene.  'The men bought some goats (long ago)' (2 takes)

(11.10b) Abandu ìbó mó bá gul’-e-syó-mbene.  'As for the men, they bought goats (long ago)'

(11.10c) Abandu bo ba a gul’-e-syó-mbene.  'It’s the men who bought some goats (long ago)'
[n.b. insertion of clefting pronoun bo]
(11.08a) Mó tu á gúl-ire e-syó-mbene.

'We bought some goats (recently)'

(11.08b) Itwé mó tu á gúl-ire e-syó-ṁbene.

'Us, we bought some goats (recently)'

(11.08c) Itwé tu a gal-’e-syó-ṁbene.

'It’s us who bought goats (recently)’

[n.b. zero realization of both mó and -ire]
(11.09a) Tú ká ndí (syá) gül-ɛ-şyó-ḿbene.

'We’re going to buy some goats <after today>.'
[n.b. the <syá> adverb is not included in the audio]

(11.09b) Itwê tú ká ndí (syá) gül-ɛ-şyó-ḿbene.

'Us, we’re going to buy some goats (after today)'
[n.b. final H on the strong pronoun, even pre L]

(11.09c) Itwê tú ká ndí (syá) gül-ɛ-şyó-ḿbene.

'It’s us who’re going to buy some goats (after today)'