

Introduction*

Laura J. Downing

ZAS, Berlin

1 The Bantu PSYN project

The papers in this volume were originally presented at the Workshop on Bantu Wh-questions, held at the Institut des Sciences de l'Homme, Université Lyon 2, on 25-26 March 2011, which was organized by the French-German cooperative project on the Phonology/Syntax Interface in Bantu Languages (BANTU PSYN). This project, which is funded by the ANR and the DFG, comprises three research teams, based in Berlin, Paris and Lyon. The Berlin team, at the ZAS, is: Laura Downing (project leader) and Kristina Riedel (post-doc). The Paris team, at the Laboratoire de phonétique et phonologie (LPP; UMR 7018), is: Annie Rialland (project leader), Cédric Patin (Maître de Conférences, STL, Université Lille 3), Jean-Marc Beltzung (post-doc), Martial Embanga Aborobongui (doctoral student), Fatima Hamlaoui (post-doc). The Lyon team, at the Dynamique du Langage (UMR 5596) is: Gérard Philippson (project leader) and Sophie Manus (Maître de Conférences, Université Lyon 2). These three research teams bring together the range of theoretical expertise necessary to investigate the phonology-syntax interface: intonation (Patin, Rialland), tonal phonology (Aborobongui, Downing, Manus, Patin, Philippson, Rialland), phonology-syntax interface (Downing, Patin) and formal syntax (Riedel, Hamlaoui). They also bring together a range of Bantu language expertise: Western Bantu (Aborobongui, Rialland), Eastern Bantu (Manus, Patin, Philippson, Riedel), and Southern Bantu (Downing).

This range of expertise is essential to realizing the goals of our project. Because Bantu languages have a rich phrasal phonology, they have played a central role in the development of theories of the phonology-syntax interface ever since the seminal work from the 1970s on Chimwiini (Kisseberth & Abasheikh 1974) and Haya (Byarushengo et al. 1976). Indeed, half the papers in Inkelas & Zec's (1990) collection of papers on the phonology-syntax interface deal with Bantu languages. They have naturally played an important role in current debates comparing indirect and direct reference theories of the phonology-syntax interface. Indirect reference theories (e.g., Nespor & Vogel

* We are grateful to Olena Gainulina for indispensable formatting assistance.

1986; Selkirk 1986, 1995, 2000, 2009; Kanerva 1990; Truckenbrodt 1995, 1999, 2005, 2007) propose that phonology is not directly conditioned by syntactic information. Rather, the interface is mediated by phrasal prosodic constituents like Phonological Phrase and Intonation Phrase, which need not match any syntactic constituent. In contrast, direct reference theories (e.g., Kaisse 1985; Odden 1995, 1996; Pak 2008; Seidl 2001) argue that phrasal prosodic constituents are superfluous, as phonology can – indeed, must – refer directly to syntactic structure.

In spite of this long history, most work to date on the phonology-syntax interface in Bantu languages suffers from limitations, due to the range of expertise required: intonation, phonology, syntax. Quite generally, intonational studies on African languages are extremely rare. Most of the existing data has not been the subject of careful phonetic analysis, whether of the prosody of neutral sentences or of questions or other focus structures. There are important gaps in our knowledge of Bantu syntax which in turn limit our understanding of the phonology-syntax interface. Recent developments in syntactic theory have provided a new way of thinking about the type of syntactic information that phonology can refer to and have raised new questions: Do only syntactic constituent edges condition prosodic phrasing? Do larger domains such as syntactic phases, or even other factors, like argument and adjunct distinctions, play a role? Further, earlier studies looked at a limited range of syntactic constructions. Little research exists on the phonology of focus or of sentences with non-canonical word order in Bantu languages. Both the prosody and the syntax of complex sentences, questions and dislocations are understudied for Bantu languages. Our project aims to remedy these gaps in our knowledge by bringing together a research team with all the necessary expertise. Further, by undertaking the intonational, phonological and syntactic analysis of several languages we can investigate whether there is any correlation among differences in morphosyntactic and prosodic properties that might also explain differences in phrasing and intonation. It will also allow us to investigate whether there are cross-linguistically common prosodic patterns for particular morpho-syntactic structures.

To pursue these goals in a systematic way, each year we concentrate on one syntactic construction. We have chosen the following constructions where previous work has shown that both syntactic and non-syntactic factors play a complex role in conditioning the prosody: relative clauses (comparing restrictive relatives, non restrictive relatives and clefts), question types and dislocations. This volume mainly presents papers from the workshop on the second year's annual theme, namely question types. The elicitation questionnaire for question types, which project members used to collect data presented in their papers, forms the Appendix to this volume.

2 Issues in the phonology and syntax of Bantu constituent questions

All of the papers in the volume except one (Mtenje) take up some aspect of (mainly) *wh*-question constructions in some Bantu language. Mtenje's paper on the prosodic phrasing of relative clause constructions in Ciwandya (Malawi, M20) is included, as the data collected was inspired by the BANTU PSYN relative clause questionnaire developed in the first year of the project and published as an appendix to *ZASPiL* 53, a volume of papers by project members on Bantu relative clause constructions. Mtenje's analysis fits Ciwandya into the patterns illustrated by the papers in that volume, showing the questionnaire fills its purpose of being useful to other linguists interested in researching, for other languages, the topics the BANTU PSYN project has chosen to concentrate on.

The other papers in the present volume examine how constituent (*wh*-) questions are formed in a number of Bantu languages along with their prosody. We briefly summarize the positions and prosodies for *wh*-words described in each paper.

Aborongui et al.'s paper on *wh*-questions (*questions partielles*) in embósi (C 25) shows that there are two series of *wh*-words in this language. One is used when it is presupposed that the question has an answer (and that the addressee knows the answer). The other series does not have this presupposition. There are two basic positions for *wh*-words. They can occur in situ or in a relative (cleft) construction. These two constructions can be used to question both subjects and objects. The use of both constructions is also possible for temporal questions, but not for locative, manner or causal questions, where the relative construction is not found. As for the prosody of *wh*-words, they are characterized by an optional floating High tone. There is no special intonation for *wh*-questions as a whole, though, nor do questions and question words have any effect on prosodic phrasing.

Downing's paper on *wh*-questions in Chewa (N 30) and Tumbuka (N 20) shows that these languages, like embósi, have a relative (cleft) construction for forming questions. However, in Chewa and Tumbuka, clefts (or reduced clefts) are required for questioning subjects. Subjects cannot be questioned in situ, properly speaking. (This is a common restriction on subject questions; see Zerbian 2006a, b for discussion.) Non-subjects also cannot be questioned in situ in Tumbuka. They must be questioned in the Immediately After the Verb (IAV) focus position that has become well known for Bantu languages since Hyman's (1979) and Watters' (1979) work on Aghem. In Chewa, in contrast, most non-subjects can be questioned in situ, though there is variation between IAV and in situ position. Even though both languages have two positions for *wh*-words (cleft and postverbal), neither language allows multiple *wh*-questions. As for the prosody of *wh*-questions, in neither language do we find an obligatory global

question intonation, though the register of wh-questions tends to be higher than that of assertions. One does find a prosodic phrase break following wh-words, and in Chewa, Downing attributes this break to the inherent focus of wh-words.

Hamlaoui & Makasso's paper on Bàsàa (A 43) wh-questions confirms the prevalence, cross-Bantu, of an obligatory IAV position for questioning (many) non-subjects. In contrast, subjects and temporal wh-phrases are questioned in situ. Subjects and non-subjects can also be questioned by fronting the wh-word. When they are fronted, they have a special prosody: the vowel of the wh-word is lengthened in order to bear a lexical High tone (as it also is when the wh-word occurs sentence finally), it is realized with a raised register, and there is a prosodic phrase break following the fronted wh-word. The questions with a fronted wh-phrase also have a different semantics: they require an exhaustive answer and presuppose that the addressee can provide the answer.

Hyman & Katamba's paper on Luganda (J10) wh-questions shows that in this language, as well, neutral non-subject wh-elements must occur in IAV position. In contrast, subject wh-question elements occur before the verb, which must have relative clause morphology/phonology. (These are, however, not cleft constructions.) Clefts are also used to form questions, but subject and adjunct wh-elements cannot be clefted; only object wh-elements can. Even though there are two positions where wh-elements can occur, multiple wh-questions are only possible with severe restrictions in Luganda. Prosodically, wh-questions have their own intonation. Wh-words end in a High tone and have distinctive phonological properties which are discussed in detail in this article.

Kisseberth's paper on Chimwiini, a dialect of Swahili (G40) spoken in Somalia, provides a very detailed description of the morphosyntax and prosody of both wh-questions and yes/no questions. In Chimwiini, as in Luganda, subject wh-phrases must occur preverbally, and the verb is in the "pseudo-relative" form. The full question word *nini* 'what' must also occur in this preverbal pseudo-relative construction, whether it is subject or object. Other non-subject wh-elements (like *gani* 'which') optionally also occur in this construction, but they can also occur postverbally, optionally in IAV position (the usual focus position in Chimwiini), and then the verb does not have the pseudo-relative form. Chimwiini also has wh-enclitics to the verb, which do not require any special form of the verb. One finds an unexpected prosodic phrase break following these enclitics, which Kisseberth attributes to the inherent focus of wh-elements. Otherwise, wh-questions do not appear to have any particular prosody. However, yes-no questions do: they are realized with a raised pitch, downstepping is suspended, and an accented final syllable is realized with a salient falling contour.

Riedel & Patin's paper on Fipa (M13) shows that, while there is some preference for post-verbal wh-elements to appear in IAV position, wh-questions

predominantly have the same word order and morphological marking as their declarative counterparts. Subjects are questioned in the pre-verbal position, and questioned objects mostly appear in the IAV position, though they can optionally remain in-situ. The opposite situation is found in adverbial questions, where wh-words are mostly questioned in situ, but may also appear in the IAV position. Multiple wh-questions are grammatical. The paper discusses agreement, showing that the questioned subject agrees with the verb, and that some wh-words, whether referring to animates or inanimates, optionally trigger object-marking, just like non-questioned objects. Riedel & Patin conclude that wh-questions are mostly marked by prosody: a falling intonation, enhanced by other prosodic parameters such as lengthening or the lack of final devoicing, is associated with the last syllable of the Intonational Phrase.

To sum up, while most typologies of wh-questions recognize two common positions for wh-words – fronted or in situ – these positions turn out to be relatively rare for the Bantu languages presented in this volume. Instead, we more commonly find other positions: clefts – often obligatory for subjects – or “pseudo-relatives” for preverbal wh-words, and IAV position for non-subject wh-words. While in situ position is attested in some of the language, in *embósi*, it freely alternates with a cleft-like construction, and in Chewa, Chimwiini and Fipa, it often alternates with IAV position. Fronting is only described for *Bàsàa*, where it is a syntactically and prosodically marked position for asking exhaustive questions. In neutral wh-questions, most of the languages do not have a distinctive intonational pattern. However, wh-words themselves often have a marked prosody: they have a final (or floating) High tone in *embósi*, *Bàsàa* and Luganda; they are followed by a prosodic phrase break in Chewa, Chimwiini and Tumbuka. This again makes these Bantu languages different from more familiar languages like English, where wh-words have no special prosody.

We believe that these distinctive morphosyntactic and prosodic properties of Bantu wh-questions, carefully documented in the papers in this volume, will make the data and analyses of interest both to Bantu and to general linguistics. We hope they also provide an impetus to engage in further research on this rich and complex topic.

3 References

- Byarushengo, E. R., L. M. Hyman & S. Tenenbaum (1976). Tone, accent, and assertion in Haya. In: L.M. Hyman (ed.), *Studies in Bantu Tonology*, *SCOPIL* 3, 185-205.
- Hyman, L. M. (1979). Phonology and noun structure. In: L. M. Hyman (ed.), *Aghem Grammatical structure*. *SCOPIL* 7, 1-72.
- Inkelas, S. & D. Zec, (eds.). (1990). *The Phonology-Syntax Connection*. Chicago: CSLI.

- Kaisse, E. (1985). *Connected Speech: the Interaction of Syntax and Phonology*. Orlando: Academic Press.
- Kanerva, J. M. (1990). *Focus and Phrasing in Chichewa Phonology*. New York: Garland.
- Kisseberth, C. W. & M. I. Abasheikh (1974). Vowel length in Chi-mwi:ni – a case study of the role of grammar in phonology. In: M. W. La Galy, R. A. Fox & A. Bruck, (eds.) *CLS, Papers from the Parasession on Natural Phonology*, 193-209.
- Nespor, M. & I. Vogel (1986). *Prosodic Phonology*. Dordrecht: Foris.
- Odden, D. (1995). Phonology at the phrasal level in Bantu. In: F. X. Katamba, (ed.), *Bantu Phonology and Morphology*. Munich: Lincom Europa, 40-68.
- Odden, D. (1996). *The Phonology and Morphology of Kimatumbi*. Oxford: Oxford University Press.
- Pak, M. (2008). The postsyntactic derivation and its phonological reflexes. Ph.D. dissertation, University of Pennsylvania.
- Seidl, A. (2001). *Minimal Indirect Reference: A Theory of the Syntax-Phonology Interface*. London: Routledge.
- Selkirk, E. O. (1986). On derived domains in sentence phonology. *Phonology Yearbook* 3, 371-405.
- Selkirk, E. O. (1995). The prosodic structure of function words. *UMOP 18: Papers in Optimality Theory*, 439-470.
- Selkirk, E. O. (2000). The interaction of constraints on prosodic phrasing. In: M. Horne (ed.), *Prosody: Theory and Experiment*. Dordrecht: Kluwer Academic Publishing, 231-262.
- Selkirk, E. O. (2009). On clause and intonational phrase in Japanese: the syntactic grounding of prosodic constituent structure. *Gengo Kenkyu* 136, 35-74.
- Truckenbrodt, H. (1995). Phonological Phrases: their relation to syntax, focus and prominence. Ph.D. dissertation, MIT.
- Truckenbrodt, H. (1999). On the relation between syntactic phrases and phonological phrases. *Linguistic Inquiry* 30, 219-255.
- Truckenbrodt, H. (2005). A short report on Intonation Phrase boundaries in German. *Linguistische Berichte* 203, 273-296.
- Truckenbrodt, H. (2007). The syntax-phonology interface. In: P. de Lacy, (ed.), *The Cambridge Handbook of Phonology*. Cambridge: Cambridge University Press, 435-456.
- Watters, J. (1979). Focus in Aghem: a study of its formal correlates and typology. In: L. Hyman (ed.). *Aghem Grammatical structure. SCOPIL* 7, 137-197.
- Zerbian, S. (2006a). Questions in Northern Sotho. *ZAS Papers in Linguistics* 43, 257-280.
- Zerbian, S. (2006b). *Expression of Information Structure in the Bantu Language Northern Sotho*. *ZAS Papers in Linguistics* 45.