

Metric foot in Mande languages

Metric foot is a prosodic unity of a suprasyllabic level which can consist of one or more syllables and has a high degree of coherence. In South Mande languages the coherence is expressed by the following means:

- vocal harmony;
- nasality harmony;
- limitation of the inventory of median consonants;
- restriction of the number of tonal schemes [Vydrin 2008].

The notion of metric foot was formulated in order to explain the functioning of grammatical tones which are not associated with one and only syllable, but often with several syllables which appear to be a part of a single metric foot (compare in Mano (my data) the association of the low tone of the verbs in the joint construction: *gīnī* ‘loose’ --> *gìnì* ‘loose.JNT’ but *lópí* ‘extinguish’ *lópì* ‘extinguish.JNT’. It can also explain the phonetic evolution of lexicon: non-derived lexemes tend to consist of only one metric foot, the structure of those which consist of two or more tending to be simplified (in Guro [Kuznetsova 2007: 22] the word *lāwà* ‘pocket’ which consists of two metric feet has a phonetic variant *lāā*).

Many scholars have noted the functional pertinence of metric foot, especially in South Mande languages ([Vydrin 2008], [Kuznetsovs 2007], [Bearth 1971]). Its statistic relevance, though, has first been studied for Mano.

The phonemic system of Mano, a South Mande language, is represented in Table 1 and Table 2:

Table 1. Vowel system of Mano.

<i>i</i>	<i>u</i>	<i>N</i>	<i>ɨ</i>	<i>ɥ</i>
<i>e</i>	<i>o</i>		<i>ɛ</i>	<i>ɔ</i>
<i>ɛ</i>	<i>ɔ</i>		<i>ɛ̃</i>	<i>ɔ̃</i>
	<i>a</i>			<i>ɶ</i>

Table 2. Consonant system of Mano.

	labials		dentals		palatal s	velars		labiovelars		labiovel ars	
implosives	<i>ɓ</i>										
stops	<i>p</i>	<i>b</i>	<i>t</i>	<i>d</i>		<i>k</i>	<i>g</i>	<i>kw</i>	<i>gw</i>	<i>kp</i>	<i>gb</i>
fricatives	<i>f</i>	<i>v</i>	<i>s</i>	<i>z</i>							
nasal sonants	<i>(m)</i>		<i>(n)</i>		<i>(ɲ)</i>			<i>(ŋw)</i>			
glides	<i>w</i>		<i>l</i>		<i>y</i>						

(*M*), (*n*), (*ɲ*), (*ɲw*) have an intermediate status between phonemes and allophones of /*b*/, /*l*/, /*y*/ and /*w*/ respectively, (*ɲw*) occurs only in the initial position has a positional variant (*ɲ*) in the median position.

The study of syllabic structure in Mano shows that 96% of underived words¹ (1482 of 1586) have CV, CVV, CVCV (or more rarely V, VV, VCV) structure. Moreover, 10% of these 96% (157 words of 1482) violate one or more of the following restrictions:

- coincidence of anterior and posterior vowels in the same CVV or CVCV structure (28 words, 1,8%);
- coincidence of nasal and oral vowels in the same CVCV structure, none of such cases being attested for CVV structures (20 words, 1,3%);
- coincidence of nasal (*m*), (*n*), (*ɲ*) and (*ɲw*)/(*ɲ*) and oral /*b*/, /*l*/, /*y*/ and /*w*/ consonants in the same CVCV structure (10 words, 0,8%);
- coincidence of nasal vowels and oral consonants (/b/, /l/, /y/ and /w/) in the same syllable being part of a CV or CVCV structure (22 words, 1,4%);
- median consonant in the CVCV structure other than /l/ or (*n*) (123 words, 8,2%).

This analysis shows that metric foot in Mano is both functionally and statistically relevant.

In my presentation I will treat the data of several Mande languages: Mano (South Mande, my field data), Kakabe (Mokole group, Alexandra Vydrina's field data), Maninka (Manding, [Creissels 2009]), Kpelle (South West Mande, [Westermann & Melzian 1930]). The data will be treated by means of RefLex platform (reflex.cnrs.fr) which disposes of search instruments appropriate for this kind of statistic research. The sample was formed with the following criteria: 1) the existence of an electronic dictionary of the language with at least 1000 entries integrated into RefLex, 2) one language group must be represented by only one language.

I will discuss functional properties and statistic relevance of the metric foot in these languages. Although the number of languages in the sample is limited and not all the groups are represented, I will make a preliminary supposition on the existence and functional properties of the metric foot on the proto-Mande level.

List of references:

Bearth, Thomas. 1971. *L'énoncé toura*. Norman (Oklahoma): S.I.L.

Creissels, Denis. 2009. *Le malinké de Kita*. Cologne : Rüdiger Köppe.

Kuznetsova, Natalia. 2007. Le statut fonctionnel du pied phonologique en gourou. *Mandenkan*, 43, pp. 13-45.

¹ or of those which are potentially derived but the bases of derivation are unknown.

Vydrin, Valentin. 2008. Metric foot in Mande languages [Выдрин В.Ф. Метрическая стопа в языках манде // *Фонетика и нефонетика. К 70-летию Сандро В. Кодзасова*. М: Языки славянских культур, с. 308-317].

Westermann, Diedrich and Melzian, Hans Joachim. 1930. *The Kpelle Language in Liberia. Grammatical outline, colloquial sentences and vocabulary*. Berlin: D. Reimer.