Quantification of Expressions of Duration in Bole and Other Chadic Languages

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This paper discusses the quantification of the duration of events in Bole, a Chadic language of northeastern Nigeria. Durational quantity of an event can be viewed from two perspectives: the beginning and/or end points of the event (I have been reading since 3:00, I read from 3:00 to 6:00, I read until 6:00) and the overall duration of the event (I read for three hours). In this paper, we consider only the latter perspective.

In English and other European languages, durative time periods are expressed by nouns, e.g. ‘time’, ‘year’, ‘day’, ‘hour’. In order to quantify duration, one therefore quantifies nouns, e.g. ‘the visitors stayed a long time’, ‘Ed Keenan has taught at UCLA for many years’, ‘we traveled for two days’, ‘the food was gone in less than an hour’. In Bole, expressions of duration are predicates. Thus, in an English expression like I spent three years in Paris, the noun year has a quantificational modifier, whereas Bole expresses spend-a-year as a verb, with the quantifier as a sort of adverbial modifier:

(1) ñ sonù kùmùm gà Pàríṣ
I spent-year three in Paris
‘I spent three years in Paris.’

In order to quantify the duration of an event, one must use a biclausal structure, one clause expressing the duration, the other the event that is coextensive with that duration.

(2) ñ sonù kùmùm ñ jì rùta gà Pàríṣ
I spent-year three I PROG working in Paris
‘I spent three years working in Paris.’

(3) mu nossan rùnàkàta mu jì sùnnàmà
we spent-time very we PROG chanting
‘We chatted for a (very) long time.’

(4) ngorwa sùmùn monò ou màte dùwàsù gà bùn-kò?
guests spent-day how many they staying at house-your
‘How many days did the guests stay at your house?’

Bole is a tone language with two tones and has distinctive vowel length. Low tone is marked with a grave accent (à), high tone is unmarked. Long vowels are marked with a macron (¯a). The transcription is standard Bole orthography, in which sh = IPA [ʃ], ‘y = IPA [ɬ]. Most other symbols are as in IPA.

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The durational predicates in these examples are all expressed by verbs: *sunu* ‘spend a year’, *nòssu* ‘spend (a long) time, last’, *sunu* ‘spend a 24-hour period’. These may be the only monomorphemic durational verbs in Bole. However, durational predicates can be productively created with the “light” verb *I* ‘do’ (→ *an* with a plural subject in the perfective, *à* in the subjunctive) followed by a noun expressing a unit of time.¹

(5) à̀ I tôre suràm à̀ ìli ngàfà la sà

*I did month entire* \(1 \text{PROG} \text{eat} \text{not} \)

‘I spent the entire month without eating meat.’

(6) *mu* an *àwà* kùnmì *mù ì* *sùmmàna*

*wè* did hour three *wè* \(1 \text{PROG} \text{chatting} \)

‘We chatted for three hours.’

(7) *ka* *ù* sātì *mò* ì *ka* tekè *rùtà yè?

you did week how many before you finished work the

‘How many weeks did it take you to finish the work?’

(8) *à* sòmbo à *jì* *pempèlà wàrì* *yòrù*

*one-did 24 hours two one* *1 \text{PROG} \text{wind} \text{without stopping} \)

‘The wind blew for two days without stopping.’

English does have predicates of duration, most notably the verbs ‘spend (time)’ and ‘last (for a time)’. It may be instructive to compare the structures of clauses containing such predicates with their translation equivalents in Bole. ‘Spend’ clauses in English require an agentive subject + ‘spend’ + quantified durational expression + gerundive phrase, e.g. *I spent three hours working, my dog spent 15 minutes burying a bone*. ‘Last’ clauses require a durative event as subject + ‘last’ + quantified durational expression, e.g. *the drought lasted two years, the lecture lasted too long*. The fact that the two predicates have different types of subjects results in distinct clause structures in English. In Bole, on the other hand, the translation equivalents of both “spend” sentences and “last” sentences are structurally identical, viz, a clause with a durational predicate paired with an event clause over which the durational clause scopes:

(9) *à̀ I *àwà* kùnmì ì *jì* *pùtà*

*I did hour three \(1 \text{PROG} \text{working} \)

‘I spent three hours working.’

(10) *sònmì* *bòlou à *jì* *pòishi*

*one-spend-year two \(1 \text{PROG} \text{drought} \)

‘The drought lasted two years.’

An alternative structure to that seen in the durational clauses above is the following:

1 Verbs are inflected for tense/aspect, subject agreement, and certain “extensions”. The exact morphological analysis of verbs is not relevant to the topic of this short paper, so we write verbs as unit words, glossed with the most appropriate English tense. See Lukas (1970-72) and Gimba (2000) for descriptions of Bole verb morphology.

2 *Sòmbò* in (8), which means ‘day’ in the sense of a period of 24 hours, is the nominal counterpart of *sunu* in (4), which means either ‘spend the night’ or ‘spend a period of 24 hours’. 
That is, a genitive construction consisting of a time period plus an agent forms the subject of a clause with a quantifier predicate. In effect, these are nominalized versions of the clauses seen above with the quantifier separated out as a predicate. In clauses such as \textit{h sonn\textbar u kunum}. . . \textit{I spent three years}. . . \textit{"I yeared three}. . . \), the quantifier, here a number, directly quantifies a verb. This type of construction and the nominalized versions illustrated just above suggest that, in constructions such as \textit{mu an aw\textbar a kunum}. . . \textit{we spent three hours}. . . \textit{"we did three hours}. . . \), the quantifier is actually “higher” than the noun and scopes over the predicate “do hour”, even though it appears from the English translation and the linear syntax that the quantifier is modifying a noun.

The Bole expressions match two clauses, one a quantified durational construction and the other an event whose duration is coextensive with the time expressed in the durational clause. This predicts that an English construction like ‘I couldn’t sleep for five nights’ cannot be directly expressed in Bole. The problem here is that the sleeping events (actually the successive failures of sleeping events) are interrupted. That is, one cannot express a succession of five nights in a clause that expresses a singular period of duration. This prediction is borne out. The example here must be expressed in Bole in one of the following ways:

\begin{verbatim}
(13) \textit{\textit{n} sun\textbar u spent-day \textit{b\textbar a} \textit{\textit{ì} no} day-my \textit{b\textbar a} \textit{\textit{ì} not} night \\
I spent-day five I sleeping not at night \textit{\textit{\textit{ì} couldn\textbar t} didn\textbar t} sleep for five nights."
\end{verbatim}

Literally: ‘I spent five 24-hour periods (during which) I didn’t sleep at night.’

or, using the nominalized version with quantifier predicate to express duration,

\begin{verbatim}
(14) \textit{s\textbar nm\textbar d\textbar i}\textbar \textit{no} day-my \textit{b\textbar a} \textit{\textit{ì} no} day-my \\
I spent-day five I sleeping not at night
\end{verbatim}

Literally: ‘my 24-hour periods [were] five (during which) I didn’t sleep at night.’

That is, the durational expression in Bole covers the entire period that encompasses the sleepless nights, viz: five 24-hour periods, within which each night was sleepless. Since duration is expressed in Bole using a clause separate from the event over which the duration scopes, the nature of the quantificational expression of the duration results in variations in the structures of the durational clauses. For purposes of this brief description we consider only expressions translatable as “less than. . . ” and “more than. . . ”.

\begin{verbatim}
(15) d\textbar ajin \textit{æ} s\textbar nm\textbar d\textbar i\textbar \textit{b\textbar o}t\textbar u ngor\textbar wa tan\textbar t\textbar m sh\textbar n\textbar k\textbar a\textbar b\textbar a y\textbar é \\
before one-did day two guests ate-up rice the
\end{verbatim}

‘The guests had eaten up the rice in less than two days.’

Literally: ‘Before one had spent two days the guests had eaten up the rice.’
It rained more than two hours. Literally: ‘It exceeded two hours it was raining.’

The mechanic spent more than two days fixing my car. Literally: ‘The mechanic exceeded two days he was fixing my car.’

The translation equivalent of English “less than” in Bole uses a ‘before’ clause, i.e. “before the time period in question was complete”, the paired durational event was complete.

The translation equivalent of English “more than” uses the Bole verb ‘yà’ exceed’, i.e. the expression of duration exceeded the matched event.

In summary, unlike European languages, which express duration using adjunct expressions involving quantified nouns of duration (‘hour’, ‘day’, ‘year’, etc.), Bole expresses duration by predications in clauses that are paired with clauses expressing durative events. One would like to know, from a typological point of view, how widespread durative expressions of this type are. It turns out not to be easy to determine this, at least from descriptive grammars. The types of constructions exemplified here are probably typical of Chadic languages, yet descriptive statements regarding these constructions are hard to come by. All the examples above could be calqued, almost morpheme-by-morpheme in Hausa, one of the best documented languages in Africa. Yet, Newman (2000), the most comprehensive published descriptive grammar of Hausa, does not mention these types of constructions, and Abraham’s (1962) dictionary, which includes an almost bewildering array of contextual examples for lexical items, has no examples like those presented in this paper.

Durational expressions are a rather small corner of grammar, but we hope to have shown that investigation of such constructions, and in particular expression of quantification of duration, is worth further cross-linguistic investigation.

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Under kwàna ‘spend a 24-hour period’ (equivalent to Bole sunu), Abraham (1962:882) has a couple of examples in which he translates kwàna as “since” nà kwàna bìyar, bìa gan shì ba ‘it’s been five days since I saw him’ (literally: ‘I “dayed” five I haven’t seen him’), an interpretation that clearly misses the nature of the Hausa construction.
References


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