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Source: *Ethnomusicology*, Vol. 30, No. 1 (Winter, 1986), pp. 58-63
Published by: University of Illinois Press on behalf of Society for Ethnomusicology
Stable URL: http://www.jstor.org/stable/851829
Accessed: 13/10/2014 16:51

What Do We Know About African Rhythm?

James Koetting
(Edited by Roderic Knight)

This paper, at the time untitled, was presented in the "Nonference" on "Time in African Music" convened by Ruth Stone at the conference of the Society for Ethnomusicology in Los Angeles, California on Oct. 20, 1984. Other panelists were John Blacking and Roderic Knight. James Koetting died of a heart attack the night after giving his presentation. Fellow panelist Roderic Knight felt that Koetting's remarks were of value to the society as a whole, and with the generous permission of Jan Kleeman Koetting, undertook the task of editing the paper for publication. Since the paper was in the nature of prepared remarks only, certain details had been omitted from the rough draft, and others had been added during the presentation. This final product is therefore actually a joint paper, with bibliographic citations, some of the examples, and certain clarifications provided by Knight for the purpose of better illuminating Koetting's basic position. It is intended as a memorial to one of the clearest thinkers and devoted scholars on this subject, whose future contributions will be greatly missed.

* * *

Ruth Stone, in her paper on "Time in African Music," notes that we have been studying African time for an extended period, but we have only recently begun to take seriously the views of Africans themselves. I agree with this statement. In fact, I would say that we often place too much emphasis in analysis on the sound material alone, spinning out theories about what *we* hear and what *we* see in our transcriptions, and we spend too little time digging beneath the surface to discover what the African carriers of the traditions conceptualize and hear. At the other extreme, some of us devote our efforts to other cultural aspects rather than to music and musicians, hoping to find answers elsewhere.

Ruth Stone, surveying the literature on African rhythm over the past half-century, notes that at least eight different phenomena have been identified and put forth by researchers as the key to understanding the nature of African rhythm combinations: (1) additive rhythm, (2) the concept of "offbeat," (3) hemiola, both horizontal and vertical, (4) cross and inherent rhythms, (5) the "standard pattern," (6) a standard pattern in the form of timbral pattern, (7) motor pattern, and (8) transaction, by which is meant

the specific polyphonic texture created by interlocking parts (as in Kiganda xylophone music), call-and-response playing, or rhythmic hocket in all its varieties.

Nearly all explanations based on these phenomena make sense in one way or another. It is possible to argue forcefully for a unilinear or monochronic reckoning of African time; there is also abundant evidence for a European-like metric explanation in rattle and clap patterns, dancers' motor beats, and the common use of divisive structures. At the same time, the variety of polychronic approaches outlined by Stone can also be applied with ease to much if not most African music. In other words, satisfactory analytical results may be obtained with any of the following approaches:

—metric or equal pulse;

—asymmetric, unequal pulse or additive rhythm, including analyses based on the so-called "standard pattern" or other time line;

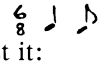
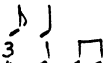
—resultant or inherent rhythm;

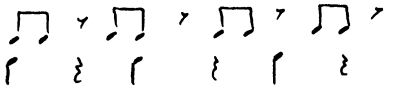
—cross-rhythm, polymeter (or polyrhythm), and hemiola.

What is more, all of these can be present simultaneously; they can be seen in transcriptions, and for the most part, they can be heard in the music.

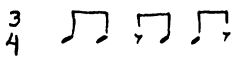
The problem with these approaches to time in African music is that while they *do* serve to explain what is being played or sounded, they are too often regarded in addition as theories about what is *heard* or what is *perceived* by the carriers of the tradition.

Stone does adress the question of how people perceive time, utilizing the idea of monochronic (one-thing-at-a-time) versus polychronic (many-things-at-a-time) perception advanced by Edward T. Hall (1983:41–54). In seeking answers to this question, I feel we must be careful to distinguish between our understanding of perception and our understanding of actual rhythmic phenomena.

A simple example of what I mean is heard in the phenomenon of vertical (simultaneous) hemiola. Labeled and understood as "two against three," it usually describes a *physical* reality: one performer (or one hand) plays two pulses in the same space as another's three. Our perceptions of this physical reality may differ widely. If these two rhythms are heard as one, the single line may be described as a predominant two with a three syncopated against it:  or as a predominant three with a two syncopated against it:  Simultaneous hemiola may also be perceived as a resultant pattern in which neither the two nor the three predominates—that is, a rhythmic hocket. Consider the following:



The basic component of the upper line of this rhythm, even without a second part, provides another example of the possibility of multiple interpretations: it is physically triple, but is it regarded as "sound-sound-rest," "sound-rest-sound," or "rest-sound-sound," or perhaps none of these? Another hemiola interpretation is even possible:

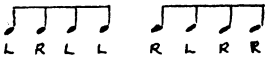


A further consideration is that hemiola patterns such as those shown here may be placed against asymmetric time lines or other metric schemes imposed by the melodic/rhythmic structure of a piece, dance movements, or other instrumental parts. In such contexts, their identity as hemiola patterns may not be significant at all.

Although we may discuss the common ways hemiola patterns may be perceived or heard, another intriguing question remains: how do African musicians in fact *conceptualize* a pattern such as hemiola? Does that nearly ubiquitous phenomenon differ in conception from music to music in Africa? This seems unlikely in a group of musical cultures that is homogeneous in so many ways.

Although I don't claim to have the answer, most of my own analysis has been done according to the concept of fastest pulse, and I feel that this *is* a conceptual structure that works for African music. What we do know generally is that African musicians do not count rhythms. Vertical hemiola, when shown in fastest pulse notation, appears as a six-pulse resultant pattern that is neither twos nor threes. This representation presumably puts us a little closer to a non-counted rhythm—one that is merely felt as a pattern. An analogy may be drawn to the western drumming rudiment known as the "paradiddle:"

(See *Kete* below for an example of fastest pulse notation.)

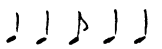


The paradiddle is never viewed or taught as two separate patterns, one for the left and one for the right, but as a balanced way to play accented groups of four fast pulses. In other words, it is conceived in terms of the resultant pattern.

An important feature of the fastest pulse concept is that it allows for the widest variety of interpretations. The fastest pulse affords the most ambiguous and thus least dogmatic explanation of rhythmic phenomena. Basing analysis on it causes fewer problems than it creates. But fastest pulse probably is *not* the answer to the question of how African timing is *perceived.*

This brings me to Stone's reference to inner time. She notes that inner time "exists for participants within the stream of consciousness and does *not* contain homogeneous units of measure" (1984:20). Quoting Alfred Schutz, she notes further that it is "dependent upon retention, impression, and anticipation" (1964:170). To me this is synonymous with the African perception of time, a perception that may or may not be evidenced in the sound material but can be a working concept for musicians and listeners.

Some of Stone's examples suggest looking outside music to explain rhythm. Surely there is much to be said for this approach, since music does not exist in a vacuum. Sometimes, however, we as musicians can be lured by non-musical or essentially extraneous evidence. Two examples: (1) the interlocking patterns of African drumming have been explained by noting their similarity to African conversational speech, in which the *listener* constantly interjects sounds as a way of showing that he or she is paying attention to the *speaker;* (2) Jeff Pressing, in a paper entitled "Cognitive Isomorphisms in Pitch and Rhythm in World Musics" (1983:40) draws attention to the parallel between the widely used 12-pulse rhythm of

 (or x . x . x x . x . x . x)

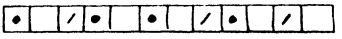
and the semitone count of the diatonic scale:

2–2–1–2–2–2–1

Fascinating and seductive as these explanations may be, they do not provide an answer to how Africans perceive rhythm. They are not operating principles—they do not actually *account* for what happens in the music.

I believe that the key to understanding the African perception of musical time is not linked to non-musical thought patterns, social structures, world view, or anything outside music. In trying to account for African timing in music, we will not be helped by delving more deeply into the *why* of music making—that myriad of phenomena that surrounds and informs a performance of music. As Ekwueme has noted, in a guest editorial for *African Music,* what we need to do now is to ". . . discover and explain *what* the African musician does musically instead, merely, of *why* he does it" (1975:5).

Vague explanations simply will not account for the precision of timing in African music. That is why, for example, the relationship between language and musical rhythm is tenuous. Once language *becomes* music it is musically timed, and sensitivities other than those having to do with language enter in. At that point, non-linguistic explanations are required. A mnemonic device, for example, may be viewed as a factor in timing or a clue to timing, but it cannot by itself account for timing. The Ashanti form of the standard pattern as used in *Kete* drumming is taught vocally as "sang si sang sang si sang si:"



This mnemonic indicates the starting point, timing, and timbre, but in order to produce the pattern correctly—whether verbally or on a bell, one must have already learned the Ashanti principles of timing. The same is true of the verbal mnemonic "Wu wo sika do-no" ("Who has the golden *donno*?"). The rhythmic timing must be *applied* to the verbal phrase that represents the drum pattern; it is not inherent in it.

Language, calendrical cycles, the complexities of kinship ties, or the attitudes of inter-urban taxi drivers towards the timing of their trips, fascinating though they may be, ultimately cannot account for timing in music. The timing of most African music is extremely precise, and this precision is required for a good performance. Thus any theory advanced as an explanation of this timing must be equally precise. With a precise theory in hand, the next task of the investigator is to attempt to prove that the theory makes some sense to the carriers of the tradition. In addition, we must know at what level the theory operates—i.e., is it a fundamental operating principle or does it account for timing in only a peripheral or non-specific way?

We have been theorizing about African timing for decades. Hornbostel set the stage with his article "African Negro Music," published in 1928. He sought to explain the bewildering accent patterns he heard in early cylinder recordings by theorizing that their timing must be based on the motor accent of tensing the muscle *before* hitting the drum in addition to the audible accent of the drum stroke itself (1928:53). We have come a long way in our understanding of African rhythm since then, but we still have not reached a theoretically sound bottom line. I would be among the first to admit that I do not know what to write on that bottom line. My intent in this paper has been merely to indicate some guideposts that I feel are important in seeking the answer.

Biographical Data

Roderic Knight is Associate Professor of Ethnomusicology at the Oberlin College Conservatory of Music.

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