

**African Rhythms**  
**and**  
**How They Are Learned**

**Final Project**

**For**

**Music 696F**

**Graduate Seminar in Ethnomusicology**

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## **I. Introduction/Subject Overview**

The complex rhythmic concepts of African musics, and the ways in which they are taught and learned, offer unique opportunities for understanding African social integration, and for promoting cross-cultural awareness and understanding.

This statement summarizes the thesis of my research project, an outgrowth of a long-standing interest in musical rhythms (especially African rhythms), as well as a growing personal appreciation of the rhythmic sophistication of African music, its pivotal roles in African culture, and its potential value to members of other cultures.

My task this semester has been to expand my awareness and understanding of the rhythmic qualities of African music...to experience some of this music first-hand...to create for myself a preliminary sense of how African people traditionally learn rhythms and to begin a comparative study of how “western” students (and others, including those who are not formally musically trained) are taught “western” rhythmic material. This research effort is motivated primarily by an upcoming two-month trip to W. Africa, during which I hope to do considerable field research on these subjects. It’s my hope that this semester’s research will better prepare me to learn all that I can from the experience of temporarily immersing myself in African culture, art and music – especially African rhythm.

My research has exposed me to the groundbreaking work of ethnomusicologists such as A.M. Jones, John Blacking, Chernoff, David Locke, James Koetting, Alan Merriam, and many others who’ve already studied these subjects (some might say exhaustively) over the last fifty years.

## **II. Meter and Rhythm**

This study has also required me to examine some of my own basic assumptions and definitions about music, and in fact to develop a set of more well-defined assumptions and definitions. I began with my understanding of meter and rhythm, for these two components, I suspected, could provide me with a framework for better understanding rhythmic material, African or otherwise. I wondered: How do we define “meter”? Or “rhythm”? How have these concepts been defined by others? How do we distinguish rhythm from meter? How can I personally define and visualize meter and rhythm in a way that will serve me well, both in the world of western music and during my studies in Africa?

There are actually myriad definitions – some controversial, some wildly confusing. Some are based on the structures of language or other cultural forces. I didn’t need to pursue them all; I just needed some definitions that would work for me.

The definitions that worked best for me are those put forth by Mieczslaw Kolinski in a 1973 article in the journal *Ethnomusicology*, entitled “A Cross-Cultural Approach to Metro-Rhythmic Patterns”.

**Meter**, Kolinski states, is “organized pulsation which functions as a framework for rhythm”.

**Rhythm**, on the other hand, is defined as “the organization of durations within the framework of a meter”.

Fairly simple definitions, to be sure. But for these definitions to work, I needed to answer a couple of questions, and those answers helped me not only to better understand

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meter and rhythm, but also to achieve a first, very important level of understanding about the differences between western and African music.

If “meter” is “organized pulsation”, just how is it organized? In the western model that we’re most familiar with, that’s easy: It’s organized by bar lines, by regular beats (for example, 1-2-3-4), and quite often by accents (often on the first in a series of beats). Western time-keeping, therefore, is primarily a linear function: moving, usually in a straight line, away from a particular starting point or toward a particular ending point (Merriam, 1981). And, each unit of meter (measure) has a beginning and an ending.

Within each metric unit, a rhythm may be created by organizing the durations available to us, either with sounds or with silences. Thus “1 (pause) 3&4” becomes a rhythm (composed of sounds and silences) within the 4/4 meter. By subdividing each pulse and combining sounds and silences, a nearly infinite variety of rhythms can be created; any particular rhythm can be repeated...or combined with other rhythms. Rhythms, individually or in series, can be situated within metric units (“measures”), or can be placed over the dividing lines, across the beginnings and endings of measures, and measure lengths and tempos can be changed, to likewise create an infinite variety of musical phrases and rhythmic meanings. But, at least in western music, it’s all done pretty much within the understanding of the measure and the organization of a series of pulses (through numbering or accent) within the measure as the basic background for all this work.

And, here’s where the first significant distinction with African music becomes evident. While African music does have what can (using the English language anyway)

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be called “meter”, there is substantial evidence to suggest that African meter doesn’t rely on 1) bar lines, 2) regular underlying counted beats, or 3) accents.

So, an African musical patterns such as this one (commonly referred to as the “standard pattern“), while strongly suggesting a meter, don’t have a bar line. Rather, it’s cyclical, with sub-patterns that can be discerned through repeated listening or playing. But, a good deal of evidence suggests that African musicians don’t hear these patterns with an underlying 1-2-3-4, as you or I might, and that they don’t think of any particular sound in such a pattern as being the “first” one or the “last” one. So a pattern such as the one above can be heard as “starting” on any of a number of different sounds or silences within the pattern.

Further, it appears that African music doesn’t require the use accents to help the performers or dancers understand the sense or organization of a meter (they use other devices I’ll discuss later). The result, as Hewitt Pantaleoni has stated, is that the African musician “learns the whole simultaneously with the parts, which is why he has never depended upon stress for rhythmic precision”. Rather, African musicians appear to perceive the organization of meter and rhythm as the sum of diverse but related components. Put another way, “. . . Africans, then, are neither counting nor learning their parts individually; rather the basic conception is an entity, a single unit made up of several parts which are envisaged as a totality”. (Merriam, 1981). I’ll be discussing this subject is covered more lately, under the topic “composite rhythms”.

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### **III. Social Roles of Music – An Overview**

Another part of my research has been a look at the social roles of music in African culture. This is well-trod ground, for it has long been recognized that African music has a distinctly social quality and character. John Blacking describes it as "...the most fundamental aesthetic in Africa: without participation (that is to say, social interaction), there is no meaning". He also states: "The music of Africa invites us to participate in the making of a community". Or, consider John Miller Chernoff's declaration that "The reason why it is a mistake to 'listen' to African music is that African music is not set apart from its social and cultural context." "The central point", Chernoff states, "remains that, compared to Western societies, African societies have many more people who participate in making music, and they do so within specific groups and specific situations."

So, we have, in Africa, cultures which participate in music in distinctly social ways, and while doing so, utilize conceptions of meter and rhythm that are themselves quite distinct and, as we'll learn, quite complex...and quite challenging.

### **IV. Music of the African Continent**

I thought it would be useful to arrive at some preliminary understanding of the totality of music on the African continent. How naive. I quickly discovered that this was very nearly impossible; it was the work of another semester...or maybe even a graduate thesis. A few broad concepts I did manage to glean from the reading: Africa, for the purpose of studying music and other cultural issues, is often divided into five general regions: West, North, East, Central, South. These are five geographic distinctions, each

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of which overlays perhaps hundreds other ways of subdividing the continent, according to language, tribal clusters, or modern political boundaries.

**West African music** displays a number of attributes: it includes influences from northern Africa, including Islam; it often includes complex, energetic, polyrhythmic drumming; it often accompanies vigorous dancing; it often imitates speech. (Dje Dje, 1998) But to say that these things “define” West African music would be both an oversimplification and an overgeneralization.

**North African music** combines middle-eastern and sub-Saharan influences, plus Andalusian (Spanish) ingredients; Islamic influence is great; musicians are often “hereditary” in their roles, and specialize in particular traditions. (Wendt, 1998) But, this by no means tells the whole story.

**East African music** displays influences from south- and southeast Asian lands far to the east of Africa; much East African music is associated with royal ensembles, some in the form of Kenyan and Ethiopian court music which persists even today; there are distinct “nomadic” styles, and distinct “agricultural” styles. (Cooke, 1998) Does this tell the whole story of E. African music? Of course not.

**Central African music** features, among other things: polyphonic pygmy singing; influences from lands as distant as Portugal and Latin America; and well-developed tonal systems. (Kubik, 1998) Is there more? You bet.

S. African music displays strong links between music and political power; polyrhythms are strong, even ubiquitous here; many instruments feature buzzing or rattling parts; there are strong European influences here, because of colonization.

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(Kaemmer, 1998) But, that's the very tip of the S. African musical iceberg.

So that's my two-minute overview of music of the African continent. Now, let's move on to the good stuff.

### **V. African Rhythm – what is it all about?**

In my readings and playing this semester, I came across dozens of resources that aim for the rhythmic “heart” of African music. Ethnomusicologist James Koetting delivered an address to the Society of Ethnomusicology in 1984 that described his view of the “eight issues” that needed to be addressed in understanding African rhythm.

Alan Merriam's article “African Musical Rhythm and Concepts of Time-Reckoning”, published in a volume of essays honoring ethnomusicologist Walter Kauffman, raises the issues of “unacknowledged assumptions” about African rhythm.

Music theorist David Temperly took a fresh approach in an article entitled “Meter and Grouping in African Music: A View from Music Theory”, published in the year 2000 in the Journal of the Society of Ethnomusicology.

As a composite, these authors and others have presented dozens of components for analyzing, understanding or learning to perform African rhythmic material. Most of these people have studied West African music; at least that's the part of Africa that's perhaps most often mentioned when discussing rhythmic concepts. That's where I'll be this summer, so their thoughts and research were especially germane to my own study.

But, my purpose here wasn't to know or understand everything about African, or even West African rhythm; nor was it to do extensive primary research (there isn't a whole lot of West African music to be found in southern Arizona); rather, it was to

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survey the thinking of those who've studied the music first hand, and to arrive at some sort of paradigm, a "mental set" for my own first-hand experience with west African music.....in west Africa.....for two months this summer.

So, I picked and chose from other researchers' materials and, in conjunction with my own listening and observations developed a list of my own "issues" concerning African rhythm, attributes of and curiosities about the music which I'll use as a basis for understanding what I hear and play in the months ahead. I refer to it as "Seven West African Rhythmic Organizing and Perceptualizing Principles". (I know that sounds academic; but hey, we're ethnomusicologists, right?) So, let's just call them "SWAROPP's". It's really just my own personal favorite list that summarizes a variety of the rhythmic qualities of the music and ways of looking at or hearing the music.

**#1: Multi-/poly-/cross rhythmic qualities** It is well known that African music utilizes multi-rhythmic techniques. What do we mean by this? We mean that two or more rhythms are performed simultaneously. For example, this passage might be considered a "multi-rhythmic" musical passage, since it contains two rhythms. But, they happen to be the same two rhythms. When we talk of African music, we usually mean two or more different rhythms, such as this one. Here, because it includes two different rhythms, I'd refer to it as a "poly-rhythmic" passage. But, even this doesn't get at the real quality of African music, since these two rhythms, played simultaneously, don't create the kind of tension and release that is a rhythmic hallmark of African music. So, consider this third example. Here, we have more than one rhythm (multi-rhythm), and they are different rhythms (polyrhythm). But, beyond either of those, the two rhythms are

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in some way at “cross purposes” with one another. They are what are commonly referred to as “cross rhythms”. As John Miller Chernoff states, “...the conflicting rhythmic patterns are called cross-rhythms. The diverse rhythms establish themselves in the way that tones establish harmony in western music. The effect of polymetric music is as if the different rhythms were competing for our attention”. Like tones, they create rhythmic dissonance, which is often resolved to rhythmic consonance.

**#2: Composite Rhythms** These are also often called “combined rhythms” or “resultant rhythms”. Simply stated, this means that a new series of notes is created that didn’t exist within any one of the rhythms being played. Matthew Montfort, in *Ancient Traditions, Future Possibilities: Rhythmic Training through the traditions of Africa, Bali and India*, states the importance of this musical quality, stating: “The very thing that would tend to throw western musicians off the beat is regarded by the African as being the only thing that keeps him in time, for in African music, one rhythm defines another.” I’d take it one step further and suggest that in African music, two rhythms together define something new, and that something new is the “composite rhythm” that is so much a part of so much African music. And consider the “composite rhythms” that can result when combining not two, but six or seven patterns simultaneously (not uncommon in African music). To say the least, they become quite sophisticated.

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**#3. “Timbral part differentiation”** There’s one of those stuffy-sounding ethnomusicological terms again. Pantaleoni takes a stab at this concept in his book, *On the Nature of Music*. What it means is that, in many or most cases in West African music, aside from identical instruments, instruments which are playing simultaneously exhibit contrasting timbres; further, contrasting timbres do not typically play the same part. Contrast this with western music, in which, for musical purposes that are deep within our culture, composers and performers will often deliberately have two instruments play the same part, that is, they “double” one another, or perhaps “echo” one another, to reinforce a particular melodic or rhythmic statement. In African music, as I have read it and heard it, you often find the exact opposite.

What’s also notable about this, as a contrast to western music, is that the functions performed by timbre are often reversed. In western music, it is usually the highest, most piercing instrument setting the direction, leading us, melodically, harmonically or rhythmically, to the next musical sensation. Think of the violin, or the soprano, or the lead guitar, out in front of the ensemble capturing your attention and moving things along. In African music, the opposite is often the case: in many ensembles, the lowest, deepest, fattest sound is often what signals the musical movement. An example of this “Atsiabekor”, a dance/music piece from Ghana, West Africa. In this ensemble, , the “lead drum”, the Atsemivu, is the lowest drum; it’s also the one that goes through the most changes and from that position of deep, booming sonority, leads the ensemble

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through the cycles of the piece. The most predictable, unchanging part however, is the highest one: the gankogui, a bell that often starts the rhythmic pattern going and doesn't change for minutes or hours at a time. Contrast this with a western rock or jazz ensemble, where the bass line or bass drum beat is often the most stable, predictable part of the sound. As Pantaleoni puts it, "...from the westerner's point of view, the layers of sound function upside down: the most interesting, varied play is down below, where we would expect to hear a steady, dependable beat, while the least interesting, least varied play – the fundamental gait and the all-important guiding pattern of the bell—lies high up where we (as westerners) would expect to hear the most rhythmically free sounds".

**#4: Non-equidistant governing accents** Here again, James Panteloni has done an excellent job defining this quality of African music, "...a series of non-equidistant, asymmetrical, and uniformly unstressed accents that outline the measure by their timing alone...they musical flow of an Anlo piece, unlike that of a western piece, need not reinforce the governing meter because the governing meter reinforces itself." (Ex., page 273). He further points out that "...the other performers easily keep together regardless of how diverse their parts may be simply by maintaining individual relationships with the bell's asymmetrical pattern". Pantaleoni is really the only author I've come across who makes this much of an issue of this particular attribute of the music. It really intrigues me; I'll be listening for it.

**#5: Divergent rhythmic perceptual paths** David Locke states: "The gestalt of the composite polyrhythm and its separate phrases is open to multiple interpretation: The whole and its parts can be heard in a variety of ways depending on conceptual factors

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such as the duration, placement and internal subdivision of metric stresses (beats), the relative prominence given to a particular part, or the moment a phrase is thought to begin.”

This is a quality of the music that I find particularly interesting, but aside from Locke’s very direct comment on this quality, one that I haven’t found extensively addressed anywhere. It has to do more with how we hear the music, or how we choose to hear the music, than with how the music itself is performed. It’s the ability on the part of the listener to hear the same thing in different ways. Let me once again use the “standard pattern” of beats found in so much African music. First, as I mentioned earlier, you can hear this pattern in and of itself as having a metrical underpinning that begins on any of twelve different sounds or silences. But, that’s just the beginning; when you start mentally dividing the pattern into different, equally-sized subdivisions, it gets even more interesting. (Example dividing by three, four, six, two, or a big “one”). Some of these different ways of hearing the music are suggested by parts within it, and the ways in which those parts interact. But, you can consciously choose to attend to the musical patterns on your own, and “hear” something entirely different. It’s important to point out that, while these “divergent rhythmic perceptual paths” are available to us as listeners, I’m not suggesting (nor is Locke, necessarily) that African musicians consciously listen to or analyze their music in this way.

**#6: Call-and-response is present at many levels** As I hear it, there are actually five ways, or levels, at which we can identify call-and-response qualities in African music. Some operate purely rhythmically, by the sounds of the instruments; others

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actually relate to the larger forms and structures of certain types of performed pieces.

Each one, in some way, further refines the “rhythmic” quality of the music.

At its most basic, the simple phrase (use Gahu, bell plus kagan) uses call-and-response within the subdivisions of the individual beat.

At the next highest level, the same passage, in the bell alone, suggests a call-and-response pattern (same passage).

At the next highest level, a line of music is heard, followed by a different line, then the first again, which is in turn followed by a new line. Each time the original vocalized line is heard, it is “answered” by a new and different line. (Pantaleoni, p. 385).

Likewise, at a higher level still, an entire multi-line stanza of a song may be heard, followed by an entirely different stanza. Again, it’s call-and-response.

Another, really quite different, call-and-response technique is heard throughout many types of African music. As I’ve mentioned, the lead drummer in the ensemble begins the playing by performing a “call”; such a call may be anywhere from a couple of beats to a number of “measures” long. Other players respond by beginning their parts and playing them for a considerable. After a period of time determined solely by the lead drummer, another “call” is played, and the ensemble “responds” by either playing something entirely new and different, or by re-starting the passage heard after the original “call”.

**#7: Controlled and Evolutionary Improvisation** This is a quality of African rhythm and music that really quite curious. I’ve got a bit of an ax to grind on this subject, so bear with me.

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Listening to an African percussion ensemble, it's easy to imagine that what's happening is some form of "group improvisation", uncontrolled and unpredictable, and that the lead drummer, in particular, may be wildly improvising over the ensemble, allowing his musical imagination to run free. It really can sound that way. It's the perceptual model of African music that seems to inspire many of those (mostly untrained) guys with their djembes out in the park on a Saturday afternoon. Pick a rhythm, think up something to play along with it, and have fun. And, when the spirit moves you, change or improvise on your pattern, toss it out there and see how it matches up with whatever else is being played. Wow – this "African" style of playing is really something!

But, as a way of playing "African" music, it's quite misinformed.

In fact, improvisation in African music occurs within very strictly-defined parameters. As Chernoff puts it: "A drummer's freedom is limited by the organization of the music...the coherence of an ensemble is chiefly dependent upon the maintenance of the rhythmic relationships which emerge from the basic composition". The underlying, interlocking rhythmic patterns of most traditional African music have been worked out over hundreds of years, have been played thousands upon thousands of times, and represent highly complex, highly evolved rhythmic relationships. In many cases, the rhythmic relationships actually represent and reinforce complex social relationships, as well.

As such, the improvisational techniques within or over these patterns are likewise highly structured and operate according to strict rhythmic rules. In the case of Gahu,

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David Locke describes how a lead drummer may improvise over the ensemble pattern: “He plays phrases appropriate to the piece and improvises upon them in stylistically acceptable ways”. In fact, Lock describes ten specific forms of creating variations that assures that the lead drummer’s improvised lines are “genetically related” to the ancestral phrase.

So, there it is: my list of Seven West African Rhythmic Organizing and Perceptualizing Principles. It’s not an exhaustive list. There are other rhythmic qualities to African music, other issues, other ways of examining or analyzing the rhythmic qualities of the music, to be sure. But, it’s something for me to go on when I study the music first hand this summer.

### **VI. African Rhythmic Learning**

I recall as a small child watching a Sunday afternoon documentary, a grainy black-and-white film that had something to do with African tribal life. I found a fascination in watching this film of tribal members participating, communally, in the act of music-making. Children were a part of the scene, clapping, dancing, smiling, singing and learning as they participated.

Contrast this with my experience (and perhaps yours) of “learning” about rhythm in my grade school, which is where many of us begin learning the subject. A harried band instructor directs a half-dozen or so aspiring little drummers and wind players, coaching us to tap and blow first whole notes (slow ones), then half notes, then quarter and eighth notes, which (to begin, at least), we played in strict rhythmic unison with one another. When the horn players advanced to the point of being able to play a series of

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different notes, the drummers tapped along on practice pads, typically in rhythmic unison with them. And, it was challenging; at the age of eight or nine, that's what our rhythmic capabilities allowed.

In African tribal traditions, learning rhythm is largely a byproduct of daily living. As Mathew Montfort describes, "...the African mother sings to her child in syllables imitative of drum rhythms. When he is of sufficient age, he learns to imitate these rhythms by rote." What's "sufficient age"? Not uncommonly, African children of three or four are routinely utilizing duple, triple and compound meters, as well as polyrhythms and polymeters, as part of games which occupy their time. Prof. Mark Sunkett of ASU observes among tribes in Senegal, "Young drummers observe older experienced players to acquire the techniques of tone production and style...I saw several young musicians practicing on tin cooking oil cans and cardboard boxes". John Blacking has commented on similar experiences with the Venda of southern Africa. Montfort also points out the strong relationship between music and the spoken word: "In African languages, proper rhythmic phrasing and accentuation are essential to meaning, and children's songs and games display an advanced rhythmic character". Suffice it to say that musical learning – rhythmic learning – has an entirely different face in African culture.

### **III. Social meanings and significance of rhythm in African culture**

I've always sensed that African rhythm played a powerful role beyond that of the audible music itself. This is born out by much of the research of the last fifty years, even more so as our theoretical understanding of African rhythm has grown. Chernoff puts it well:

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“Just as the participant at an African musical event is unlikely to stay with one musical perspective, so do Africans maintain a flexible and complicated orientation toward themselves and their lives”. He states further, “...the many ways one can change a rhythm by cutting it with different rhythms is parallel to the many ways one can approach or interpret a situation or a conversation.” (Musically, he’s referring to cross-rhythms, composite rhythms, and divergent perceptual paths.) That is to say, in African society, music is very much a social situation, a social conversation.

Consider again the remarkable complexity of African rhythmic material, the ingenious ways in which parts fit together, each with a unique timbre, a special rhythmic twist, the calls and responses, the little pregnant spaces that pop up between them, the musical conversations which, surely, express more than just the notes which we can write down to represent them. And, consider the ways in which music is so regularly interwoven with everyday life, with everyday events, from the magnificent to the mundane.

For Africans, especially those for whom life is still in any way associated with the tribal unit as a means of connection to the world, music plays a special and very remarkable role. The rhythms of walking, the rhythms of talking, of dancing, of playing, of working, of mourning, of celebrating. Of living day to day.

For me, it all holds a remarkable allure. It’s going to be quite an experience to see it for myself.