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# The categorization of musical heritage in oral tradition societies

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## Introduction

The cognitive capacities that allow people to categorize the material and symbolic world in which we live give rise to universal operational procedures. Each individual, each community, classifies, orders, and identifies the objects of its culture, placing them in a certain number of categories. The role of the scientist is to understand and bring to light the criteria of relevance on which each culture-like each of its members-bases this categorization.

In what follows we consider the categorization of musical heritages in Central African oral tradition societies (comprising mainly the Central African Republic, Cameroon, and Gabon). This work is based on more than three decades of investigation, collection, and analyses undertaken among some thirty populations.<sup>1</sup> These have a high degree of homogeneity and exhibit generally shared competences in both practical and theoretical knowledge of music. Indeed, the status of professional musician does not exist in this region, but most members of these communities know how to sing, dance, or play the music of their heritage. They also know the principles underlying the association of specific pieces with specific circumstances, as well as the rules that form the basis of their musical idiom.

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<sup>1</sup> The music discussed in the present article has been studied by: Central African Republic: Aka (S. Arom and S. Fürniss), Banda Gbambiya (S. Le Bomin), Banda Linda (S. Arom), Gbaya (V. Dehoux); Cameroon: Baka (S. Fürniss), Bedzan (F. Marandola), Uldeme (N. Fernando), Tikar (N. Fernando and F. Marandola); Gabon: Teke (S. Le Bomin); Senegal: Wolof (L. Penna-Diaw).

Yet little of this is verbalized and much of the operational knowledge underlying people's musical competence is implicit. Thus, it falls to the researcher to illuminate the logic of such vernacular representations, above all the linkages between the three symbolic domains of language, belief, and music. We will see that the close intertwining of these three aspects of culture necessitates coming to terms with the different kinds of data they each provide.

Our fieldwork experience teaches that each community orders the pieces of its heritage in a certain number of *sets*. The *cultural relevance* of these sets is attested to by the fact that each is given a name, and is linked to one or more specific circumstances and/or functions. It follows that the vernacular organization of this heritage is articulated in a coherent way.

The question arises of how much vernacular classification and musical features correlate. Our experience affirms that cross-checking of data between specific circumstances, the musical sets attached to them, and their names in the local language, reveals that musical parameters bear heavily upon the discrimination of the endogenous categories which constitute a community's heritage. These parameters concern the vocal and instrumental combinations used, as well as the musical substance.

Given this perspective, we have had to invent our own conceptual and methodological tools. The goal of this article is to show, using concrete examples, how a simultaneously *comparative* and *contrastive* analysis of data - describing both cultural context and formal properties of music - can lead to the modeling of principles underlying vernacular classification.

The relevance of principles of organization described here need not be limited to Central African cultures: one can infer that many would operate in other geocultural areas. The substance of what follows may therefore be of use to other researchers interested in how the musical and the social co-articulate.

### ***The construction of a presumption***

Imagine an ethnomusicologist arriving in the field with the objective of describing a culture's musical systematics, and delineating the links that will show how the musical system is articulated in relation to the culture as a whole.

The tools at the researcher's disposal are those of ethnomusicology's parent disciplines, ethnology and musicology. Familiarity with the object of study comes via field investigation and the encounter with its many disparate features. This leads him to take indirect paths, follow digressions, and wind his way through the ensemble of autochthonous representations. The path to a reasoned interpretation of the data emerges from a constant dialectic between what members of the culture say, observation, and analysis of facts. Information of different kinds quickly accrues:

- *Musical*: several kinds of recordings of the musical repertoire (see below: Collection of Data);

- *Linguistic*: especially the vernacular names given to pieces, the repertoires that they collectively constitute, their song texts or themes, and any associated musical terminology;
- *Ethnographic*: relating to performance circumstances and functions of music, as well as symbolic associations attributed both to the context and to any and all aspects of musical practice.

The constitution of the corpus therefore requires, on the one hand, sound recordings and, on the other hand, all the data that make it possible to situate a musical practice in its socio-cultural context.

### **Shared Competences**

Without describing methods of collection and research in detail, we can say that there are many ways of going about it, based on one's prior knowledge of the society in which one is to work.<sup>2</sup> Typically, ethnomusicological investigation in Central Africa is done in the presence of several members of the community since, as stated above, virtually all of them know their musical heritage. Nonetheless, in each society there are people who, in one domain or another, are more expert than others. Some are better able to play instruments, others have specialized knowledge of how to make them, and still others may have a particular talent for singing or dancing.

In such communities there also exist repertoires known or practiced by a limited subset of the population, who are allowed to know them because they possess some special social status. This is especially the case for musics linked to different kinds of initiation rites, certain age groups, or the religious practices of ritual associations and/or secret societies. One must therefore distinguish between repertoires in the "public domain" - known and open to the participation of one and all - from those that are "reserved", which are the prerogative of a restricted group, and that can be ignored by everyone else. In each case, the validity of collected information is confirmed by correlating what the experts say with what they do, in other words, on a *cultural consensus*.

### **Collection of Data**

Investigation and collection are not dependent on a pre-established procedure that would be invariable. On the contrary, in initial phases, empirical techniques can be very effective, so long as a common thread among them is maintained. Indeed, whatever the theme or subject upon which one launches the research, certain continuities will take shape - clues, intuitions, even hypotheses - which, in a later phase, will permit the co-articulation of collected data. One could, for example, begin by looking into the various performance circumstances in which a community uses music, and then broach, on this basis, a study of musical instruments and the repertoires to which they are linked. One must establish an

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<sup>2</sup> G. Dournon, *Handbook for the Collection of Traditional Music and Musical Instruments* (Paris: UNESCO, 2000) is a useful reference.

inventory - provisional but as complete as possible - of the items in the community's musical heritage and the various ways they are grouped and associated with one another in sets.

To categorize such sets one must record a representative sample of pieces in each of these different sets. To deepen the analysis, both "conventional" and analytical recordings are needed.<sup>3</sup> The latter allows the transcription and detailed description of musical characteristics and provides the necessary elements to understand the structural foundations of music. Indeed, analytic recording facilitates access to how metric organization - pulsation<sup>\*1</sup>, periodicity - is conceived, but also to the musician's mental reference during performance or learning. Finally, it makes possible the analysis of complex polyphonies, and in doing so a parsing of the way different voices can be superimposed.

In addition to the data directly related to music and its performance, investigation into a piece or group of pieces naturally requires taking social, symbolic, and natural domains into account. Thus:

- Precedences governing the organization of festivals and dances may reflect hierarchic relations between members of a community and reveal aspects of social structure.
- The study of many musical repertoires may lead to the elicitation of myths of the pantheon of a community.
- Song texts used by initiation cults are often voiced in an esoteric or even secret language that can provide clues to history.
- Healing songs bring the researcher into the domain of therapeutic techniques and often botanical knowledge.
- Musics linked to the agrarian calendar reflect symbolic interaction between human and plant life cycles.

In this way, music becomes a privileged means of access to aspects of a culture that might otherwise escape detection.

### **Denominations, Polysemy**

Language is the basis for confirming the often indissoluble link between music and the occasion of its performance. In the cultures under consideration, vocabulary about music emerges directly from lived experience; thus, there is neither a generic term for what we call "music", nor for "musical instrument". What is musical is often grouped under the rubric "song" - or sometimes "dance" - even for instrumental music. On the other hand, there is a relatively well-developed terminology for functions, contexts of performance, instruments, and their component parts. Moreover, each piece of music is named, as is (with rare exceptions) the set of pieces to which it belongs. Most of the time, the term

<sup>3</sup> S. Arom, "The Use of Playback Techniques in the Study of Oral Polyphonies." *Ethnomusicology* 20 (3) (1976) : 483-519; E. Olivier, "À propos du re-recording", in V. Dehoux *et al.*, eds. *Ndraje Balendro. Musiques, terrains, et disciplines: textes offerts à Simha Arom*, (Paris : Peeters-SELAF, 1995), 111-118.

<sup>\*1</sup> [In this article the terms *pulsation* and *beat* are used interchangeably. M.T.]

designating such a set also connotes the circumstance, the ritual, and the dance – even the mask – associated with it. It can even be the name of the instrument or instrumental ensemble used, or even a rhythmic formula common to all of the pieces.

The links between the different meanings of one and the same vernacular term are of different orders of complexity: a term may refer to only two, or sometimes to many things.

This is the case among the Aka Pygmies, for whom the term *bòndó* designates:

- a divination ritual,
- the divination by fire that occurs during this ritual,
- the officiating diviner-healer,
- the dance associated with the ritual,
- the musical pieces linked to the ritual,
- the polyrhythmic formula associated with the dance,
- the hallucinogenic plants ingested by the officiant (*Strychnos icaja* BAILL., and *Tabernanthe* cf. *iboga* BAILL.) and which constitute the etymological origin of the term.<sup>4</sup>

To the extent that the researcher does not take full measure of the polysemic meanings of such terms, he is not in a position to grasp the symbolic network that links the different meanings.

### **The Corpus**

In addition to sound recordings, the collected information thus consists of data of various orders encompassing:

- Musical and choreographic features: the types of vocal and/or instrumental ensembles, singing and playing techniques that can be observed, the number of constituent musical parts, the polyphonic layering, rhythm formulas;
- Linguistic information: names of repertoires, names of pieces, song texts, vernacular terms for musical techniques, metalinguistic terms (often metaphoric in nature);
- Symbolic information: potential intervention by deities, symbolic meanings of instruments;
- Social facts: sets of pieces and their respective links to specific circumstances or functions, social status of participants.

Gradually, as the research progresses, one accumulates and compares such heterogenous morsels of information. The researcher learns to link and organize, and gradually conceives their interrelationships and their relevance. The data gathered on performance circumstances will be seen to refer to different sets of pieces, that is, to different *classes of objects* of which each has characteristics

<sup>4</sup> J.M.C. Thomas *et al.* (eds), *Encyclopédie des Pygmées Aka*, vol. II: *Dictionnaire ethnographique Aka-Français*, fasc. 2: B (Paris : Éditions Peeters [Selaf], 1993), 248-61.

shared by all pieces in the set. Regularities thus appear in the correspondences between performance circumstances, function, vocabulary, and musical materials.

## Categorisation

### ***What is categorisation?***

Categorisation can be understood in two senses: the act of categorising, and the results that ensue. In the first sense, we are interested in the *operation* of classifying elements related within a given domain, be it technical, linguistic, artistic, or otherwise; the focus is on the *processes* that lead to classification. In the second, it is the *result* which holds a central place, a result from which one can make comparisons, whether within the same domain or between different domains of the same culture, or for a given domain, between different cultures.

We aim to *account for how members of a culture classify their musical heritage*. We do not claim to describe the cognitive processes members of the culture enact: they are obviously very complex and remain, in many respects, inaccessible. On the other hand, we show how our method – that is, the process we use – enables us to propose a *modelisation* of vernacular categories.

### ***What is a Category?***

For a set of objects to be categorised they must all lie on the same conceptual plane. Otherwise, any attempt at categorisation can only lead to an arbitrary grouping of disparate objects. *To categorize* is thus to group items belonging to a particular domain into a certain number of sets or classes. Each class forms a *category* with properties particular to itself; thus, all objects placed in the category have at least one such property in common. This property confers the category's *distinctive* character. Differently said, the property allows, on the one hand–through resemblance or proximity–the objects *to be grouped* in the given category, and, on the other, *to distinguish* the category from all others. Categorisation thus relies upon a *principle of exclusion*.

In categorising an inherited musical repertoire, *objects* correspond to musical *pieces* that can be characterized in terms of any feature whatsoever: an instrumental grouping, a polyrhythmic figure, use of a mask, the theme of a song text, etc.

To clarify the nature of the elements that enable the grouping of objects in categories, the concepts *parameter*, *criterion*, and *trait* must be introduced.

### ***Parameter - Criterion - Trait***

To aid in comprehension of these three terms, consider this example of three different flute ensembles of the Uldeme of Cameroon.

- 1) One ensemble consists of three clay flutes (*āmbélèŋ gwárá*) played by the young men who remain unmarried after the “ceremony of the new wives” (*wālāmātáyà*) until the first sowing.
- 2) A second has five pairs of reed flutes (*ázèlèŋ*) played by the women between the first sowing and the millet harvest.
- 3) An ensemble using three bark flutes (*tālákway*) played by the men between the second hoeing and the end of the harvest.

### Parameter

The music of each of these ensembles can be described at a given level of detail according to its characteristics. As we have seen, such description can be at diverse orders and levels, and refer to elements accessible to non-specialists – such as the materials used to make the flutes, the players’ gender, the period during which they are allowed to play – as well as more technical aspects such as musical scale, manner of subdividing the pulsation, type of polyphonic layering, and the nature of the vertical simultaneities that result. These different elements comprise the full set of parameters manifested in the ensembles.

*The parameters permit:*

- precise description of each ensemble on its own,
- comparison among them and, by corollary,
- differentiating them.

The three Uldeme ensembles are most notably distinguished by the number of flutes, the materials of their construction, the number of playing holes in each flute, and by the type of polyphonic process each ensemble uses. Thus, the distinctions rely on the different *values* each parameter can take:

		VALUES			
		<i>āmbélèŋ gwárá</i>	<i>ázèlèŋ</i>	<i>tālákway</i>	
PARAMETERS	<i>Ensemble Name</i>				
	<i>Instrumentation</i>	3 flutes	5 pairs of flutes	3 flutes	
	<i>Players’ gender</i>	Men	Women	Men	
	<i>Flute construction</i>	<i>Material</i>	Clay	Reed	Bark
		<i>Playing holes</i>	3	0	4
		<i>Embouchure shape</i>	Curved	Straight	Straight
<i>Polyphonic process</i>	Quasi-monody with partial counterpoint	Vocal-instrumental hocket-polyphony	Counterpoint		



In categorizing inherited oral tradition musical practices, parameters are frequently similar to those used in musicology<sup>5</sup>, and principally concern:

- Time organization (of *successions* of sound events): measured/unmeasured, metricity, periodicity, rhythm, tempo, formal structure.
- Pitch organization: scale, mode, melodic contour (motivic structure), intervals.
- Interpart relations: monody, heterophony, drone, homorhythm (parallelism, homophony), polyrhythm, hocket, imitation, counterpoint
- Timbral organization: different types of vocal and instrumental combinations, the composition of the ensemble, techniques of sound production

The following Table 1 illustrates the parameters relevant to a description of the music of the Aka Pygmies of Central Africa. Note that one need not have a complete set of them in order to arrive at an *operational description* - that is to say, using only the necessary and sufficient parameters for the objective pursued, namely categorization.

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<sup>5</sup> Some, however, have been developed specifically for the study of oral traditions, for example the classification of different types of hocket and drone, (cf. S. Arom, N. Fernando, S. Fürniss, S. Le Bomin, E. Olivier, F. Marandola, H. Rivière et O. Tourny, in "Typologie des techniques polyphoniques" In Jean-Jacques Nattiez (ed.), *Musiques. Une encyclopédie pour le XXIe siècle*, vol. V. Paris, Actes Sud/Cité de la Musique, 1088-1109, or the relationship between meter and rhythm (cf. especially S. Arom, "Structuration du temps dans les musiques d'Afrique Centrale: périodicité, mètre, rythme et polyrythmie", *Revue de Musicologie* 70/1 (1984), 5-36).

TABLE 1: EXTRACT FROM THE SYNOPTIC TABLE OF THE PARAMETERS CHARACTERIZING THE MUSICAL CATEGORIES OF THE AKA OF CENTRAL AFRICA.

	VERNACULAR TERM	mòkòndí	ngbùti	mònzòli	yòmbè	mòmbénzélé	ndàmbò	bòndó	zbbòkò	nzòmbi
<b>ENSEMBLE PARTICIPANTS</b>	<b>CIRCUMSTANCE</b>	New encampment; End of mourning	Funerals	Expiation for the soul of the elephant	Entertainment	After a successful hunt; Funerals	Before a spear hunt	Divination for disease or disorder	Before net hunting	Return from a hunt
<b>VOICE</b>	<b>Singing technique</b>	all	all	all	all	all	all <sup>3</sup>	all	all	men all <sup>6</sup>
	<b>Performance modality</b>	chest register	chest register, yodel <sup>2</sup>	chest register, yodel <sup>2</sup>	chest register, yodel <sup>2</sup>	chest register, yodel <sup>2</sup>	chest register, yodel <sup>2</sup>	chest register, yodel <sup>2</sup>	chest register	head register
<b>INSTRUMENTS</b>	<b>Rhythm Instruments</b>	sung	sung	sung	sung	sung	sung	sung	sung, declaimed	sung
	<b>Melodic Instruments</b>	2 drums, machetes, percussion sticks	1 drum, machetes, perc. sticks	2 drums, machetes, perc. sticks	2 drums, machetes, perc. sticks	2 drums, machetes, perc. sticks	2 drums	2 drums, machetes, perc. sticks, vessel rattle, string rattles	tree trunk, machetes	
	<b>Handclapping</b>	optional	optional	optional	optional	optional	optional	optional	optional	2 flutes without fingerholes
<b>SYSTEMATICS</b>	<b>Subdivision of the pulsation</b>	ternary	ternary	ternary	ternary	ternary	ternary	ternary	ternary	optional
<b>METRIC ORGANIZATION</b>	<b>Materialization</b>	optional	optional	optional	optional	optional	optional	optional	optional	optional
	<b>Number per period</b>	8 <sup>1</sup>	8 <sup>1</sup>	8 <sup>1</sup>	8 <sup>1</sup>	8 <sup>1</sup>	8 <sup>1</sup>	8 <sup>1</sup>	8 <sup>1</sup>	8, 12 <sup>1</sup>
<b>CONSTITUENT PARTS</b>	<b>Vocal parts</b>	3	4	4	4	4	4	4	2	2 <sup>7</sup>
	<b>Instrumental parts</b>	4	3	4	4	4	2	2	2	2
	<b>Specific Formula</b>	yes	yes	yes	yes	yes	yes	yes	yes	no
<b>PLURIVOCALITY</b>		counterpoint	counterpoint	counterpoint	counterpoint	counterpoint	counterpoint	monody <sup>4</sup> , counterpoint	counterpoint	counterpoint
<b>FORM</b>		block	block	block	block	block	block	block	block	hocket <sup>7</sup>
	<b>Number</b>	6	1	4	9	5	3	12	4 <sup>5</sup>	5
<b>PIECES</b>	<b>Obligatory order/piece</b>						piece		piece	
<b>ORDERING</b>	<b>Transition formula</b>						yes			
	<b>Integrated in tale</b>	yes								
<b>TEXT</b>	<b>Sung by</b>	soloist	soloist	soloist	soloist	soloist	soloist	soloist	soloist, all <sup>4</sup>	soloist
<b>DANCE</b>		yes	yes	yes	yes	yes	yes	yes	yes	no

NOTES: <sup>1</sup>Instrumental cycle. - <sup>2</sup>As a constituent part. - <sup>3</sup>In two phases: 1. all; 2. women and children. - <sup>4</sup>If declaimed. - <sup>5</sup>One song shared with èsà. - <sup>6</sup>As recreation. - <sup>7</sup>Two complementary voco-

Table 1 (continued)

ENSEMBLE PARTICIPANTS	VERNACULAR TERM	mòbàndi	èsà	sàpá	mòzó	mòbòmá	ndósí	d'isào	kóbá	kófi	mbèlá
VOICE	CIRCUMSTANCE	Before collecting honey	After a series of bad hunts	Recalling the men away for hunting	Children's games	Rocking	For a baby whose mother is pregnant	Tale-songs	After having caught a white-bellied duiker	Lamentation	Trapping
	Singing technique	all	all	women	children	all	all	all	all	all	men
	Performance modality	chest register	chest register, yodel	chest register	chest register	chest register	chest register	chest register	chest register	chest register	chest register
INSTRUMENTS	Rhythm Instruments	sung, declaimed, sung-declamed	sung	sung-declamed	sung	sung	declaimed	sung, declaimed, sung-declamed	sung	sung	sung
	Melodic Instruments	bunch of leaves	bunch of leaves						bunch of leaves		
	Handclapping	-	-	optional	ground bow <sup>3</sup>	optional	optional	optional	-	optional	optional
SYSTEMATICS	Subdivision of the pulsation	ternary	ternary, binary	ternary	ternary	ternary	ternary	ternary	ternary	binary	binary
	Materialization	inherent	inherent	optional	optional	optional	optional	optional	inherent	prohibited	optional
	Number per period	4, 8 or 16	8, 12	4	8	8	4	4, 8, 16	8	8	8 <sup>8</sup>
CONSTITUENT PARTS	Vocal parts	2	3 or 2	2	1, 2	2	2	2	3	2?	2
	Instrumental parts										1
PLURIVOCALITY		monody, parallelism	counterpoint	monody, <sup>2</sup> parallelism <sup>2</sup>	monody	monody <sup>5</sup>	monody	monody <sup>6</sup> , parallelism	parallelism	counterpoint	counterpoint
	FORM	responsorial	block	responsorial <sup>2</sup>	block, responsorial <sup>4</sup>	responsorial	responsorial	responsorial	responsorial	block	block, responsorial <sup>9</sup>
		11	4 <sup>1</sup>	4	8	2	1	15	1	2	11
PIECES	Obligatory order/piece	order	order					order <sup>7</sup>			
	ORDERING	Transition formula	yes								
	Integrated in tale							yes			
TEXT	Sung by	soloist, full group	soloist	all	all	all	all	all	all	soloist	soloist
	DANCE	yes	yes	yes							

NOTES: <sup>1</sup>Song shared with zòbàkò. - <sup>2</sup>Except of one song. - <sup>3</sup>Some songs. - <sup>4</sup>Three songs. - <sup>5</sup>Realized tiled counterpoint. - <sup>6</sup>If declaimed. - <sup>7</sup>If more than one song per tale. - <sup>8</sup>Instrumental cycle. - <sup>9</sup>Vocal parts.

## Criterion

Having finished an operative description of objects according to a certain number of parameters, the process of categorization requires that some of the parameters be *selected*; those that are retained become from then on the *criteria* of classification. That is to say that in constructing a categorization, one must make choices in accordance with one's objectives.

Consider once more the Uldeme flute ensembles. They can be viewed in several ways: an anthropologist interested in the roles of men and women in the diverse domains of culture will, in making a categorization, privilege a regrouping according to the gender of the musicians; this would be the principal criterion. One would in such a case emphasize the distinction between the flute ensembles *āmbélèṅ gwára* and *tālákway*, played by men, from *ázèlèṅ*, reserved for women. Organologists, for their part, will focus on the parameters relating to the flute construction (materials, embouchure shape, number of holes) and playing technique (how the instrument is held, breath technique, fingering). The priorities given by the researcher to certain parameters over others serve as criteria for different modalities of regrouping into categories:

- Using the the number of holes as a criterion yields three distinct categories;
- Embouchure shape determines the placement of the flutes *āmbélèṅ gwára* in a different category from *ázèlèṅ* and *tālákway*;
- Using instrumentation creates a distinction between *āmbélèṅ gwára* and *tālákway*, which have three flutes each, from *ázèlèṅ*, which has five.

Hence, we see that categorisation is always determined by a particular research perspective.

## Trait

We have seen that a category groups objects with at least one property in common. Such a property, which both characterizes and distinguishes the category from all others, is its *distinctive trait*, or simply *trait*. In contrast with parameters, which inhere to the object being classified, the trait does not manifest until one *compares* objects with a view to grouping them in distinct categories. The identification of traits is dependent upon the choice of analytical criteria. Consider three scenarios:

1) *Presence or absence of a criterion*. Most often, the existence of a criterion specific to a category suffices to distinguish it from all others. This is especially the case with categories of instrumentation (harp vs xylophone ensemble vs a *cappella* singing), but, also possible, criteria related to musical structure (among the Banda-Linda of Central Africa, only pieces for horn ensembles use *hocket polyphony*).

2) *Different values for the same criterion*. There arises the question of distinguishing two categories, each with its own value, on the basis of one and the same criterion. We can thus distinguish two categories in which one specifies a periodicity of 8 beats and the other one of 12: the criterion - periodicity - is unchanged; it is the value that does - 8 in one, 12 in the other.

3) “*Bundles*” of criteria. It is not always possible to isolate a trait on the basis of a unique criterion. The trait emerges from a specific combination of several criteria – or criteria values, as shown in the following table:

		Categories			
		Category A	Category B	Category C	Category D
Criteria	<i>Beat Subdivision</i>	ternary	ternary	binary	binary
	<i>Polyphonic process</i>	counter-point	parallelism	counter-point	parallelism
	<i>Periodicity of rhythmic accompaniment</i>	8 beats	12 beats	12 beats	8 beats

It is not unusual for a category to distinguish itself from all others by the presence of *several traits*. It goes without saying that only one of these traits is sufficient to distinguish it.

Returning to the Uldeme flute ensembles, the *ázèlèŋ* is the only one in the entire Uldeme heritage to be played by women, have flutes grouped in pairs, and use a vocal-instrumental racket technique.

### Principles of categorisation and types of categories

Before conceiving of the *modeling* of the principles underlying vernacular categorisation, one should submit the entire collected musical corpus to analysis. Only after doing so can one determine the musical criteria that will make it possible to identify the unique character of each repertoire the culture provides.

Our experience shows an extremely high rate of agreement between autochthonous categorization and categorization established purely on the basis of musical traits. There is thus a convergence of classification criteria between the vernacular conception and the musicological analysis. However, the culture’s classification criteria are not limited solely to the musical domain. In effect, certain vernacular repertoires are not distinguished by a musical trait, but by an extramusical one linked to context. Two types of categories thus emerge: musical and contextual.

Remember that we took as our point of departure the groupings given by the culture. Consequently, every category, whether musical or contextual, is in essence a vernacular category.

### **Musical Category**

By *musical category* we mean a collection of vernacular pieces featuring a musical trait that distinguishes it from all others, thus from all other categories. The trait is manifest in all pieces in the category. In practice, the correlation between the pieces given in the vernacular categorisation and the criteria established as a result of music analysis is done in several stages. When a set of pieces manifest a musical feature that is immediately perceptible and found in no other such set, one can say that it is a trait identifying it as a musical category. This is the case most often for the matter of instrumentation.

Among the Aka, the music for the hunting ritual *zòbòkò* comprises polyphonic songs accompanied by a polyrhythm played on a pair of machettes struck together, *dikétò*, and a tree trunk, *mòkóngò*, struck by several men in unison. The parameters: polyphonic song, playing of struck machetes, as well as the rhythms they perform are found in several other Aka musical configurations. But only the music for the ritual *zòbòkò* makes use of the struck trunk.

Among the Gbaya, "thinking songs", *gimá tà-mò*<sup>6</sup>, are accompanied by one or two lamellophones, *sàŋzi*, pairs of sticks struck together, *gá dá*, and/or one or more rattles, *sòkò*. This Gbaya ensemble is the only one that uses the lamellophone.

In these two examples, the comparison with other musical repertoires in each of the cultures shows that instrumentation is the criterion upon which one can define *zòbòkò* and *gimá tà-mò* as musical categories; the presence of a specific instrument, respectively, the struck tree trunk and the lamellophone, is the distinctive trait defining each.

The trait defined by the presence of a specific instrument can be closely associated with another trait, related, for its part, to musical systematics: for example, a specific rhythm pattern or polyrhythmic formula.

In *zòbòkò*, a rhythm pattern is played on the struck tree trunk which is exclusive to it, and which forms, together with the machetes, a specific polyrhythmic formula. This example is thus a category with two traits of which one - the tree trunk - is related to instrumentation. It is immediately perceivable, even before musical analysis. The presence of the other trait - the polyrhythmic formula - emerges after musical analysis and is revealed only through it.<sup>7</sup>

Such a trait, inherent to musical material, is in many cases the *only* one that can distinguish a category from others.

<sup>6</sup> For description and analysis of "thinking songs", see V. Dehoux, "Chants à penser," in *gbaya (Centrafrique)*, (Paris: Sela, 1986).

<sup>7</sup> Cf. detailed analysis in S. Arom, *African Polyphony and Polyrhythm: Musical Structure and Methodology* (Cambridge: Cambridge University Press, 1991.)

Thus, among the Cameroonian Baka, the three musical categories calling for two drums and a pair of struck machetes - *ējēngì*, *màwòsō* and *yéyī* - can be distinguished exclusively by their respective polyrhythmic formulae.

This type of trait emerges only at a later stage of the correlation between repertoires and musical criteria, because only music analysis allows it to be brought to light.

The same is true when the trait consists of a bundle of criteria in a specific combination. In such cases, no criterion belongs to the trait alone, because it appears in multiple categories. It is thus the binding together of several criteria that identifies each of the musical categories of the heritage in question.

The Aka have three musical categories of *a cappella* singing accompanied by handclaps and with a ternary metric organization. They are differentiated only by the combination of parameters “melodic texture”, “performers”, and “mode of vocal production”:

	<i>ndósí</i>	<i>mòbòmá</i>	<i>sàpâ</i>	<i>mǎsà</i>	<i>mbèlà</i>
<i>Ensemble</i>	<i>a cappella</i> choir handclaps	<i>a cappella</i> choir handclaps	<i>a cappella</i> choir handclaps	<i>a cappella</i> choir handclaps	singing. musical bow handclaps
<i>Metric Organization</i>	ternary	ternary	ternary	binary	binary
<i>Melodic texture</i>	(monody)	parallel movement	parallel movement	monody	counterpoint
<i>Performers</i>	mixed	mixed	women	women	men
<i>Vocal Production</i>	declaimed	sung	sung or declaimed	sung or declaimed	sung

The first three categories combine the criteria “*a cappella* + handclaps + ternary metric organization” with one or two others:

*ndósí*: *a cappella* + handclaps + declaimed

*mòbòmá*: *a cappella* + handclaps + parallel melodic movement + sung by a mixed choir

*sàpâ*: *a cappella* + handclaps + parallel melodic movement + sung by women only

It can be seen that criteria can change status from one category to another: the criterion “sung by women” is constitutive of the bundle *sàpâ*, because it establishes opposition between the two ensembles *mòbòmá* and *sàpâ*. On the other hand, it is not pertinent to the bundle *mǎsà*, because this category is more easily identified on the basis of its binary metric organization.

### **Contextual Category**

A *contextual category* is a vernacular grouping lacking a *musical* trait, but based upon a trait of a different kind. In such cases, the function of the music, its performance circumstances, the texts set to music, or a particular dance can serve as contextual traits. Two types are discernable: those concomitant with the music, or *paramusical*, and those independent of it, or *nonmusical*.

### **Paramusical Traits**

Paramusical traits are closely linked to music itself; typically, they involve dance or the playing position of an instrument.

Certain vernacular groupings are distinguishable by their choreography, as the music accompanying them can be identical.

Among the Aka, *mbénzélé* and *èmùjèkè* are recreational dances accompanied by the same polyrhythmic formula and the same songs. These, then, are two contextual categories defined by the presence of a paramusical trait, the choreography.

Similarly, aspects of playing technique can determine the vernacular classification, thus distinguishing two contextual categories for the production of identical sounds.

Among the Giziga of Northern Cameroon, an identical set of pieces changes category according to the playing position of the drum used. For the funerals of non-initiates, the instrument is played in a reclined position—symbolizing the position of a cadaver. The set of pieces is called *bàdàk ngí mázà* in this case. The same set of pieces accompanies a recreational activity that normally follows funerals. In this case, the drum is positioned vertically and the set of pieces is called *bàdàk cícì*. Here, a paramusical trait linked to the position of the instrument is what permits the distinction between these two contextual categories.

### **Nonmusical Traits**

Examples of nonmusical traits would include themes in song texts, musical function, or specific circumstances of performance. Song texts and their themes can be important classificatory criteria, notably in some West African societies.

The repertoire of female Senegalian Wolof griots comprises songs bearing the same musical features (sung solo, *a cappella*, in non-measured rhythm). But, on the basis of the trait of song text themes, the Wolof distinguish two contextual categories: *taggate* and *gheremate*, which connote, respectively, praise and compliments.<sup>8</sup>

<sup>8</sup> Cf. Penna-Diaw (2016). [updated reference]



When pieces used in the course of one and the same event have no musical criteria in common and are grouped together solely because they are linked to the circumstance in question, one is dealing with a different kind of contextual category, namely that of a trait defined by circumstance.

There are many possible reasons for such groupings. Consider these two cases from Cameroon:

<p>Among the Bedzan, the contextual category <i>n̄ā</i> groups three “principal” pieces together, <i>mpú n̄ā</i>, <i>mbwé n̄ā</i> and <i>n̄ā</i>, as well as about dozen “secondary” pieces. The identity of the group rests solely on this distinction. The very fact of their grouping constitutes the distinctive feature of this category, which is considered by the Bedzan as emblematic of their music.</p>	<p>Before their assimilation into the Tikar, the Mbi had an independent identity. Today all that remains of their musical heritage is a set of disparate pieces grouped together in the contextual category <i>nswǝ</i>. The trait making the grouping possible is their very ethnic origin.</p>
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### ***Umbrella Category***

The basis of an *umbrella category* forms when members of the society distinguish other categories within it, whether on a musical or contextual trait. We are thus dealing with categories having an inclusion relationship. There are four kinds.

#### **1) Umbrella musical category partitioned on the basis of a musical trait.**

The most common case is that of a musical category in which the pieces can be split into two groups on the basis of a musical trait. It is thus a question of musical categories whose discovery requires a *multi-level analysis*.

<p>In the Gbaya example cited above, “thinking songs” form a musical category based on the trait of the exclusive presence of the lamellophone <i>sàŋzì</i>. However the Gbaya partition the <i>sàŋzì</i> pieces into two ‘families’, <i>piéré</i> and <i>nàá-nàŋà</i>, based on the subdivision of the pulsation and the rhythmic formula played by a pair of sticks that are struck together: <i>piéré</i> has a period of eight <i>binary</i> pulsations, <i>nàá-nàŋà</i> has a period of eight <i>ternary</i> pulsations, and each has its own specific rhythmic formula.<sup>9</sup></p>
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#### **2) Umbrella musical category partitioned on the basis of a contextual trait.**

Somewhat less often, vernacular classification arises from the partitioning of a musical category on the basis of a contextual trait. The trait is most often the performance circumstance specific to each category.

<sup>9</sup> Cf. Vincent Dehoux, “Chants à penser” *gbaya (Centrafrique)*, (Paris : Selaf, 1986), 135.

Above we illustrated a paramusical trait based on choreography with an Aka example. The same example illustrates the inclusion relation between a musical category, *mbénzélé* -based on a specific polyrhythmic formula-and two contextual categories, *èmùpèkè* and *mbénzélé* -based on choreography.

In some cases, an umbrella category can be partitioned on the bases of musical and contextual traits at the same time.

Among the Uldeme, the ensemble of nine bamboo flutes without playing holes, *áziwili*, has a dedicated corpus of pieces; hence it constitutes a *musical* category based on the trait of its instrumentation.

These pieces form two vernacular categories linked to two distinct performance circumstances and are, moreover, corroborated by a musical trait. Those played during sowing have five constituent parts of which four are doubled at the octave. But during rituals for the “chief of the rain”, the Uldeme play the piece *fèk ī zīk ī zīk*, in which each of the nine flutes has its own part.

### 3) Umbrella contextual category partitioned on the basis of a musical trait.

This is a case of grouping pieces from different musical categories that are heard in the same performance context.

<p>One often encounters this in ceremonies related to mourning. For example, in the Baka contextual category “funerals”, <i>wòkò</i>, pieces from several musical categories may be used. Their selection depends on the gender, social activities, or personality of the deceased.</p>	<p>Among the Mofu, the ritual <i>māráy</i> features the performance of pieces from two musical categories, regrouped under the name <i>fógwòm</i>. These categories - one of which consists of but a single piece - require the same instrumentation, that of the eponymous flutes <i>fógwòm</i>, a cylindrical drum, <i>gàngàṅ</i>, horns, <i>tōlōm</i>, and rattles, <i>mākwēdkwēdé</i>. The two categories are distinguished by a musical trait based on the metric conception. The category played at the moment of the bull’s entrance is based on an <i>aksak</i> (asymmetrical combination of binary and ternary minimal units) meter, while all the rest are <i>either</i> binary or ternary.</p>
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### 4) Umbrella contextual category partitioned on the basis of a contextual trait.

This kind of grouping is usually linked to complex rituals in which successive phases call for the accompaniment of specific pieces. The ordering of the pieces - whether they belong to musical categories or have no specific defining musical traits - is constrained by the succession of the constituent phases of the ritual.

The Baka umbrella category for circumcision, *bèkà*, is organized according to the following categories and pieces. The categories are:

- “soldiers” marching songs *bè ā sōjà*,
- women’s marching songs *mèngbàā*,

- songs of a collective dance with drumming accompaniment *bè á ndùmù*.

The specific songs are:

- the affirmation song of the members of the ritual association *gàlō*,
- the songs for dressing up and presenting candidates to be circumcised, respectively, *āyē sēngbé* and *āyē kò bōmā*,
- the song for seeking the circumciser *nkìyàà yàká*.

Each of these songs or categories accompanies one or more phases of the ritual and cannot be exchanged with another. Hence, in such cases we see that the umbrella contextual category not only groups pieces from different categories but also introduces pieces specific to the ritual context.

### ***The relationship between categories and circumstances***

Since all musical activity takes place within a particular context, the culture's own categories are closely linked to a performance circumstance and/or a symbolic function. Relationships between musical ensembles and circumstances/functions are of different kinds and constitute a particular feature of the heritage, because they illustrate how music is articulated in relation to other social domains. Thus, for each culture, the structuring of the musical heritage relates to economic or ritual activity, social stratification, or the division of the year according to seasonal activities.

Performance circumstances may be simple or complex depending on the number of categories that apply to them. When the musicians play music from one and only one category for the entire duration of a performance occasion, we propose speaking of a *simple circumstance*. We speak of a *complex circumstance* when the same circumstance calls for two or more categories. Whether the circumstance is simple or complex, categories can be linked to it in a *univocal* or *non-univocal* way. As well, the categories performed during the occasion can be *obligatory* or *optional*.

The relationships between category and circumstance are thus regulated by three principles: simple or complex, univocal or not, and obligatory or optional enactment of the categories. Let us illustrate with some common case studies.

#### **Simple Circumstance**

The Aka musical category *bòndó*, identifiable above all by a specific polyrhythmic formula, is played for an eponymous ritual. The function of the ritual, of divination by fire, is to discern the cause of a serious illness, a suspicious death, or the source of destabilizing tensions in the community.

Similarly, among the Uldeme, the category *wālāmātáyà* comprises songs accompanied by three cylindrical drums *gwàndàràyà*, and three variable-tension drums, *ḏéwáḏéwè*. It is exclusively reserved for the ceremony of the same name, *wālāmātáyà*, celebrating newlywed women, which takes place at the juncture between the end of one agrarian cycle and the commencement of the next.

Heard from afar, the Aka *bòndó* and the Uldeme *wēlāmātáyà* signal unmistakably that a divination ceremony, or a marriage, is in process. In both cases, category and circumstance are in bi-univocal relation, and the enactment of the categories is obligatory.

### Complex Circumstance

At Baka funeral wakes, *wòkò*, enactment of the category *màngēlēbò* is indispensable to the successful completion of the ritual. Exclusively reserved for wakes, this musical category is *never* realized in any other context. Yet during the wake, the Baka also introduce songs and dances from other musical categories, used as well at other occasions, and whose selection depends on the status of the deceased. Hence one sings *àbàlè* songs if the deceased was a member of the group responsible for the spiritual protection of hunters, *bèkà* if responsible for circumcision, *ndēmbà* if the person who died was a talented hunter, or *ngàngà* if a healer.

In this circumstance, only the *màngēlēbò* category is in bi-univocal and obligatory relation; the others are optional.

As indicated, categories can be linked to a single or to multiple circumstances. An example of the latter case follows.

### One Category for Multiple Circumstances

The Baka *àbàlè* category is defined by its polyrhythmic formula and instrumentation. Its function is to establish contact with ancestors with the goal of ensuring their protection. As such it is associated with multiple circumstances such as departure on an important hunt, funerals, or the night before the end of a mourning period, in which it is always found in varying combinations with other categories.

## Piece and Musical Entity

### Piece

We have seen the basis on which musical and contextual categories can be defined, and how they relate to their performance circumstances.

Now let us consider the pieces that form the categories. They may be vocal and/or instrumental. In the region under our purview, pieces that combine voices and instruments are by far the most numerous; instrumental pieces are rarer and almost always based upon a *song* that serves as their reference.

The repertoire of the Banda-Linda horn orchestras contains only pieces that, in other circumstances, are *sung*. Thus it is for the piece *āméyā*, which is rendered in vocal form for the cult of twins, but in its instrumental version is used in diverse circumstances.

By *piece*, we intend here the materialization, within a category, of a musical utterance identifiable as such by culture bearers. It necessarily possesses the trait characterizing the category.

Bear in mind that a piece can, in and of itself, constitute a category, most often a musical one.

Among the Banda Gbambiya of Central African Republic, the mourning song *ēcē kùzū* is accompanied by an ensemble of two xylophones and a drum, a feature it shares with many other pieces of their heritage. It is the only piece, however, to add a struck calabash. That trait distinguishes this piece from others, making it into a separate musical category recognized as such by the Banda Gbambiya.

More rarely, a piece can form a contextual category by itself:

Such is the case for the Aka piece *bèmbà mòkùdù*, the sole member of the *kóbá* category used in the ritual of atonement of the same name. The piece is not distinguished from other categories by a musical trait, because it has the same features as most of the songs used in another ritual, *mòbándì*. It is its exclusive use just after the accidental capture of a white-bellied duiker that confers it its status as a contextual category.

Not all pieces within a category have the same status.

In some ceremonies, entering into communication with ancestors is achieved only with certain specific pieces. This is notably so for the Banda Gbambiya's cult of twins, as well as the cult *bwítì* practiced in Gabon by different populations, and the *onkila* healing cult of the Teke of Gabon.

The particular function sometimes accorded to some of the pieces may affect their place or their ordering within a given circumstance. The ordering can have one of the following three modalities:

- *Indeterminate*, the choice is left to the participants;
- *Partially determined*, when only certain pieces have a specific positioning;

Among the Teke each dance is associated with a group of pieces forming a category. All begin with a specific song whose text mentions the name of the dance, its origin, and the reasons for its performance (Le Bomin 2004). Symbolically, the song is intended to gather the energy enabling the human participants and the ancestors to enter into communication with one another, and for the latter to grant their blessing for the successful outcome of the ongoing event. It may be repeated several times during the course of the dance.

- *Fully determined*, when the sequence is immutable.

### **Entity**

It frequently happens that pieces in two or more categories share the same name.

Two Banda Gbambiya categories are comprised of pieces sharing the same names, words and melodies.

Categories	<i>āméyā</i>	<i>kóbó</i>
Pieces	<i>àbúró dà kōngbō</i> <i>ēcē āpāpā</i> <i>kǎjē āgōā</i> <i>ngàkōlā dé bè lé àvāngalè</i> <i>dúbà né mē</i> <i>máyōlō</i>	<i>àbúró dà kōngbō</i> <i>ēcē āpāpā</i> <i>kǎjē āgōā</i> <i>ngàkōlā dé bè lé àvāngalè</i> <i>dúbà né mē</i> <i>máyōlō</i>

In the columns above, the corresponding pieces, all of which have the same names, are distinguished by one of many possible musical features, for example by instrumentation. It is precisely this distinction that explains their membership in both categories. This is culturally validated by the fact that each of the two categories is separately named, and associated with a different circumstance.

Categories	<i>āméyā</i>	<i>āpāpā</i>
Circumstances	Twins Cult	Spirit Cult
Instrumentation	Two xylophones <i>mbāzā</i> A drum <i>kpóró</i> Two ankle bracelet bells <i>éngbèdé</i> worn by the twins' mother	Two xylophones <i>mbāzā</i> A drum <i>kpóró</i>

Musical characteristics distinguishing pieces with the same name are often more striking than in the above example, and transform the sound object to greater and lesser extents. The differences can bear upon the number of singers and/or players, polyphonic layering, or scales, such that the sounding results of two identically titled pieces can be so divergent that it is difficult for an outside observer to perceive any resemblance.<sup>10</sup>

What then leads the bearers of the tradition to confer the same name on the pieces? It is that they are grounded in one and the same entity, carried out in different ways. By *entity*, we mean a substrate<sup>11</sup> common to several pieces that is conceptually prior to their materialisation. The substrate manifests the rhythmic and metric characteristics, ordering of scale-degree successions and, in the case of plurivocality, anchor points and the nature of consonances. An entity functioning as the common denominator of a group of pieces is never realized as such. It is not unlike a schema capable of being materialized in different ways.

<sup>10</sup> Cf. Betmalle (2000); Arom & Fernando (2002).

<sup>11</sup> Cf. Fürniss (1993); Le Bomin (2000).

The pieces mentioned in the preceding example can be performed in yet another form, by a seven string harp. For each, the entity comprises the following parameters:

- Periodicity;
- Mode of subdivision of the pulsation;
- Order of succession of certain scale degrees.

By corollary, any piece, whatever its materialisation, necessarily embodies its underlying entity. This entity appears in each piece like a watermark.

## Conclusion

Our goal was to propose a way to account for the classifications by which the members of a society organize their musical heritage.

Recall the stages of our method: we begin from the organization of the repertoires as experienced by the members of the community, and as revealed in vernacular vocabulary. This classification leads us to the circumstances in which musical selections belonging to a given category are performed, and their functions. In the second stage, we analyze each category, which leads to its modelization on the basis of musical traits. We are thus able to distinguish two types of category among vernacular classifications: those we label “contextual”, which were indistinguishable from other categories on the basis of any musical features, and “musical”, in which distinctions are due to the presence or absence of at least one musical trait. The core finding of the research is this: musical categories comprise nearly 90% of the totality of vernacular categories. They are thus closely correlated with musical characteristics.

We have also highlighted the existence of entities, that is, musical substrates common to multiple pieces from different categories. These are even more abstract musical relationships, which cross category lines, and are not unlike those of a *theme and variations*.

We are well aware of the limits of our enterprise. Though founded on long fieldwork experience, our method is just one among many possible ways to study a culture’s musical heritage. We nevertheless hold that it is fecund and of interest because we know the importance of categorization both in society and in individual cognitive strategies. This is why the study of vernacular categories, in music as in other domains, furnishes a strategic point of departure in the quest to understand another culture. It gives us efficient access to a global representation of the heritage founded on the members of the culture’s competence. It constitutes, moreover, a strong basis for comparative and diachronic study.

In the broadest sense, we have made a case for a set of two-way relations between the categories and the pieces. There is on the one hand a functional network linking them to their social context and the symbolism of their performance, and on the other a network of strictly musical relationships that bring into play not just the musical characteristics of each category, but the links

that various pieces maintain with the entity which constitutes their common substrate. It is therefore legitimate to claim that the cognitive mechanisms that make it possible to identify and associate the pieces and categories of a musical heritage are jointly drawn from the resources of the two networks.

## Graphic Representations

Having completed the analysis of categories, we now present them in three forms of graphic representation: pie charts,<sup>\*2</sup> arborescences,<sup>\*3</sup> and double-entry tables.

The pie charts consist of sectorized concentric circles, with each sector representing a category. The circles, respectively, bear information about the context, vernacular names, and musical features.

The arborescences are hierarchized, representing musical criteria at the first level and then contextual ones, which lead to distinguishing the categories.

Double entry tables articulate relationships between dimensions not taken into account by the pie charts or tree diagrams, especially complex relations between music and context.

The following examples offer different representations of the musical heritages of the Banda Gbambiya, the Aka, the Uldeme, and the Baka.

### *Pie Charts or Concentric Circles*

#### **Banda Gbambiya**

The following pie chart presents a schema for the organization of the musical heritage of the Gbambiya in categories, shown in relation to the circumstances of their musical life. The outermost circle presents the circumstances, the next one the names of the corresponding contextual categories; a first level of distinction between instrumentation types is shown in the third circle, and the innermost circle displays the distinctive traits determining musical categories. Shading distinguishes social from musical data.

The musical heritage of the Gbambiya is shown to comprise, in the innermost circle, fifteen categories, each linked to a sole circumstance. Musical category names tend to match with the corresponding circumstance (*sùmálè, àméyā, kùzū, gbángá, gànzá kǒfè, kévèrè kòtàrà, kòtàrà, kòtàrà ná ànáfè*). But they can also correspond to a function or a circumstance, such as songs for bush fires (*ècè ké jò gūsū*), guarding fields (*ècè sá pá kwara*), children's game songs (*ècè ná ànáfè*), fishing (*ècè kihi dè súnjú*), or lullabies (*ècè ké gbálá gbòlò*). Categories associated with functions always contain the term "ècè", "song".

<sup>\*2</sup> [*Camembert* in the original French. M.T.]

<sup>\*3</sup> [*Arborescence* in the original French. M.T.]





which are particular to each category they join, furnishing them with distinctive traits:

- *éngbèdé* (metal rattles worn by a mother of twins): *āméyā*,
- *mbīsí* (inverted-bowl calabash struck with wooden sticks): *kùzū*.
- *mángá*, *ngálà*, *bākēdzè* (wickerwork rattle) and *éngbé* (metal rattle): *sùmálè*.]<sup>\*4</sup>

The category *kóbó* is defined by the mere presence of the two xylophones and the drum, and by the absence of rattles.

The ages and gender of the participants (children, women) in a vocal group demarcate the primary distinction between the two categories of children's songs (*ēcē ná ānáfē*; *kòtàrà ná ānáfē*) and the two of women's songs (*ēcē kihi dè súnjú*; *ēcē ké gbálé gbòlò*).

Only internal musical traits (periodicity, mode of subdivision of the beat) create a distinction between the two categories reserved for children, and for women. Pieces in the category *ēcē ná ānáfē* have a periodicity of four beats, as opposed to six for *kòtàrà ná ānáfē*. In the categories reserved for women the distinctive trait is subdivision of the beat:

- Ternary: *ēcē kihi dè súnjú*,
- Binary: *ēcē ké gbálé gbòlò*.

As for the two groups of songs calling for the same instrumentation (men's choir and a single horn), periodicity is the distinctive trait:

- 12 pulsations: *ēcē ké jò gūsū*,
- 8 pulsations: *gbángá*.

## Uldeme

This pie chart highlights the function of instrumental combinations and interrelates it with the nature of the music itself (*a cappella*, instrumental, or vocal-instrumental).

The inner circle represents the musical substance (which could be also defined in terms of compositional processes, such as hocket polyphony, monody, since these designations emanate from the researcher's perspective); the intermediate circle contains the denominations of the corresponding vocal and/or instrumental ensembles, while the outer circle shows the function correlated to each of them. This mode of representation is of special interest because it highlights the musical material: it is in effect possible to add a circle for each level that musical analysis allows us to distinguish.

<sup>\*4</sup> [This paragraph was mistakenly omitted in the French printed version.]

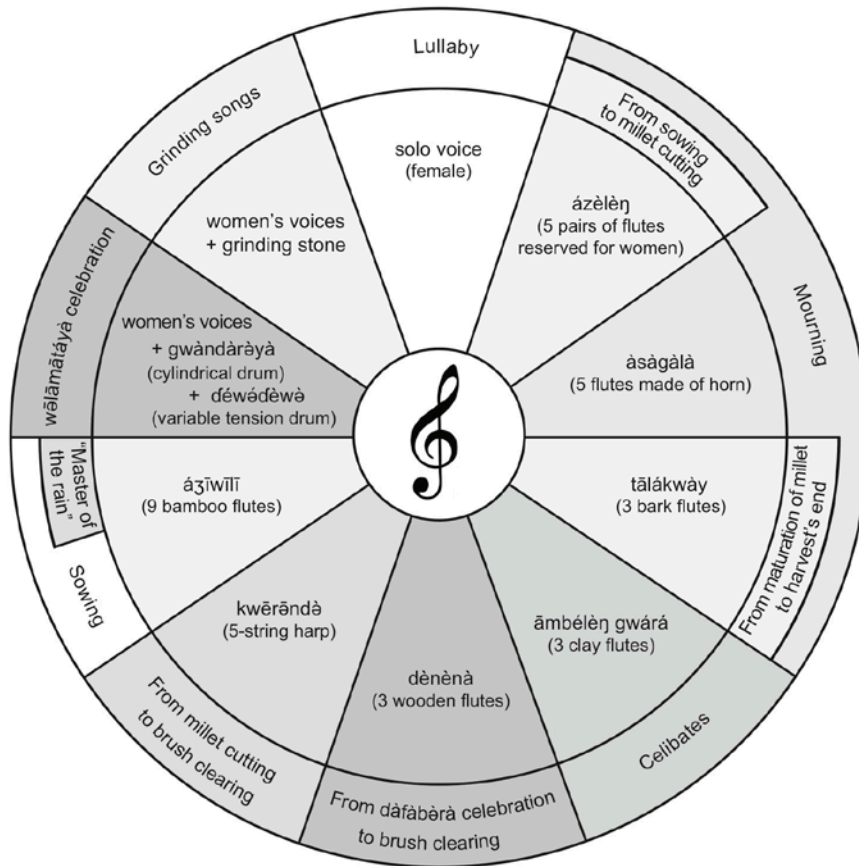


Fig. 2 Pie chart of the Uldeme musical heritage

**Aka**

This slightly revised version of the pie chart published in Fűrnis and Olivier 1997 accounts for the fact that all Aka music is sung. It organizes the heritage into *a cappella* and songs accompanied by instruments or leaf-bundles. The intermediate circle shows the category names, the outer one the function or occasion of their performance.

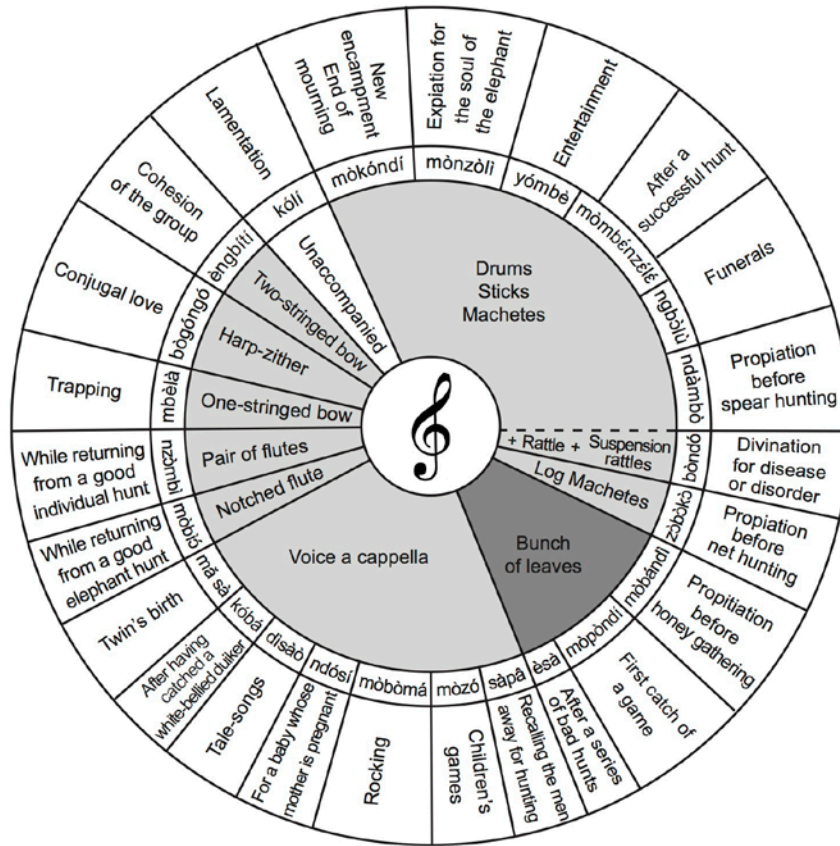


Fig.3 Pie chart of the Aka musical heritage

Shown in gray is the status of pulsation, which, by its absence, is sufficient to delineate the category of lamentations, *kólí*. This is the only category prohibiting any accompaniment. In the categories delineated by the leaf-bunches the pulsation is inherent, while it manifests in the form of optional hand clapping in all other categories.

An opposition between melodic and rhythmic instruments is immediately apparent: the former are each in a different category. In these cases, the instrument suffices to determine the category.

This is also the case for the tree trunk, the rattle, and the suspension rattles. But the three principal rhythm instruments figure in six categories of which four call for the same combination: two drums, a pair of percussion sticks (used to strike the side of a drum), and a pair of machetes struck together. Here, identifying the categories calls for detailed musical analysis determining the polyrhythm formula specific to each (cf. Arom 1991: 304-306).

It is much the same for the categories accompanied by leaf-bundles or sung *a cappella*. The latter, as shown above (p. 12), are determined by a distinctive bundle

of traits including metric organization, melodic texture, performers, and vocal production.

This representation only takes into account what one can *see* in the performance, hence does not clearly demarcate the entire ensemble of categories. It nonetheless illuminates the categories identifiable solely on the basis of instrumental formation.

## ***Arborescence***

### **Aka**

This amended version of the arborescence published in Arom and Khalfa (2000) enables a view of the distinctive traits of Aka categories at a glance (Table 2).

The hierarchies inherent in this type of representation in no way reflect the autochthonic hierarchic arrangement of the categories. It is the researcher who selects the initial criteria and makes all subsequent choices. As a result, the position of the categories on the vertical axis is variable and depends on the sequence of distinct criteria chosen

The arrangement presented here begins with a criterion of musical systematics - the metricity - and involves successively:

- The presence or absence of instrumental accompaniment for the songs,
- The family of instruments used,
- The materialization of the pulsation,
- The type of melodic instrument(s),
- The specific instrumentation of the polyrhythmic accompaniment,
- The polyphonic layering,
- The specific polyrhythmic formula,
- The global form of the piece(s),
- The performers' gender.

Because the gateway criterion is binary or ternary metricity, and because both are found in more than one category, it is impossible to isolate a category at this initial analytical level. At least three levels are needed before this can happen. Here we find two categories

- *kólí*, lament over a corpse (binary-*a cappella*-without handclaps)
- *disàò*, tale-songs (ternary-*a cappella*-alternating spoken, sung and declaimed (this category is left unspecified in the pie chart).

TABLE 2 : Aka Music (tree diagram)

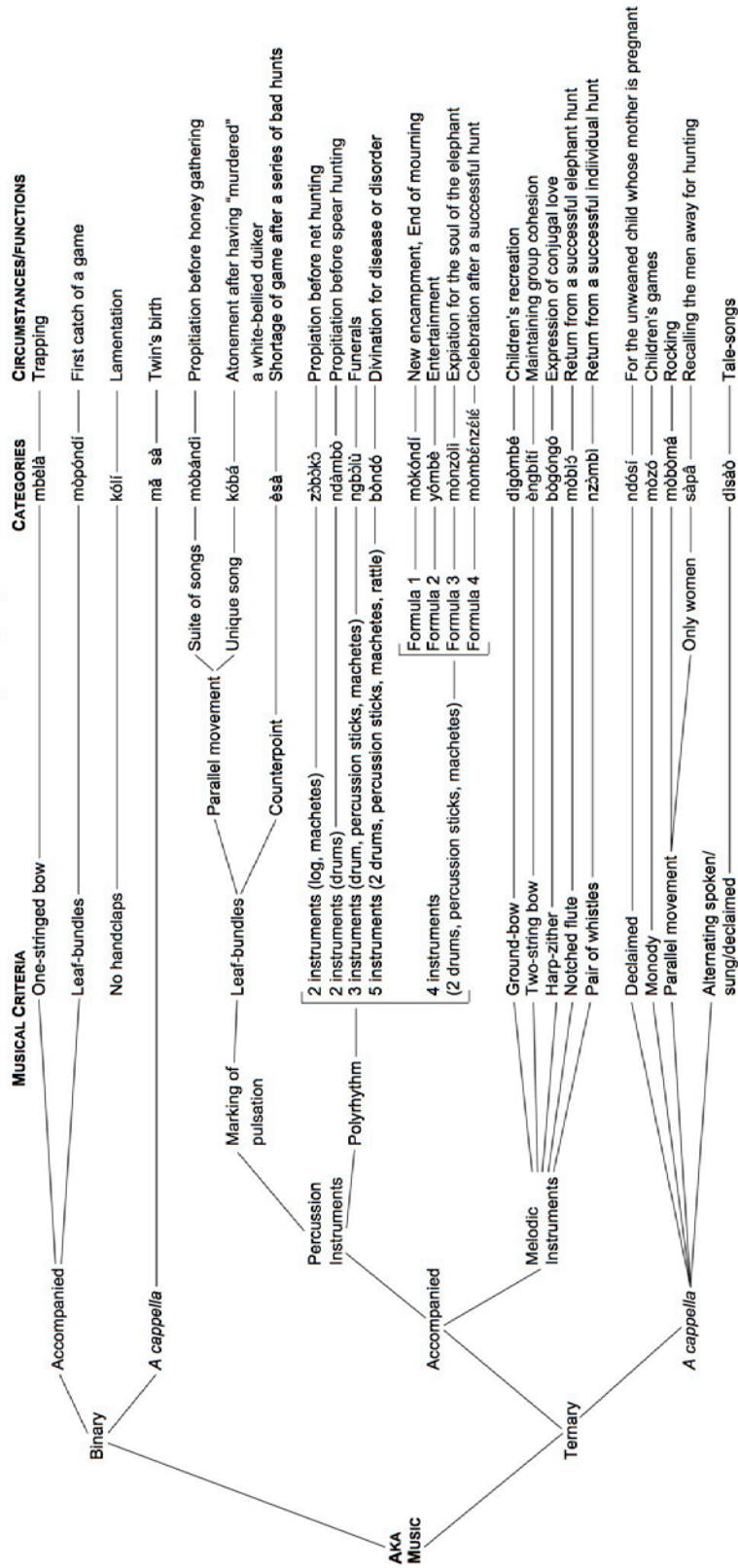


Fig. 4: Aka Music (tree diagram)

## **Baka**

The arborescence-representation of the Baka musical heritage (Table 3) is constructed like that shown for the Aka. Departing from the distinction between a *cappella* and accompanied song, it shows the variety of vocal and instrumental combinations in Baka music.

As with the Aka, for the categories in which song is accompanied by a melodic instrument or an idiophone, that instrument is never combined with another; it is always the only accompanier of the song. However, rhythm instruments contributing to a polyrhythmic formula always have as the principal instrument a single-headed drum. Sixteen musical categories—the majority of them ritual ones—show the great variety of rhythm instrument combinations, mixing concussion sticks (or blades), a beaten tree trunk, two types of rattles and two different kinds of suspension rattles. A polyrhythmic formula is specific to each of these categories, and in many cases constitutes the sole distinctive trait.

As for the *a cappella* categories, the parallels with the criteria “instrumental family” and “organological type” are those of gender and the singers’ ages. We see here, too, a relatively varied set of combinations revealing special categories—reserved for adults, children, women, men, and sometimes mixed groups. As choreography plays an important role in the actualising of Baka music, some categories are distinguished on the basis of the paramusical criterion of how the singers are physically positioned.

TABLE 3 : Baka Music (tree diagram)

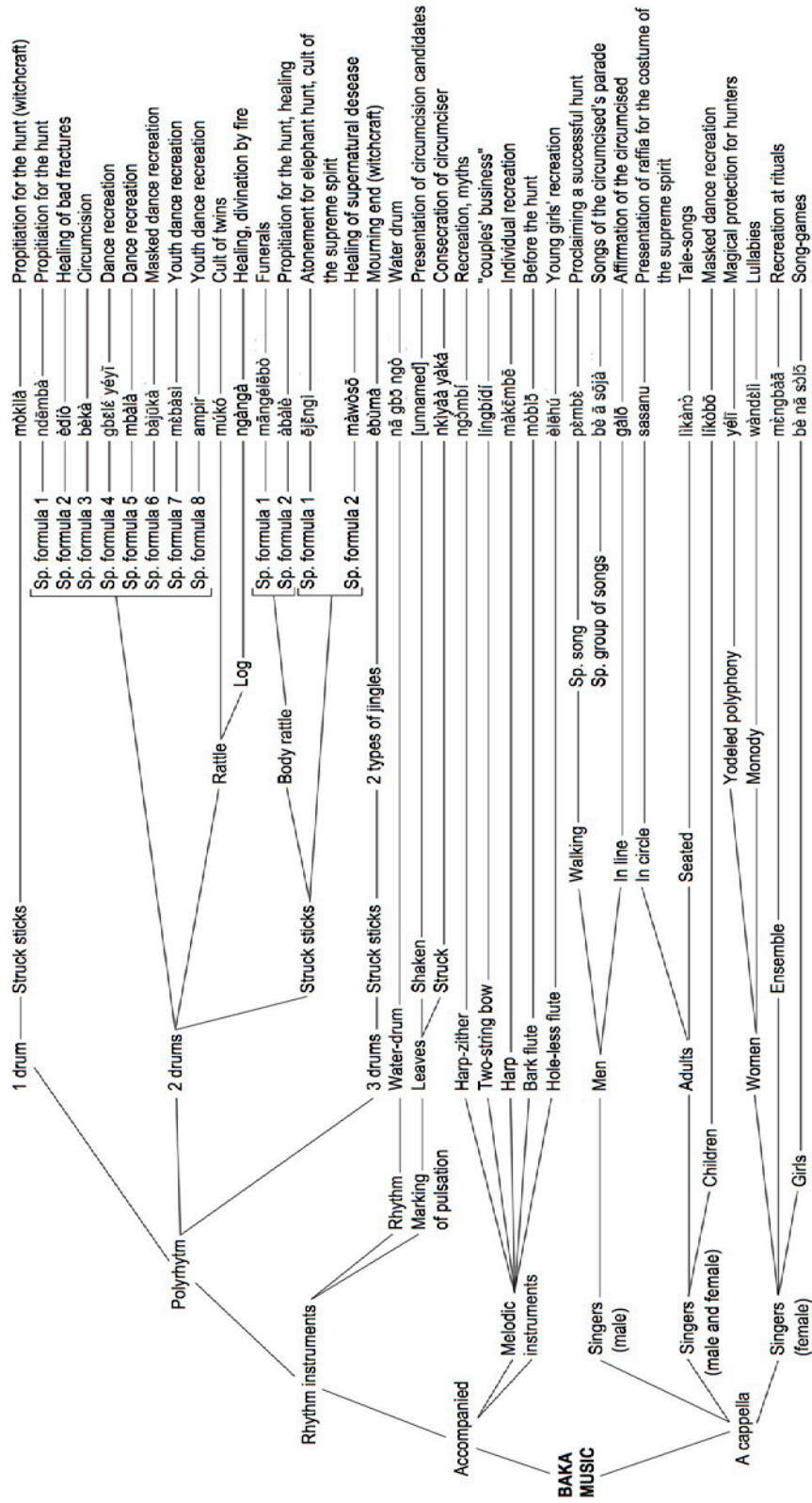


Fig. 5: Baka Music (tree diagram)



## ***Synoptic Table***

### **The Uldeme Agrarian and Musical Calendar**

In the Mandara Mountains, people maintain very close ties to the natural environment and it is the agrarian calendar that rhythmicizes the life of each community. Millet is the staple food and music has a symbolic function in its growth and harvesting abundance. A specific instrumental combination and its associated repertoire corresponds to each period of the agrarian calendar.

The synoptic table shown is read from top to bottom. It shows successively the two seasons that divide the year, the months of the Gregorian calendar and the corresponding Uldeme ones, vernacular denominations of the latter, the agricultural activities that take place during the course of the year, the principal festivities—*wālāmātáyà*, the celebration of newlywed women and *dàfàbèrà*, the harvest festival—and, finally, the instrumental formations used during each calendrical period. The correspondence of instrument groupings with positions in the annual cycle must be strictly respected. Thus the 9 bamboo flute ensemble *ázīwīlī* is played from the first rains through to the first hoeing. Then follows the flute ensemble *tālákway*, played until the last ears of millet are cut. During these same periods the *ázèlèŋ* flutes, reserved for women only, will be played; the latter are performed from the first rains all the way up to the beginning of the harvest. And so on.

Some instrument groups, such as the *àsàgàlà* (5 horn-flutes) are played all year, not being linked to the agrarian cycle but rather to death and funerals. Women sing grinding songs all year as well, though there are different songs for the dry and rainy seasons.

So as to circumvent the prohibitions associated with this agrarian calendar, the Uldeme respect all of these linkages, even as they adapt pieces played by such-and-such formations to other formations. The latter are sometimes difficult to identify for the unaccustomed ear inasmuch as their polyphonic structures may be drastically rearranged (cf. the paragraph on entities).

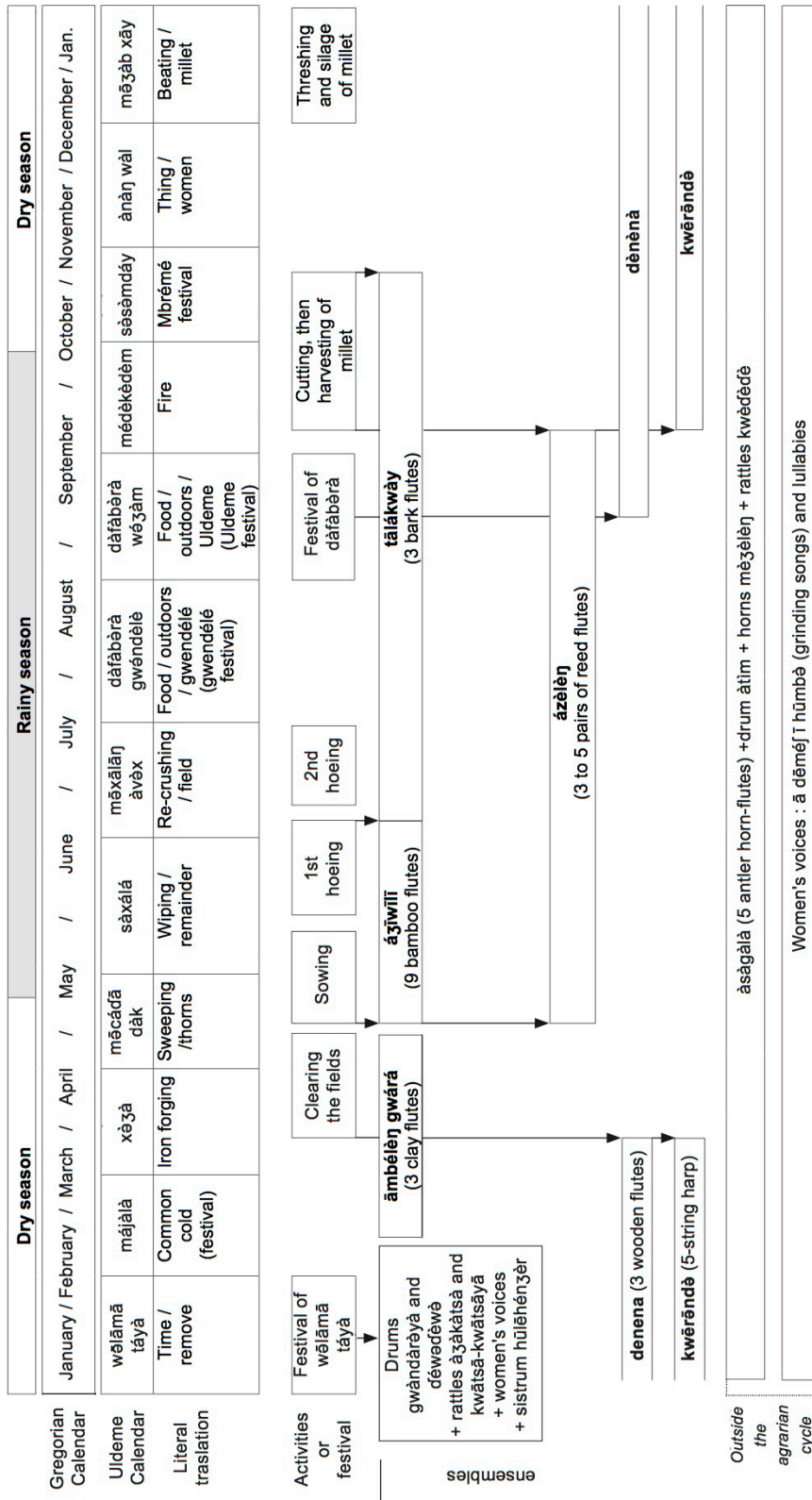


Table 6: Uldeme agricultural calendar [for “denena” read “dènèrà”]

### **Baka Ritual Music**

A particularity of Baka heritage is the polyfunctionality of its ritual music. The complex associations among circumstances and musical categories can only be adequately represented with a double-entry table.

Although each musical category is associated with a particular circumstance (bold frame), the majority of circumstances make use of more than one musical category. The choice of categories is constrained to greater or lesser degrees.

For funerals and the ceremony of the end of the mourning period (“mourning end” in the table)–as we saw above–the music played (in addition to the specific categories *māngélēbò* and *èbùmà*) depends on the identity of the deceased.

Certain rituals unfold in phases (indicated in smaller font), each requiring different music.

- The initiation ceremony of the Spirit of the Forest "*ejēngì*" brings together two categories of which one is specific to the presentation of large rolls of knotted raffia fiber that are used for the spirit’s attire.

- The circumcision ritual has several phases during each of which specific groups of songs – *bèkà*, *bè ā sōjà*, *gàlō*, *nkìyàà yàkà* – are performed, as well as the marching song *mēngbàā*, which is adjunct to many rituals. Its function is to fill moments of pause in the ritual and renew participants’ motivation.

Finally, other circumstances involve musical categories whose function is specific (*in italics* in the table) and whose choice depends on the context:

- Hence, four categories involve choosing among therapeutic practices – *ngàngà*, *màwòsō*, *èdíò*, *àbàlè* –depending on the nature of the individual’s illness or any implications for collective health;

- The categories performed for spear-hunting propitiation rituals – *ngàngà*, *màwòsō*, *yélí*, *àbàlè*, *ndēmbà*, *gbēlé yéyī*, *mòkìlà* – are distinguished by their divinatory, protecting, purifying, or transmogrifying capacities, and are used in conjunction with the community’s situation vis-à-vis the success or failure of hunting expeditions.



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