Musical Organization in Traditional East African Cultures:
A Case Study of the Embaire Xylophone
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Abstract

The *embaire* log xylophone is used among the Busoga of southeast Uganda. It is still popular today in this region, reflecting certain cultural and aesthetic preferences. In practice, the Busoga gather together and celebrate various events involving singing, dancing and xylophone playing. This paper takes a closer look at musical organization in selected East African traditional societies with special reference given to the musical organization in the *embaire* playing tradition of the Busoga.

The first part of the discussion provides a short overview on East African xylophones, their types and their geographic distribution. This will be followed by the portrayal of Ugandan xylophones. In due consideration of past and present-day Busoga the *embaire* will be discussed in terms of its use, method of its set-up, its playing technique, the order of its keys in accordance with the traditional tuning as well as the allocation of keys among musicians belonging to the xylophone group.

The second part of the assessment dwells with musical analysis that is based on recorded audiovisual material. It will thus specifically refer to melodic-rhythmic structures of separate *embaire* patterns and of the resulting tone bank when all patterns interlock\(^1\). In accordance to this matter, aspects of pattern perception and recognition will be reviewed both from intra- and inter-cultural viewpoints.

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\(^1\) I would like to express my special appreciation to Prof. Peter Cooke for his kind support during the phase of my analytical work of the collected data. His replied my endless questions (E-Mail) giving me fruitful advises and suggestions and simultaneously criticizing some of my thoughts. I thank him for his patience and understanding. I would also like to acknowledge the Ugandan musician Isabiry for sharing his experience on the Ugandan music in general and the *embaire* playing in particular. His constructive suggestions were extremely important, since they are based on the viewpoint of a culture bearer (etic). So the cooperation of these two scholars has played an essential role in shaping my paper in the appropriate direction.
This will particularly be based on aspects of perceiving, understanding and interpreting music, here the *embaire* tradition. Thus, the following major questions of concern therefore deserve due attention as the investigation proceeds: How do oral cultures create music to transform it into a “humanly organized”, and expressive sound? How is music conceived and interpreted in cultures with no written music theories, vocabularies and terminologies, compared with the elaborately evolved Western music and its written notation system that can describe or prescribe performance in great detail?

My analysis is based on data I collected during my fieldwork in Uganda in 2005. It began in the country’s capital, Kampala where I was able to examine the *amadinda* xylophone and conduct interviews with expert musicians who served the former *Bugandan* court⁵ as musicians⁶. Following this, I visited the *embaire* group⁷ in the Nakibembe village located in Busoga (figure 1) where I met Bidah Mpola Rashid, the leader of the music group and his fellow musicians: singers, dancers and instrument players. In Sub-Saharan Africa various types of xylophones are found. These are leg, log, pit, box- or trough-resonated, pot as well as xylophones with individual resonator/s. The number of keys which either rest on temporary supports e.g. banana stems, or permanently attached to one another or to a supporting resonator such as a gourd, varies considerably from one area to the next.

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5 The *Bugandan* court was discovered around 1862, but its court probably existed much earlier. For a long period the royal palace played a significant role in cultivating traditional music (Kubik 1982: 14-16; 2010: 249-151). However, today a large portion of this musical legacy is diminishing. In this regard, Cooke states the following: “The majority of the royal ensembles no longer function today. Most ensembles vowed not to play again until their king was restored in 1993. In 1987 I made a survey of the state of the traditional groups which I submitted to the Kabaka. He did nothing, and still does little about restoring any of them. Sometimes he will call for some musicians to come and play for some public event but it is often amount to just two or three players on only the xylophone” (e-mail 09.02.2011).

6 I would like to express my gratitude to the late court musician Albert Ssempeke (who passed away shortly after I concluded my fieldwork) and Ludovico Serwanga as well as his son Albert Bisaso Bisaso who provided me with information about the music culture of Buganda. Albert also accompanied me on my trip to the neighboring Busoga.

7 This music group was founded around 1976. Since then its members travel throughout Busoga performing music on different events, e.g. weddings and funerals.
East Africa principally exhibits pit and log xylophones. To start with, xylophones in Uganda have been recorded among Bantu-speaking people’s groups of south and southeast Uganda, specifically the Basoga, Baganda, Bakonjo, Banyoro and Bagwere who play the *amadinda* or *entaala*, *akadinda*\(^8\), *embaire*, *endiga*, *endara*, and *miruli*\(^5\) xylophones. The *ndara* is found among the nilotic *Alur* of north west and the *Adhola* (also *Jobadhola* or *Badama*) and south east Uganda around the early 1950s (Wachsmann et. al. 1953: 314)\(^10\). Scholars though, argue that these instruments are probably

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\(^8\) The *akadinda* (17 or 22 keys) might probably no more exist today. By the time Wachsmann et. al. (1953: 315) conducted his researches in Uganda (around the early 1950s or earlier), only a few specimens of the *akadinda* seemed to have existed. "... incidentally its rarity made it difficult for young players to get sufficient experience. The *akadinda* demands a specialized technique for the various parts; it is practically impossible for a player to change parts with another man at short notice; ... a full complement of musicians has been unobtainable latterly, and when the *akadinda* was played at all the number of keys had to be reduced by one octave, i.e. by five to seventeen. Recent visit put some heart into the musicians and a promise was given to revert as soon as possible to the traditional range of twenty-two keys (ebd.)" Isibiry informed me that there is currently an *akadinda* set played by students at the department of performing arts of the Kyambogo University (E-Mail 21.03.2011).

\(^9\) The *endara* is a 16-18-key and the *entaala* or *miruli* a six-key log xylophone. The slats of both instruments are laid on banana trunks. In the case of the *entaala* short sticks are additionally pushed between the keys to void twisting. A drum serving as extension of the lower slats accompanies this xylophone. Written accounts record that the *entaala* was so scarce already in the 1940s and 1950s. Later on it was superseded by the *namadudu* drum set (Wachsmann et. al. 1953: 318-320).

\(^10\) The *ndara*, an 8-key pit xylophone, made of the *anga* wood (*Cordia Abisinica*). The keys are laid on bundles
not used today (Micklem et al. 1999: 29-30). Through xylophones called marimba has been reported on Zanzibar and Pemba Islands as well as among the Zaramo, Sambaa (Shambala) and the Bondei of north east Tanzania (Kubik 2001c: 85; 2001d: 856). In south east Tanzania the Makonde play a six-key log xylophone dimbile.\(^{11}\) Gourd resonated xylophones called ambira are found among the Kranga of Mosambique, an instrument believed to have been imported by a Portuguese missionary ca. mid of the sixteenth century. Xylophones known by the name manza and kpaningha (also kpiningbo or pandingbwa) are played by the Sudanese Azande\(^{12}\) (also Zande, A-Zande, Sande, Zande; see Evans-Pritchard 1963: 191; Kubik 2010a: 102-109).

**Ugandan Xylophones:** Ethnomusicological studies have been carried out at different periods particularly on the south Ugandan xylophones, amadinda, akadinda\(^{13}\) and embaire. As to the embaire, only a few studies are at our disposal. For instance, the article Micklem et al. (1999) provides an in-depth overview about this instrument to the interested reader. This group of scholars visited a number of Busoga villages (Nakibembe, Bugwere, Watamu, Namundidi and Nakisenyi) looking for embaire playing areas. In this article methodological music transcriptions are presented by means of graphic and staff notations using the numbers 1-5 which represent the pentatonic arrangement of the embaire keys. Basing this, the distinct structures of separate patterns, their inner structures and rules of melody and rhythm variations, their principles of interlocking, and the resulting tone bank are examined. Other points of discussion refer to additional music instruments (particularly percussion idiophones) which usually accompany an embaire group. Furthermore, Kubik’s articles (1964, 1982, 1988, 1992 and 2001) which deal with the organology of the embaire, its playing technique, musical organization, and its theory of culture are essential source materials from which comprehensive information can be acquired.

The embaire is assumed to be the source for the emergence and development of xylophone playing in Buganda\(^{14}\). Of course, there are differences and similarities in terms of instrument making, numbers of keys and musicians and music repertoire. All these attributes reflect specific regional and

\(^{11}\) Communities in southern Tanzania and northern Angola apply the name Madimba for the same instrument (Kubik 2001d: 856-857).

\(^{12}\) Larger groups of the Azande reside in north Zaire as well as in eastern Central African Republic.


\(^{14}\) “During the nineteenth century, Busoga was a vassal of Buganda, and at the same time an important source for cultural innovation in the Bugandan kingdom. Buganda’s court music assimilated many creative impulses from Busoga. By the mid nineteenth century … Busoga musicians were regularly recruited to the court of Kabaka Mutesa I…. The basic structural identity between the amadinda and embaire log xylophone music testifies to the intimate relationship between the two musical cultures (Kubik 2010a: 51).”
local cultures.

Scholarly studies report of embaires with 15, 17, 21 and 25 wooden keys made of the lusambya, munyenye or mukeremba trees (Markamia platycalyx, Fagara species or Vitex fischeri; Wachsmann et. al. 1953: 316). The number of musicians playing embaire and other accompanying music instruments may vary from one ensemble to another.

In the past few decades, changes were observed in the embaire playing tradition. Let us for example review the research results of Kubik and Barz: In 1963 Kubik (1964: 143-144) reports of a 15-key embaire (figure 2a) observed in Bumanya played by three musicians and accompanied by a drums called ngoma, mugave/mugabe and kagoma katono. The drums were deliberately positioned near the lower keys. He writes: “During the recording session I suggested that the drums should be placed somewhere else, so that the lower xylophone keys could be heard more distinctly on the recording. The musicians refused. The drums, so I was instructed, were ‘a part of the xylophone’ and had to stand near the lowest keys of the embaire. They were regarded as a continuation of the xylophone keys into the deep register.”

Furthermore, the photograph given in figure 2b (made by K. Wachsmann in 1954) shows a 17-key embaire with five musicians playing the xylophone and two playing drums placed near the lower slabs likewise figure 2a. Hence, the function and purpose of the drum set is apparent.

Most likely at the beginning of the millennium (2000), Barz encountered embaires with 21 and 25 keys in a few Busoga villages and in the neighboring Bugwere. He explains that “the extension of slabs is perhaps the most striking innovation in contemporary embaire performance (2004: 31). But in this relation one may raise the question which connection Bugwere has with the embaire? James Isabiry, a Ugandan musician, made a plausible remark: “The large xylophone came to Busoga around the early 1970s from Bugwere and Bunyoli. They used to be called “embaire edhe Bunhole” - xylophone from Bunyole or ‘embaire edha Banhole’ meaning xylophones of the Banyole people. There were groups of people who went to settle in
Bunya from Bugwere and Bunyoli and mixed with other societies. They were the first to play the large xylophone in Busoga. At that time, the best players of that xylophone were groups from Butaleja and Busakira (areas near Tororo). I remember when I was a boy, in ca. 1977 a group from Busakira came to play near my home hired by a rich neighbor. They arrived late at night and started playing the xylophone. We (kids) left home immediately to see this amazing instrument with a group of men singing so well. It was the rather poignant rhythm and loud but sweet singing that the Banyoli groups introduced and by which Basoga musicians were attracted. So after some time of adapting the new instrument and the styles of playing, Nakibembe musicians including other groups from the neighboring villages started playing their version of the large embaires singing typical Lusoga songs accompanied by the low and large slabs which overtook the role of drums. But, what they play is not what those early groups used to play. The current embaire groups rather play drum rhythms on the low slabs, whereas the former groups used to play the basic tune deriving from the starter’s and mixer’s parts. The rhythm was rather irregular” (E-mail 01.03.2011).

So the embaire was gradually enlarged by adding 6 to 10 new keys to the lower octaves thus increasing the number of slabs from 15 or 17 to 21 up to 25. This does however, not mean that 15- and 17-key embaires have disappeared all over Busoga. In some few localities especially the 15-key embaire is still played together with sets of drums, shakers, panpipes and tube fiddles (Micklem et.
al. 1999: 30). Large xylophones with 21 to 25 keys are rather preferred and at least in *Nakibembe* it seems to have become vogue (Mpola Rashid 2005).

Prior to examining the changes and innovations in the *embaire* tradition in detail, I would at first like to explain the process of its set-up which I observed and recorded in *Nakibembe*.

**Setting-up the *Embaire***: In the *Nakibembe* village, there is center spot where major music events and social gatherings take place. Here is a trench or pit with ca. 50 x 250 x 50cm width, length and depth exclusively reserved for the *embaire* performances. After such an event, the trench is usually covered with grass, iron sheets or wooden boards. The use of a trench serving as an amplifying chamber is presumably a recent invention besides the addition of new xylophone keys (Barz 2004: 26). The process of the set-up involves several work phases described as follows: At first *Budah Mpola Rashid*, the master musician, uncovered the pit, excavated some earth with a pick axe to make minor corrections. Then he felled two banana trunks, *omuteteme*; and positioned them along both edges of the pit (figures 3). He fixed the stems by inserting thick wooden twigs (figure 4). Thin bundles of elephant grass, *ikungu*, were laid on top of the stems to serve as a cushion for the xylophone slabs and to help them vibrate freely when played (figure 5). Finally the 21 slabs were placed in-line one after the other (figures 6-7). Thin vertical twigs of the *enza* wood (*Teclea nobilis*) were pushed into the stems between the keys to prevent them from sliding and twisting when stroked (figure 8).

The surface of the keys is elaborately decorated with black ink. Each key is additionally indicated with a serial number that serves a practical purpose for the musicians, namely to lay the keys in line without proving their respective pitches. So the arrangement of the keys from the shortest to the longest became optically apparent.

These huge *embaire* are not accompanied by sets of drums like the 15-key xylophones, since the new bass keys substitute drum sounds. Thus, instead of physically existing drums, the *Nakibembe embaire* is accompanied by *enseege*, *nsase* or *ensaasi* shakers (flat metal boxes, figure 9) and wooden concussion idiophones (figure 10) for rhythmic accentuation together with the lower keys.

Nearly half a century after Kubik’s visit in *Bumanya* (1963), the huge *embaire* I observed in *Nakibembe* (2005) proves that a process of change has taken place that may be evaluated from various perspectives. One reason seems to be the scarcity of trees and consequently the unaffordability of wood for drum manufacturing. Another reason is however, related with aesthetical and practical preferences of Basoga musicians who were inspired by huge *embaire* which were introduced by musicians from *Bugwere* in the early 1970s as already cited earlier. The changes can not only be reduced to the unaffordability of wood. Cooke also suggests that apart from the fact that it may be hard to get wood for drums it is also hard to find good quality *lusambya* tree for the wide and long bass keys (E-Mail 12.02.2011). Barz (2004: 31-32) suggests “...that since making drums is
especially time-consuming and expensive; effecting the drum-like extension of the embaire is a logical innovation. This explanation is supported by comments made on several occasions. A second explanation is that embaires have always been an ongoing developing musical tradition, and the extension of keys should be understood as part of normative progression. The second explanation centers on change and adaptation as inherent aspects within historical embaire tradition. In most cases the reality is probably somewhere in between the two explanations."

Isabirye on the other hand, argues "... that the Nakibembe musicians preferred huge xylophones out of fascination and not due to material shortage for making drums. Drums are still played with embaires in certain areas. Drums are made in Kalatu in Bugweri (close to Nakibembe) to date. There is the Mwewesi Mhaire group (also near Nakibembe) which includes drums in the xylophone music and the combination is interesting to hear. Therefore, those groups who want to include drums in embaire performances are quite able to do so. The main point is that many groups including the Nakibembe group, preferred and still today prefer the large embaires."

Another justification for the absence of drums in embaire ensembles could perhaps be understood from a practical viewpoint. Depending on the degree of its reputation, an embaire group is usually invited to perform music on various occasions. It is possible that the trans-portation of heavy drums may not be that easy. These groups do not only put up performances in the musician’s residential areas, but sometimes also far away outside of the locality. So given this perspective, the best solution is just to transport the keys (tied in bundles) including other weightless instruments to perform music against payment. In this regard Isabirye explains the following: "Until very recent time, the musicians of such an ensemble group came walking from their home area to the place they were hired to entertain. They used to carry the instruments and costumes alternately until they reached their destination. Young boys and girls carried one or two slab(s) each according to age, role in the group and sex. Senior musicians as well as young girls usually do not carry anything." (E-Mail 22.03.2011).

Figure 3
Figure 4
Figure 5
Figures 3–8: Process of the embaire set-up; Photographs: T. Teffera Nakibembe, Uganda, 21.05.2005

Figures 9-10: Musicians playing ensaasi shakers and wooden concussion idiophones; Photographs: T. Teffera Nakibembe, Uganda, 21.05.2005
The popularity of the *embaire* is a representation of shifting value system. *Basoga* musicians have gone along with the innovations, adaptations thus, guaranteeing the sustainability of this musical practice without completely throwing away the old.

**Process of learning of musical skills:** In many African cultures terminologies are not applied for every aspect of music. Kubik (1979: 222) writes: "... a terminology specific to a given culture only becomes possible where phenomena have to be distinguished from an intercultural standpoint. An ethnic unit, which only knows a single dance will have no name for it, but only a generic name for "dance". However where a number of dances are customary there will soon be a need for distinctive designations so as to make it possible to refer clearly to them. In this way a terminology is gradually built up".

In traditional African cultures informal learning of musical skills usually begins in early childhood. Apart from cradle songs through which an infant becomes acquainted to the music of its society, it is part of the everyday life for an African mother to carry her baby on her back and participate in various music events. This is the start of children’s experience with music. Certainly, there is no doubt that the natural talent of every individual also plays a major role in the conscious process of musical perception (Nketia 1974: 58-60; Agordoh 2005: 30-31; Merriam 1964: 158-162; Kubik 2010: 42). Parallel with the informal music learning, the understanding of the respective rules of music is, of course, important as well. Blacking’s (1995: 57-58) study among the *Venda* people of South Africa may be mentioned as an example: "The Venda consider that anyone who is not totally deaf ought to be able to recognize and understand different patterns of sound, and to perform music. They learn techniques of composition and performance without any stated theories, and adult members of the society are expected to make knowledgeable musical judgments. In making these judgments and in learning their musical tradition, the Venda assess what is right and wrong, or good and bad in music, according to a system of musical behavior whose principles are acquired in society by processes which are not always directly related to the production of music. Although Venda music is systematic and could be taught according to a set of rules, like the grammar of a foreign language, it is not learned as such and its most important creative principles can be acquired only by growing up in Venda society. Even if it is learned behavior that could be described in terms of stimulus-response theory (which I doubt), it is certainly not always consciously learned, because many of its rules are hidden and non-musical. The surface structures of Venda music reflect not only the musical conventions of Venda culture which are transmitted from one generation to another, but also cognitive and social processes which are endemic in all aspects of their culture and particularly present in musical activity."

Regarding informal music learning, I made an observation in 2005 during my field research in the *Tanga* region of northern Tanzania, in the *Vuga* village inhabited by the *Bantu*-speaking *Wasamba*.
There are traditional music performances, generically called *ngoma* executed in male and female groups. Thus, besides the male *ngoma* group *ngoma duneenge* ‘drums of men’, there is the female group known by the name *ngoma ya kidembwa* ‘drums of women’. Unlike the male group, the female ensemble includes a pair of single headed cylindrical drums and a number of wooden duct whistles. From the group of women who attended the music performance with singing, dancing or instrument playing, at least five of them held babies on their backs (figure 11). Children who were old enough, participated and interacted in the musical performance by themselves singing and dancing together with the adults (see Tefera 2009a: 305-318; see also figure 12).

A similar teaching-learning practice also occurs in *embaire* playing starting at an early age. Nketia (1974: 61) cites the eastern African *Chopi* who put a high value on learning xylophone starting at the age of seven. This process of learning enables the child to cultivate a feeling to the instrument. Converging on the aspects of rhythm and movement patterns in traditional African music teaching, Kubik (1979: 226-228) remarks that rhythm entails something that sounds, whereas movement "includes musical phenomena which are completely without sound. ....One can define African music in one of its fundamental structural aspects as a system of movement patterns. Consequently, in the situations which arise when teaching African music one emphasizes in many cases not only the sonic auditory aspect but primarily the motional production process...... For the player of mendzan, a xylophone in southern Cameroon, it is in the first place important to know at what point of time he must strike which key, in this is what he learns....during the teaching process... patterns of movement are imparted "physically" by the teacher to the pupil, for instance by a xylophonist holding his pupil's hands an imparting direct impulses to them until the pupil has absorbed the movement pattern and his hands holding the sticks act at the correct instant. The mental or even physical absorption of pattern of movement in the learning process is one of the secrets of understanding as a musician or a participating dancer."

![Figure 11 - 12: Ngoma Ya Kidembwa ‘drums of women’ performance](image)

Photographs: T. Tefera, Vuga, Tanga region, north Tanzania, 13.06.2005
During the set-up of the *embaire* in *Nakibembe*, a large group of children was watching the entire happening with great attention. Before the adult musicians started to perform, three boys between ca. six and eight years of age took a seat in front of the xylophone and started striking the keys (figure 13). Each of them seemed to take full control over the respective number of the keys they were allocated. While listening to their music, one could tell that they have acquired the basic rules and a certain level of know-how in playing the *embaire*. Each player stroked a different pattern thus creating the common interlocking style. Isabirye (E-mail 23.03.2011) suggests the following in this relation “...to learn an instrument the hearing ability of a child is very important. Thus, children hear songs played on *embaire* in the evening and learn the parts by listening and as soon as they get to the xylophone they play the song easily. Then they get to point of imagining a mixer part for a starter which they have never heard before but they base on the knowledge of the instrument. This is the level many young boys aspire to reach in order to be regarded master players. Then one would say they learnt the instrument not songs on the instrument”. By the time the adult musicians started playing the xylophone, a young boy participated in the music performance as the youngest member of the *embaire* group (figure 14).

Kubik (1964: 138-139) discusses his practical experience in learning the *amadinda* xylophone from his teacher Evaristo Muyinda over a long period of time (i.e. in 1959/60, 1961, 1962 and 1963). The learning starts with getting orientation as to how to hold the sticks and where to strike the keys to produce the required sound quality. To teach the ‘good’ and ‘bad’ playing, Evaristo applied certain metaphorical terms in the local Luganda language such as *akudaliza* and *okwawula* or *okubwatula* and *okugugumula* thus illustrating the correct and/or aesthetically desired playing techniques on the one hand and the incorrect and/or bad way of playing that are by no means tolerated. Kubik describes the terms quoting his translator. He argues about the problem of communication he faced between him and his teacher due to lack of a common language. In the course of his long years of repeated researches carried out in Uganda and elsewhere in Africa, Kubik has doubtlessly acquired a lot of knowledge and the *amadinda* xylophone learning is just one of his plentiful concrete experiences made in the field. Now one may imagine that unlike a non-native observer like Kubik, who uses a methodology to learn this xylophone, a native does usually not face difficulties to understand the local language. As a member of a traditional African community one learns and absorbs music and making music more practically than theoretically, since music is an inseparable part of social life that goes hand in hand with other cultural activities and experiences. So, what appears to be difficult for a non-native at the start is a natural process for the natives that are simply taken for granted.
Members of an *embaire* group mostly live in the same village. They have ample chance to play music either on real events or on repeated rehearsals. The extensive experience of playing together in one and the same ensemble generally enables musicians to become experts. This includes children who, at an appropriate time, become full members of a music group.

*Embaire* groups perform their music, among others, on weddings, private parties, funerals, rituals and several other occasions. Songs alternately performed by a song leader and choir group always belong to *embaire* performances. The song leader, *omulesi owolwemba*, plays a vital role in leading the chorus group, *abanguzi*. He is responsible for keeping a good mood during music performances through his lyrics.

The *embaire* is closely related with rituals for which certain ceremonies are carried out at certain moments. The members of an *embaire* ensemble therefore, still hold strong ritual beliefs associated with the instrument\(^\text{15}\). For example, "...a chicken is sacrificed for the tuning, and a goat sacrificed to remember the spirits of the ancestors and late members of the group who placed the xylophone. Blood from the goat is splashed on the underside of key 15, which is considered to be the heart of the xylophone. New members have to provide a chicken for their initiation into the group to be sacrificed before their first performance. The group also uses a reed stick with herbs inside to protect them from the witchcraft of rival groups: the stick is taken to performances, and planted in the mound of the ex-\(^\text{15}\) *Embaire* is also played in possession cults, usually accompanied by four drums. Cooke writes his observation like this: "In the one example I recorded and filmed the xylophone was a 12 or 15 key instrument. Often however the xylophone is only used before and after the ritual as part of the warm-up and cooling-down dances. In 1988 I also recorded and filmed a twenty-key *embaire* at a healer's compound in Kawete village a few miles north of Iganga. No drums were used with this one (E-mail 10.02.2011)."
cavated earth beside the xylophone’ (Mickhelm et. al. 1999: 32).

Song lyrics applied in embaire music may reflect the social, cultural and political life of the Basoga. Such lyrics may for example express good or bad harvest, natural calamities and times of joy and sorrow the community went or goes through. New song texts narrating the latest incidents may also be inserted on previously existing melodies. “Many of the improvised lyrics supporting the music and dance reflected current social issues, such as the famine that had swept the Basoga region (Barz 2004: 30).

Player’s Arrangement: The number of embaire keys that may vary from one instrument to the other and from one village to the next, is determining for the amount of players who are mostly also active members of the respective music group. Thus, to play an embaire, two to more than six musicians are required. The 15-key embaire Kubik (1988: 156-162) studied, is played by three musicians called mulangalira, mugoiti and mudumi (figure 15). More than six musicians play the 25-key embaire (Barz ebd.: 32), while the 21-key embaire I was able to observe in Nakibembe was operated by six musicians.

In figure 16 Micklem et. al. (1999: 33-34) who visited the same embaire group in Nakibembe, illustrate the playing areas of the six musicians. Each player is distinguished by his Lusoga name, whereas the English connotation is given in brackets.

The numbers indicated in the centre of the keys with 5-4-3-2-1... etc signify the embaire pitches representing a pentatonic tuning to be discussed below. So here, we have two totally different scale conceptions resulting from traditionally learnt and adapted behaviors; i.e. either the highest or the lowest pitch serves as the point of departure of a given traditional tuning (Kubik 1964: 139-140; 1979: 222 and 1985: 36-37). My version of the playing areas of six musicians is shown in figure 17.

Figure 15: 15-key embaire, Source: Kubik 1988: 157
If a pentatonic scale characterizes the music of the Basoga, it is then obvious that in the case of the embaire all other pitches appearing after the first five are repetitions in the lower octaves providing a tonal range of two, three or four octaves consistent with the amount of the slabs.

Depending on the melodic structure of a given musical piece of an embaire performance; a certain pitch or pitches play a central role being frequently highlighted hence, sounding in different octaves. The starter and mixer each play ten keys, namely 6-15 and 3-12, whereas the top key musician is provided with the first five highest keys (1-5). All three musicians use a pair of wooden sticks that are called nzo or enzo to play their keys. The tenor, bass and bottom key musicians altogether play keys 13-21. Usually they strike their keys with a stick (right hand), whereas they ‘half-mute’ (left hand) the center of the key after each strike with the stick. Based on my observation, it is above all the bottom key player who frequently pounded the center of his single key with his left hand. At certain spots of the song, he rapidly struck the key with a pair of sticks for brief periods. The tenor and bass key musicians used their left hands to ‘half-mute’ the keys almost always immediately after a stroke with the stick (figure 18).

![Diagram of Embaire Xylophone Playing Areas]

**Figure 16:** Playing areas of six musicians according to Micklem et. al. 1999: 34

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16 This aspect may be compared with *Berta* flute and trumpet ensembles of Ethiopia and Sudan. One of them is known as *bol negero* (flute-drum). It comprises 10-24 flutes of various lengths each producing a single pitch. The group I examined in Ethiopia (2005) consisted of 19 flutes, a kettledrum and 2 end-blown calabash trumpets (quite uncommon in such groups). It is possible that the number of musicians playing in one ensemble may differ accordingly, but a minimum of five musicians should play together (each of them playing one pitch on his instrument). All additional instruments added to these basic five are therefore just octave duplications in the higher or lower registers. This, however, would neither alter nor influence the identity and the musical structure being performed. For detailed description see Teffer 2009b: 199-277.
The arrangement of the all 21 embaire pitches is demonstrated in figure 19. The shortest key is to be considered as the departure point of the pentatonic tuning 5-4-3-2-1. This is sequence is duplicated in the steadily descending octave registers. The tone range from top to bottom is more than 4 octaves. Before the performance started I recorded each pitch as demonstrated by a musician. When I listen to the recording I perceive the pitches of the first fifteen keys as a pentatonic sequence even if they are not very accurate.

The six lowest keys though, have weak fundamentals so that the harmonics (2\textsuperscript{nd}, 3\textsuperscript{rd}) are rather perceived (Kubik 1964: 143; Mickhelm et. al. 1999: 31-32). Cooke remarks: "I usually find that the middle octaves are the most 'accurately' tuned in respect of cultural norms and the ones at the bottom octave may sometimes be mistuned, since it is harder to hear the fundamental and also that the highest are often out of tune for purely practical reasons - the smallest keys can have their pitch more easily affected by frequent battering so that they get worn and sharpen. I think that in Uganda the set of keys covered by starter and mixer are in tune it is less important if the others at the 'top' and xylophone makers create and tune the middle keys first. Musicians might take the view that as long as 'bottom' somewhat go out of tune (E-Mail 18.02.2011\textsuperscript{17}).

\textsuperscript{17} P. Cooke supported me in filtering the pitches by cutting the treble and middle frequencies, while amplifying the bass. Then, the fundamental pitches of the lower octaves were clearly audible.
Kubik (1982: 82) describes the Basoga scale as a pentatonic system in which an octave consisting of 1200 cents is divided into five pitches with equal standard intervals of ‘theoretically 240 cents equivalent to 2.4 semitones of the Western scale. Pitch fluctuations may be tolerated to a certain degree, since this does not refer to Western tempered pitches. “...the extent to which we may theorize at all on South Ugandan scales largely depends on the amount of deviation from pure octaves.... If a deviation in octave tuning of say up to 20 cents is tolerable or even desirable to the musicians, we know a norm where our speculation has to stop” (Kubik 1964: 140). Also Cooke (1992: 119)
argues about pitch tolerances in Ugandan instrument tunings that may extend from “a few cents to more than 60 cents from the theoretical equal spaced norm of successive intervals of 240 cents”. He rightly raises the question whether the ‘equal-stepped tuning’ is such a relevant issue for Baganda and Basoga musicians at all. He notes (ebd. 124): “The frequency of pen-equidistant tunings in Ganda and Soga musical traditions have given rise among researchers to the concept “equi-pentatonic”. My researches suggest that this concept is no invalidated by the existence of measured instrumental tunings that include non-equal intervals. They further suggest that, however they are measured; differences in interval size of up to 80 cents (possibly more) are not ‘emically’ significant. …..i.e. they do not cause problems for the musicians themselves (not counting octave comparisons). In addition, the readiness with which Ganda musicians transpose their melodies up or down one or more steps in the amadinda xylophone and other instrumental traditions (flute, lyre, harp and fiddle playing) without admitting to any ‘modal’ difference, lends support to possessing an unverbalised cognitive scheme of equidistance.”

Music Analysis: The embaire song analyzed here is entitled “Wompa omuwala oyo waire nzira nte” = ‘Please, give me that (your) girl so I can marry her even if I do not have cows for her bride price’\(^\text{18}\). The song consists of solo and chorus parts with call-response pattern.

This section considers the inner layout of the embaire music and takes a thorough look at each pattern, its structure and the resulting tone bank. I recorded the six embaire patterns separately before the performance started. Consequently, my analysis will be divided into two parts: namely on the one hand patterns 1, 2 and 3 of the asansaga, atabula and ow’obutono (starter, mixer and top parts) representing the melody, and patterns 4, 5 and 6 played by the enduuni, enene and engaabe (tenor, bass and bottom parts) signifying the drumming (rhythm) patterns mainly that is closely related with the dancer’s task on the other. Isabiryé confirms that the lower xylophone keys accompany the dancer(s) (omukini = plu. abakini) by playing drum rhythms called, e.g. Tamenhaibuga, Nalufuka and Irongo (e-mail 02.03.2011). Michelm et. al. (1999: 44) explains that “….these parts are derived from the several drums (enene, enduuni and engaabe) that accompany Soga ensembles. On the embaire, these ‘drumming’ parts add variety, and control the pace and excitement of the performance, while reflecting dance movements: it is important for these players to be able to see the dancers.”

It would be expressive to make some general remarks about reciprocal characteristics of all the embaire patterns that are of a certain length and which are generally repeated in a cyclic form.

\(^{18}\) Isabiryé further adds the following referring to the content of the song: “The other words are “Oyo omuwala awomera amaka, otabona bukaire nantu” - That girl is (potentially a wife) good for a home, Do not judge me (to be so old) by looking at (my) old age and grey hair'. As you can see, the singer is a man requesting the hand of a girl in marriage but he is being denied for his old age and not having cattle to pay her bride wealth. At introduction ceremonies such songs are requested for by the groom’s party to prepare for the bargain of how much the bride’s parents will ask for” (E-mail 01.03.2011).
Melodic and/or rhythmic variation(s) *ekisoko* (pl. of *ebisoko*) seem to be common in all patterns, though mainly in the starter’s and mixer’s patterns. But, the basic melody and rhythm should not be disrupted, but constantly shine through. Particular notes may temporarily be replaced by others, but they should not be shifted from their regular position, while other notes remain in their exact time place. The time-span of a pattern which may for instance contain 12, 24 and 36 beats per cycle, generally remains unaltered.

The song consists of four to five distinct song parts called *ebitundu* (sing. *ekitundu*). "...*ekitundu* literary means a part. In a piece of music it can mean a verse or section that can be clearly identified" (Isabiry: E-Mail 03.03.2011).

*Ebitundu* parts are arranged differently in close relation with the song lines (lyric). Listening to the complete performance together with the song lines makes clear, how the *embreire* patterns are adjusted when a new *ekitundu* begins. These changes take place "smoothly and abruptly, without any breaks in the performance. It seems likely that some part changes are intended to allow a better correspondence of the xylophone notes with particular song lines. For people familiar with the music, the delicately altered pattern of notes might then suggest the rhythm and tones of the words of that song line, so to them, it is almost as if the xylophone is singing those words" (Mikhelm et al.: 1999: 38).

The transcriptions represented in the figures 20-27 refer to only a single course (a pattern with 48 beats) taken from one long *ekitundu* (song part). Since the piece consists of several long or short *ekitundu*, the melodic and rhythmic arrangements and their interlocking styles may differ from one another⁹. Songs comprising several sections are for example widespread among the *Amhara* people of Ethiopia. Between 1996 and 1999 I studied ca. 80 traditional wedding songs. The songs are mainly performed by solo, *awraj* and chorus, *tekebayoch*. As a result of my analysis, I discovered how smoothly the shifting from one section to the next occurs²⁰. Song sections are usually melodically and/or rhythmically related with one another, while the moments of shifting are also expected by both participants and listeners. The solo singer is the motor of the group, hence in charge of keeping a good mood. He/she may determine when to end one part and move to the next. Depending on the melodic and rhythmic arrangements, song lines give way to moments of tension and relaxation. Unlike the relaxed parts, moments of tension frequently induce intensive dances, clapping, shouting, ululating and instrument playing. In other words such parts motivate the entire group to respond and react correspondingly. Additionally, the lyric comprising the core message of the given song is formative. The relaxed and tense moments in the *Amhara* songs are closely related with the content of the lyric

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19 For detailed information see transcriptions of different *ekitundu* in Mickhelm et. al. (1999)

20 There are no equivalent terms applied for song sections in the *Amhara* musical culture as in the case of the *ebitundu* and *ekitundu*. There are two comparable *Amharic* terms used refrain = *azmatch* and stanza = *gitim*. But, the different song sections do not only consist of *azmatch* and *gitim*, but may as well comprise other fragmented melodically and rhythmically distinct parts.
The first three so far discussed embaire patterns reveal analogous features with the three patterns played on the amadinda xylophone, omunazi, omwawuizi and omukonezezi. In both cases the starter’s and mixer’s patterns are interlocked in the same manner, whereas the tasks of both third musicians differ. Hence, in the amadinda the omukonezezi listens to the lowest two keys (amatengezezi) and duplicates a pattern that is created in his auditory perception on his two highest keys. The omukonezezi’s pattern is according to as Kubik (2010a: 71) an inherent rhythm. On the other hand the ow’obutono on the embaire usually plays a five-note pattern on the embaire that determines the melodic scope. In his pattern, the ow’obutono similarly picks out notes sounding in the lower octaves to duplicate them on his keys, but this pattern is not inherent with the starter’s and mixer’s patterns as in the case of the omukonezi on the amadinda. For that matter, ow’obutono’s pattern may thus be regarded as a completely new ‘construction’ (Kubik 1964: 149 and 2010: 70-73).

**Tenor, bass, bottom key players:** The patterns of the tenor, bass and bottom key (figures 24-26) have a different arrangement than the first three patterns. I suppose it is difficult for the musicians to demonstrate such apparently ‘infringing’ patterns, since they can only make sense in the complete performance. These patterns are not always played as given in the transcriptions below. I watched the movements of the player’s hands on the xylophone during the performance and later on in the recorded film. I realized that they differ wholly or partially from the ones played individually. Unlike the bottom key player who is allocated just one key, both tenor and bass key players in fact, not always play all the keys they are allocated, but just one or two notes. Nonetheless, I was surprised when at the beginning of the performance the bass key musician played a completely different pattern than that illustrated in his separate pattern (figure 25). He also joined the ensemble after two and a half patterns. The bottom key musician as well played various patterns at different spots of the performance by applying two playing techniques; i.e. either with stick and hand or with a pair of sticks.

In figure 27 the full score of the six embaire patterns including the ensaasi (shaker) is demonstrated. The tenor musician’s beats occur at every third beat which fits in adequately with the tone bank. The first half of his pattern ends on note 4, the second half on 5. His sixth and seventh notes in that first half of the cycle ‘harmonize’ with the note in the tone bank: 3 with 1 and 5 with 3 (note that the tenor notes are in a low octave). All other notes are identical with the notes in the tone bank.

![Figure 24: Enduami (tenor key player) pattern](image-url)
The bass key mainly plays the pattern shown in the chart with slight variations and accentuations. At times he stops playing for a certain while and then starts playing again. The bottom key player also makes several breaks. As soon as the complete performance begins, separate patterns that were perceived at first fade away and are replaced by shifting patterns. The excess of pitches sounding from the different keys together with the group song influence the human auditory perception so that one may start searching for new reference points in the high, middle and low octave registers. We may simultaneously extract more than one pattern or sub-patterns depending on our subjective perceptive capacity. So, regardless of their arrangement, the perceived patterns may be compared with puzzles belonging to one piece. These pieces can only then make a complete picture when they are fitted together to build a unified entity. Kubik (1979: 233) explains that already in much earlier periods African musicians used auditory patterns for composition purposes by using the reaction of human auditory perception. Such inherent patterns are recognized intuitively in the auditory perception by the African musician, then picked up and played on the instrument by trial and error up to the level of mastering. These musicians created this composition technique by inserting new patterns on already existing patterns in order to ensure an uninterrupted flow of melody and rhythm. This technique possesses a completely structured internal order and organization. In this conjunction, he uses the term
‘inherent patterns’ (ebd.: 232) and he makes the following remarks: "Inherent patterns are auditory patterns which stand out of the overall complex of melodic/rhythmic models of a musical passage. They are not produced directly by any musician, but they are a perceptive phenomenon. ... they are provided as part of the composition. The composers of the relevant types of African music make skilful use of the characteristics of human auditory perception. The total melodic/rhythmic models of a composition are constructed in such a way that the notes of different pitch layers form sub-patterns with one another. These sub-patterns are located in the total complex; they are inherent in it." In many African cultures inherent patterns are carriers of text phrases or fragments. Thus, they can only be picked up and properly used by the musician who is either native speaker or one who has mastered the respective language.

**Conclusion:** The organology of the *embaire*, its musical, traditional and social meaning discussed in this paper mainly reflects my etic viewpoint. In order to make the discussion as plausible as possible, appropriate analytical tools (graphic and Western staff notation) and terms, e.g. scale and melody in accordance with Lusoga terms e.g. *mugave*, *enseege* and *asansaga* have been used. Relevant publications of scholars who are strangers like me to the Busogon music tradition, of course, have largely supplemented my studies, broadened my horizon on this music practice, and gave me reassurance in a number of my thoughts. The emic perspective coming from the culture bearers, the Basoga musicians, is limited to facts I gathered during my fieldwork. Although I felt to have collected quite satisfactory information in the field, new questions always arise in the process of material analysis.

The *embaire* music possesses complex rules that can only be conceived in an extended oral process of teaching and learning. Hence, every new generation interpreted the inherited music tradition and contributed its part to the adaptations and innovations of the *embaire*, its playing style, its music repertoire in conformity with existing social and cultural circumstances. So, the frequent use of the *embaire* still practiced in today’s Basoga supports the idea that this musical practice is not a short-lived tradition. My fieldwork in Nakibembe and the subsequent analytical work, which took me quite a while to understand the secret of the *embaire* music, has made me conscious about the fact that the Basoga musicians cannot just be regarded as ‘village musicians’, but literate scholars of music. It was extremely captivating to observe the performance, feel the rhythm of the *embaire* music, and observe how these musicians took full control over the instrument thus playing their respective patterns, while simultaneously actively taking part in the song.

In traditional African cultures musical expressions are manifested through performances. All existing and essential performance methods and rules are handed down from one generation to the next as has been observed in the case of the *embaire* playing tradition. Compared to oral knowledge of
music, one may ask whether Western music might be a captive of its meticulous theory and notation system. Holding this point of view, it may be quite interesting to find out whether this 'captivation' might eventually have hampered its 'free and/or unrestricted' development.
Reference


