COMPOSITION TECHNIQUES IN KIGANDA XYLOPHONE MUSIC

With an introduction into some Kiganda musical concepts

by

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INTRODUCTORY

The impression that distinct and sophisticated composition rules are at work in Kiganda music is sustained by a number of observations. The field researcher in Uganda may be struck by the fact that an expert amadinda player can usually reconstruct the second part (okwawula) of a tune, if he is given the first part (okunaga), provided he knows the melody of the vocal theme inherent in the instrumental pattern. Though traditional musicians in Uganda cultivate an excellent memory, it may happen to anyone that parts of a musical piece slip the mind temporarily. It is then interesting to note how the lost part is recalled. For instance, Mr. Evaristo Muyinda, one of the former court musicians who instructed me in Kiganda music during several stays between 1959 and 1963, asked me to play him the one part he remembered, usually okunaga. In a few seconds of experimenting, he then tried to put between my part all possible notes that occurred to him, sometimes humming the vocal theme with it. By thinking rather of the resultant pattern to be expected from the combination he succeeded in reconstructing the missing okwawula part. If nothing helped he would have recourse to his endingidi fiddle, and try to reconstruct it out of the total pattern of the fiddle version.

Another observation is that identical or similar interlocking passages occur in quite different amadinda pieces. Compare “Ssematimba ne Kikwabanga” (Transcription no. 11) with “Naagenda kasana nga bulaba” (no. 12), or “Wavvangaya” (no. 8) with “Katulye ku bye pesa” (no. 18) and many other items.

The third observation is that Kiganda xylophone music has a pronounced harmonic quality, though not a single “chord” except the octave is used, and that this quality immediately dissolves if a number of notes are deliberately changed, or if one misses the right entrance point with the second pattern.

I have long been convinced that it is not only the 2-note okukooneera part in amadinda music that is deduced from the combined basic parts, but that the latter are also structurally interdependent.

It is the primary aim of the present paper to show by what factors the individual parts in Kiganda xylophone music are predetermined and to what extent they are interdependent. This will enable us to lay down in descriptive technical terms the composition experience of the (unknown) ancient composers of Kiganda court music. Though we shall limit ourselves to xylophone music, we have to keep in mind that xylophones are merely one facet of Kiganda music and that this music is intimately connected with that of other instruments.

The presence of distinct composition techniques stresses the fact that in spite of its inner diversity and readiness to absorb borrowings from outside, the Kiganda musical system has not only preserved a remarkable stability over long periods but has remained essentially unitary. It has been customary to consider amadinda and akadinda music as two separate traditions. Although this is perfectly true from the narrower point of view of playing technique, there is evidence provided by the structure of the tunes themselves to show that these two xylophone styles are not so separate and self-contained as it might appear.

1. These Luganda terms are verbs. See page 37.
I would have been able to complete the present paper in 1963, but for certain regrettable circumstances in Nigeria which tied up all my Uganda notes for six years. For their retrieval I must thank Mr. Nau, the German Consul in Ibadan, and also Mr. Rolf Peter in Lagos.

This paper contains the 102 xylophone pieces that are the basis of the analysis. Most of the material was collected from two sources: Mr. Muyinda and his numerous pupils, and the group of blind musicians with whom I have regularly played at Salama, the Agricultural Training Centre of the Uganda Foundation for the Blind. The availability of this collection transcribed in easily readable number notation may encourage musicians and students in Uganda itself to collect many more tunes and report variants.

TRANSCRIPTION OF KIGANDA XYLOPHONE MUSIC

Staff notation may convey aesthetical meaning in itself, as one music student recently declared to me in defence of it. Therefore, some people may find it lamentable to abandon it altogether, though its limited utility in African music has been demonstrated by many authors. Serwadda and Pantaleoni's article in the previous number of this Journal (Vol. 4, no. 2) appears to me as pioneer work towards devising notation systems suitable for African musics. During a six-week conference in preparation for the I.L.A.M.'s textbook scheme in February/March, 1969 it was also emphasised that preference should be given to transcription systems that have been worked out in co-operation and agreement with the African traditional musicians.

For Kiganda xylophone music something very simple exists and has in fact been used in Uganda for some time. In this notation the five notes of the Kiganda scale are represented by the numbers 1 to 5. With these, amplified by a few additional signs, practically all xylophone music in southern Uganda can be transcribed with absolute rhythmic
and melodic accuracy. Since our first experiments with this in Mr. Muyinda’s home near Kampala in summer 1962, more than six years have passed.

Numbering xylophone slats is almost an established tradition in many parts of Africa. For a long time it has been familiar practice in Uganda, C.A.R. and other places, for quickly assembling an instrument whose slats are usually stored in a hut. To write down a xylophone tune with numbers is a logical development of an already familiar African concept.

Incidentally, a similar notation system, independently developed, is also found in Javanese gamelan music, reports Andrew Tracey. (See Notes and News).

Notation in numbers also has a few drawbacks. One is that the direction of melodic movement is not shown visually, which often renders musical analysis difficult. It is for this reason that I shall partly use staff notation when concerned with melodic analysis.

The following illustration shows the notes of the two common Kiganda xylophones in conventional staff notation and in numbers. It may serve as a key to the transcriptions.

![Diagram of xylophone notes]

Fig. 2

Both notations are relative ones. They are not intended to convey the meaning of absolute pitches. The notes on the stave, as well as the corresponding numbers in number notation refer to xylophone keys, and the intervals meant are those found on the Kiganda xylophones. No European key or clef signature is used.

In this number notation lines above or below a figure show the exact octave position of that note. Numbers in the central octave (middle range) have no line. The lowest/highest octaves have two lines. We also use another important sign in this notation: the full stop. While the numbers convey the action of striking a certain xylophone key, a full stop indicates when no note should be struck. The full stop must not, however, be confused with a rest. This notation does not consider the notion of duration, since the duration of a xylophone note on the instruments of Uganda is not subject to arbitrary alteration. In fact, both symbols employed (number and full stop) have the exact value of what A. M. Dauer (1966) has called a “Nennwert.” “Nennwerte” are the smallest rhythmic units discernible in a single composition. In English I would propose to call them elementary pulses.²

Another problem connected with number notation is that in the area concerned the concept of scale is usually one of movement from the highest to the lowest note. (Wachsmann 1950 and 1953a). When traditional musicians write numbers on their xylophones they do it this way, as I have often seen in southern Uganda. Shall we

² Andrew Tracey prefers simply to call them pulses. David Rycroft said that “pulse-rates” might be used in translation of A. M. Dauer’s term.
follow this custom? I have been undecided about this for some time. It is mainly the concept of specific playing areas on the amadinda which in the end made me favour the other way. If we called the highest note on the amadinda number 1 and numbered the scale downwards, in accordance with traditional use, our system would cross the playing areas of the musicians. This would be contradictory to the structure of the music and even make the notation system unsuitable for musical analysis. The nature of the amakoomezi as a separate playing area and separate functional part of the music would also be veiled. Therefore I prefer to call the lowest note on the amadinda no. 1 and in staff notation a C. For the akadinda of seventeen keys I have decided to call the third note from the bottom number 1, here again because of the particular nature of akadinda playing areas. Another reason was that on the two xylophones that have been used in the Kabaka’s palace for many years the akadinda note which I call no. 1 was the nearest in pitch to the no. 1 on the amadinda.3

THE HISTORICAL BACKGROUND

Excellent research has been done in this direction, particularly by Prof. K. P. Wachsmann, in whose publications the necessary details may be found. (See the short bibliography at the end of this paper). In addition there is the travellers’ literature. However, I should like to raise a few points. Though Buganda was “discovered” as late as 1862, it is evident that the kind of xylophone music described here has existed for a far longer period than that. To estimate for how long it might have existed and what changes the music might have undergone in the past, belongs to the realm of speculation. But on the other hand some conclusions about the approximate age of particular Kiganda compositions may be drawn from references in the vocal parts to historical events. Taking into consideration that African musicians usually compose a new musical piece or song immediately after the moving event took place, this gives us a key for establishing a chronology with some probability. It is clear that a tune called “Uganda kwefuga” (transcription no. 63) was composed quite recently, probably around 1962 when Uganda became independent. Some other tunes, like “Ekyma” (no. 3) for instance, refer to events early in this century and were composed at that time (Wachsmann, in press). On the other hand, a song like “Olutalo olw’Ensinsi” the story of a fierce battle, is perhaps a late eighteenth century composition.

By carefully comparing the contents of the song texts, the style and vocabulary of the language with established facts in the history of Buganda, e.g. the genealogy of the kings, we may be led to a better understanding not only of the history of Uganda, but also of her music. Here training in ethnohistoric methodology such as laid down by Jan Vansina (1965) must be regarded as a necessary tool.

Of course the problem has more dimensions: another custom in many African societies is to preserve the music of older songs and give them new texts; consequently in many cases (provided that no essential changes in the music took place) the tune would be older than the known text. To what extent this is so for Buganda may be seen from remarks in Roscoe (1912, pp. 31-32) that the king’s harp players were able to invent new song texts on the spot “at a moment’s notice”. In such cases the new “improvised” songs must have been based largely on melodic material already known before.

Kiganda court music appears to have been comparatively stable. Although new instruments have been adopted all the time, a recent example being the endingidi one-string fiddle, which was “Invented in Buganda in 1907” (Wachsmann, in press), the numerous impulses from outside have always been integrated into the existing musical system.

3. Another acceptable way of number notation in amadinda music would be to start on the two top notes with the numbers 4 and 5, then move downwards with 1, 2, 3, 4, 5, 1, 2, 3, 4, 5, down to the bottom note. But this too has more drawbacks than advantages.
The stability of the court music tradition may in part be explained sociologically. As Wachsmann has pointed out, Kiganda court music can be regarded as a rather esoteric tradition. The playing of certain instruments was restricted to the Kabaka's palace, such as *entenga* etc. and until recently one of the xylophones studied here, the *akadinda*.

Little material is available for a study of stability and change in Kiganda music. But we do know for certain that the old compositions for xylophone and other instruments have remained stable at least for the last twenty years, which is not insignificant. If one compares recordings of "*Ssematimba ne Kikwabanga*", "*Kalagala e Bembe*" and others Hugh Tracey made in 1952 in the Kabaka's palace with what Mr. Muyinda taught me ten years later (and still plays today), we can see the identity, to the degree of only one or two notes changed per tune. Mr. Muyinda was not in the group recorded by Hugh Tracey. Therefore we have two different testimonies of the same tradition before us.4

Further amplification of our knowledge of Kiganda music and xylophone playing in particular may be gained from pictorial documents. In 1902 Johnston published a photograph (taken in the last decade of the 19th Century) of two musicians playing *amadinda*. (Johnston, 1902, Vol. II). On the two sides of the instrument, opposite each other, sit two players in white kanzus, each with two beaters. The instrument is a 12-keyed log xylophone, looking identical to those one sees today. We cannot hear the tune these two musicians were playing in Johnston's picture, but we can clearly make out that they were playing in parallel octaves. We can also distinguish their playing areas and sufficient other details of importance to establish that this was the same *amadinda* style as today.

These are important facts. It is evident that the material dealt with in this paper comes from widespread historical periods. Although the tunes were collected after November, 1959, they embrace material that may sometimes be generations apart. For this reason the present examination of composition techniques cannot be more than preliminary. We shall deal rather with lasting techniques, which may be identical with whatever has been stable in this music over long periods, than with the characteristics of the musical periods that have probably existed in the history of Buganda.

I intend to follow this preliminary probe into the work of the unknown composers of Buganda with a more extensive one, after the existing material has been spread out chronologically with some certainty. In this context I am waiting for the materialization of Mr. Evaristo Muyinda's recent statement5 that he intends to start writing his planned books on texts and history of Kiganda songs, an important undertaking that deserves every conceivable support.

THE STRUCTURE OF THE KIGANDA SCALE

This is a topic of acute relevance to our subject since the intervals and combinations we shall deal with are within the Kiganda tone system. In fact, the scale itself provides a firm background that determines to a certain degree the composition techniques, especially as regards "harmonic" concepts.

Important data about tuning procedure in Kiganda music and the nature of the scale are found in Wachsmann 1950 and 1953a. There is no doubt today that the Kiganda scale is tempered, in the sense that it is not based on natural intervals (except the octave). Whether the basic idea is an even division of the octave into five equal parts, however, remains to be proved. From the point of view of playing and composition techniques at least it is most convincingly so. I myself have not found any evidence that intervals are given different treatment according to which step of the scale they stand on. All intervals are treated as if in an equidistant pentatonic system, definitely at least in one

4. Hugh Tracey's recordings are available on AMA TR-137. Prof. K. P. Wachsmann's large collection, of which he played me a few items when we met in London a few years ago, is unfortunately not yet published. My own recordings of some 450 items from Buganda are preserved in the Phonographic Archive of the Austrian Academy of Sciences, Vienna.

5. In a letter to me from Mrs. E. Zirimu—January 30th, 1969.
of the two xylophone styles: the *amadinda*. On the other hand the actual measured tunings of Kiganda instruments\(^6\) often show considerable deviation from the equipentatonic mean of 240 cents, though never so far as to establish European minor thirds or seconds. On the *akadinda* musicians are usually reluctant to play any tune at arbitrary pitch levels and, it appears to me, this is not only for reasons of playing area. Mr. Muyinda, as I have often observed, is quite decided about playing *akadinda* tunes at certain pitch levels only, and I feel preferably at a level where, by chance of minor deviations from equidistant tuning, the Kiganda-fourth sounds as near as possible to a pure fourth. I may be mistaken here, but I feel that this observation must be mentioned.

From questioning the musicians it is also clear that in the Kiganda musical system there is nothing like a concept of minor thirds as opposed to seconds, but instead musicians have in mind an interval falling between these two European ones, i.e. about 240 cents. I should like to call this standard interval a Kiganda-second.

In Kiganda xylophone music an important concept is to define intervals in terms of instrumental playing, in terms of the spacing apart of xylophone slats. These "instrumental intervals" defined by distance of the beaters are freely translocated over the keyboard and still identified as the same intervals.

We have to realize that this concept, important to Baganda musicians, is hidden in European staff notation. The same Kiganda intervals may look like different ones when written in staff. For instance, what is written as a C-E or D-G is the same interval, namely a Kiganda-fourth. There is no distinction between thirds and fourths in the Kiganda musical system, though it may appear so from European notation. It is very important to keep this in mind when reading Kiganda music from staff. The same, of course, applies to what appears to be a distinction between minor thirds and seconds, for example E-G as compared with D-E.

Herein lies one of the major deficiencies of staff notation whatever virtues it may otherwise have. The number system avoids this difficulty altogether since it has no implied meaning referring to pitches.

There are six intervals in Kiganda xylophone music that can be described in terms of instrumental playing. On the xylophone these are defined by distance. For the time being we shall call these intervals by their nearest European equivalents, until some better African names have been found.

1. Prime (progression to the same slat) ........................................ —
2. Kiganda-second (progression to a neighbouring slat) .. on average 240 cents
3. Kiganda-fourth (jumping one slat) .. " 480 "
4. Kiganda-fifth (jumping two slats) .. " 720 "
5. Kiganda-seventh (jumping three slats) .. " 960 "
6. Octave (jumping four slats) .. —

The first five intervals are only used melodically in Kiganda music, the last, the octave, only harmonically.

These intervals are represented on the xylophones as follows:

![Diagram of xylophone intervals](image)

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6. A. M. Jones, London, has measured all my Uganda tunings, which I hope to publish later.
A Kiganda-fourth is on the average 18 cents smaller than a pure fourth. In spite of this it has melodically and harmonically a distinct fourth quality. This is why the use of the term “fourth” may be justified in this context, also for comparison with other areas of Africa. Even if we take wide variations in this interval—as often occur in the tunings—into account, the Kiganda-fourth is much further from a pure third (386 cents) than from a pure fourth (498 cents). Similarly with the Kiganda-fifth, an interval on the average 18 cents sharp of a pure fifth.

Europeans usually project their own tone system onto the Kiganda scale and almost invariably perceive the Kiganda notes in terms of an “anhemitonic” pentatonic scale, i.e. C, D, E, G, A.

Next, there is one factor in Kiganda xylophone music which reduces the six intervals we have distinguished to only three interval structures as I would propose to call this. This factor is the miko system, which applies to amadinda music. Elsewhere I have explained the miko system in detail (Kubik 1960). The following can only be a brief summary. According to Mr. Ephraim Bisase, Kampala, “muko” means “page”, (plural: miko). It may also mean “leaf” of a banana tree, “in which case it should be added: emiko gyendagala”, says Mr. Bisase. The miko are specific kinds of transposition in amadinda music. The principle is that the musicians have to remain within their restricted playing areas when transposing a musical piece a step lower or higher on the xylophone. But by transposition the playing areas would, of course, also be shifted. In order to avoid this, all notes that would fall out of the fixed playing areas are displaced by an octave. One result of this particular kind of transposition is that each muho may be appreciated almost as a different musical piece, since parts of the melodic patterns, though identical in structure, appear totally changed in shape in the transpositions.

Another consequence is that in each muko a different inherent melody looms up from the two important bottom notes called entengezi. Since it is the task of the third player to duplicate this inherent note pattern two octaves higher on the two top keys (ama-koonezi), each muko has a different third part (okukoonera).

Since the system is pentatonic every amadinda tune can appear in five different miko.

The miko system implies a notion of melody that may be strange to a foreigner. The Kiganda concept of melody is in fact much wider than found for example in European music. Although each of the five transpositions may be considered a different melody with regard to melodic shape, it is the same melody with regard to melodic structure. This is an important distinction to keep in mind. Octave displacement may change the melodic shape, but not its structure. The essential criterion is that the notion “melodic structure” includes the possibility of octave displacement of any note, while “melodic shape” does not.

In fact it is melodic structure that matters in the context of composition techniques, while melodic shape is important to the relationship between texts and instrumental patterns. Figure 4 may help to explain what I mean by melodic structure in the Kiganda musical system. The okwanwula part of the famous composition “Olutalo oh’we Ninsi” contains three notes which appear as follows in the five miko.

![Fig. 4](image-url)
The patterns shown above differ in melodic shape but are identical in melodic structure.

Consequently in the *miko* system several of the six possible intervals in Kiganda xylophone music must be considered structurally the same, for example: a descending Kiganda-second is the same as an ascending Kiganda-seventh (1-5 as compared with 1-5); or a descending Kiganda-fourth is identical with an ascending Kiganda-fifth. (1-4 as compared with 1-4). In the number notation this is perfectly well expressed, since the numbers remain identical in these cases.

In fact the *miko* system operates with only three interval notions: 1. Prime; 2. Kiganda-second (a) ascending (b) descending; 3. Kiganda-fourth (a) ascending (b) descending. The octave is excluded from this classification since it has no melodic function. All the intervals within the *miko* system are thought of as equal-sized. They may be transposed throughout the scale without any evidence that they are then appreciated as different. The assumption that the Kiganda scale is equipentatonic is, in fact, the only working hypothesis compatible with this analysis of composition techniques in *amadinda* music.

While interval structure or melodic structure is the fundamental notion to be worked on in the analysis of composition rules, melodic shape is more important as regards the question of the vocal melody being contained in the total instrumental pattern. This applies particularly to the *okunaga* part which is based on the vocal theme.

Just as important is the melodic shape of the "inherent rhythms" or "inherent melodies" in Kiganda xylophone music, a kind of *gestalt*-effect quite widespread in Central African instrumental music. (Kubik 1960; A. Tracey 1961; Kubik 1962). I have shown in a brief analysis of *ennanga* harp music, which is related to the amadinda, that the inherent note patterns looming out of the rapidly moving total image of the instrumental part represent various text phrases. (Kubik 1966/67).

In amadinda music their melodic shape cannot be retained in all transpositions. Octave displacement destroys individual inherent patterns in certain miko. Thus the "words" disappear too. The same applies to the *okunaga* part of any amadinda composition. In *muko* no. 3 of "Olutalo olwe Nsinsi" (see the published score in Kubik 1960, p. 19) it would be very difficult to recognize the basic words of the song which says "Olutalo olwe Nsinsi olwatta abantu" (The battle of Nsinsi killed many people), since those very notes of the *okunaga* part that represent these words are spaced a Kiganda-seventh apart. This partly explains why—in spite of the importance of the miko system—not all miko of a tune are equally popular and equally often played.

Of certain interest is the question of absolute pitch in Buganda. For some time there has been a controversy over this. (Kyagambidwa 1955, Wachsmann 1956b, Jones 1964). Although I have not yet completed the evaluation of my own collection of tunings from Uganda, I should like to give a brief summary of the main points I believe I have found.

Although amadinda and akadinda tuning models are perhaps identical in structure, it seems that they deliberately stand at different pitch levels. I have found the akadinda tuning model as a whole a little higher than that of the amadinda. By this I am not referring to the range of the xylophones, which is a phenomenon not connected with the level of the tuning models.

A typical example of these tuning models is the measurements Hugh Tracey made in the Kabaka's palace in 1952. In the middle octave the amadinda tuning was 388, 344, 304, 260, 228 v.p.s. (slats nos. 6-10) while the akadinda was 416, 364, 312, 280 and 232 v.p.s. (slats nos. 9-13).

The two tuning models which Baganda musicians seem to have in their mind consist of a ladder of absolute pitches approaching the above vibration numbers. There is a certain amount of tolerance, but comparison of many tunings has shown this quite clearly.
Psychologically tuning is a kind of "focussing", in which the musician brings the notes he attempts on his instrument into congruence with his inner tuning model, an inner pattern of approximate pitches to which he has been trained from early youth.

More than one tuning model may be present in a particular culture. In Buganda I feel there are two. In practice this means that in amadinda tunings, which correspond to the ennanga harp, one will always find a note near 344 v.p.s., (172 and 688 v.p.s. respectively in the other octaves) while on the akadinda there will always be a note very near 364 v.p.s. (respectively 728 and 182 v.p.s.). These "guiding" v.p.s. of 172 and 182 need not necessarily be the lowest notes of the xylophones, although this was found to be so in a few cases. Their position is quite independent of the range of the xylophone. Baganda musicians make both small and large xylophones with high tuning, and with low tuning, but this is irrelevant in this context. The amadinda and the akadinda can immediately be distinguished by the pitch levels of their tunings. This means that the actual notes of a particular xylophone can in principle start anywhere, but at some point they will always come near one of the two vibration numbers mentioned above. The akadinda scale is higher than the amadinda, "smaller" in Bantu terminology. This may be what the diminutive prefix -ka- really means in this context, taking into account the magnitude concept of notes in Kiganda music.

I found the two Kiganda "scales" to be roughly 100 cents apart, but minor fluctuations also occur. The akadinda tuning model, incidentally, also occurs in Busoga.

PART I

THE AMADINDA

The fundamental problem in this section is the extent to which the two basic interlocking parts depend on each other in melodic structure. As is now widely known, amadinda music is performed by three musicians, two sitting opposite each other. Holding two beaters each they play two equal-spaced note series in parallel octaves, combining them in duple-division type interlocking. The third part (okukoonera) performed by the third player on the two top slats (amakoone) is a duplication of the inherent bass melody that can be perceived by the attentive listener looming up from the two bottom keys (entengezi) as a result of the combination of the two basic parts. A few players in Buganda, particularly nowadays, feel at liberty to occasionally leave out or alter one or two of its notes during performance. Sometimes they may play it only in its approximate shape, especially when the other parts are constantly varied, as is the case in "Ennyana ekutudde" (no. 6). This, however, does not change the fundamental concept of the okukoonera part as a pattern deduced from the combined basic parts. The okukoonera part may be disregarded in the present investigation, since it does not add structurally to the two basic parts.

But what is the relationship of the two basic parts themselves? Are they constructed at the will of the composer, or are there certain rules for setting them out? If so, is it possible that the two parts might be entirely deduced from each other as the okukoonera part is deduced from them?

Though they possess a rich musical nomenclature, it appears that present-day musicians in Buganda cannot give a satisfactory answer as to rules for the composition of
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their xylophone music. They are in the wider sense of the word only interpreters, for nearly the entire repertoire of amadinda music is historical. This contrasts with the akadinda for which a few new songs have been composed recently and are now played in the “Kiganda orchestra.” However this does not imply that definite rules have never existed. On the contrary, they may have been known consciously to the ancient composers, or at least have existed as generally accepted norms of “musical behaviour” among the musician families responsible for the court music.

Our approach to this problem is therefore analytical. From the “behaviour” of melody in the two basic parts and their correlation we may try to distil the norms of composition that bound the ancient composers whom we do not know.

The basis of the present analysis is the 50 amadinda songs published at the end of this paper. Nearly all of them I have collected from Mr. Evaristo Muyinda and members of his music ensemble, a few from his pupils. Usually Muyinda did a final check with me so that the versions published here are to be considered what he taught me. I have also made recordings of most of them, in which Muyinda relates and explains the text and the history of each item as well. These are filed in the Phonographic Archive of the Austrian Academy of Sciences, Vienna. Each recording is accompanied by notes on circumstances and history, biographies, photographs and various observations. Many tunes were recorded more than once.

One of the striking features of Kiganda xylophone music is its overall harmonic impression. Though no other notes than octaves ever coincide (apart from hererophonic dissonances in the course of variation) the two basic parts always seem to be in perfect harmony. Perhaps it is not by chance that Kyagambiddwa (1955) uses the term “harmonize” quite often in his book. However, the Baganda do not use chordal harmony, all their music being in unison and octaves. The harmonic experience here is essentially melodic, a kind of consecutive harmony which has its roots in the preference for certain (consonant) intervals to follow one another in melodic succession. This harmonic effect is increased by the slight durational overlapping of the notes when played very fast. This is clearly visible in sonagrams, such as Prof. Walter Graf, University of Vienna, kindly made for me at my request.

By these observations we have encountered a key phenomenon in Kiganda music. How pronounced the harmonic effect really is can be proved by experiment. If you play amadinda music and miss the entrance point with your second part, as often happens to a beginner, the immediate result is disagreeable dissonance. The two combined parts do not produce that mellow and pleasing consonant sound that was praised even by the first explorers in Buganda, but rather unorganized series of notes which seem to clash against one another. Traditional musicians do not hesitate to disagree as soon as this happens, and the piece has to be started again.

But what has in fact happened? One can discover it visually if one writes any amadinda piece on paper so that the two parts are wrongly combined. Then you see that in the total pattern (the combination of the two basic parts) there occur many runs of Kiganda-seconds (or Kiganda-sevenths) as well as repetitions of the same note. I may reveal already that it is just these intervals that are not preferred in melodic progression within the total pattern. Their use in amadinda music is limited and subject to strict (unwritten) laws. If you examine amadinda compositions carefully you will discover that practically never do more than two identical notes follow one another in the total pattern. This is a strict law. On the other hand there are two typical intervals that seem to govern the scene. These are the Kiganda-fourth and -fifth. Obviously the preference for these intervals causes the overall harmonic effect. Though “tempered”, Kiganda-fourths and -fifths have a pronounced harmonic quality in contrast to Kiganda-seconds and -sevenths.
I have examined statistically all interval progressions occurring in the *amadinda* pieces published (a painstaking labour!). This took a long time, but the results are interesting. The point of departure for the investigation was the *okunaga* parts of all the songs. It is this part that forms the basis of the xylophone compositions and represents an abstracted form of the vocal theme, whereas the *okwawula* part to be inserted is a complementary and "harmonizing" melody.

At first I classified all the *okunaga* parts according to their number of notes (form numbers). They are 12, 18, 24 or more. This I did because of the possibility that different rules might apply to *okunaga* patterns of different length. I found this not to be the case only at the end of the investigation.

The main work was then to discover statistically how the second or contrasting part was normally set out to fit into the first one. For this purpose I had to examine one by one all the intervals occurring in the compositions (totalling 966). The original table with the results would be too "scopious" to be published here, but I will make the details available to readers if requested.

Having completed this, I did a brief sampling from the point of view of the *okwawula*. This gave approximately the same proportion of intervals used in each particular context as the other way round. This shows that the rules I have distilled from this examination are valid reciprocally, from *okunaga* to *okwawula* and vice versa.

I have considered only the basic structure of *amadinda* patterns. No attention was given to melodic variation, first because it is comparatively rare, and secondly because in this music variations go deliberately against the composition rules, in order to create excitement. As in *embara* music of neighbouring Busoga, variation in Kiganda xylophone music causes transient heterophony. It also deliberately violates the principle of octave relationship between the *okukoonera* part and the basic parts.

I should like to set out the result of this statistical examination in staff, because it is more visually obvious. *Okunaga* notes are written with up-tails, the *okwawula* note that may or may not be inserted with a down-tail. Combinations “not allowed” in this music are crossed out. Rare combinations are marked by dotted crosses. We must also keep in mind that these “rules” apply to all five miko transpositions. If we see, for example, that between two C’s no other C may be inserted, it automatically implies that between two D’s no other D may be put and so forth. I have only given one muko in staff notation. But in order to remind the reader of the wider validity of these rules, all five miko are written in number notation next to each combination.

I. Non-occurring combinations.
II. Rare passages.

1. \[ \text{Fig. 5 (b)} \]

III. Preferred combinations.

1. \[ \text{Fig. 5 (c)} \]

Composition rules in the microstructure of amadinda music (the total pattern).

From the above illustration we learn that there are seven melodic progressions “not allowed” in the total pattern of amadinda tunes. By “not allowed” I mean the statistical fact that these progressions never occur, apart from one or two extraordinary exceptions. This non-occurrence must certainly have reasons.

We may at first define these seven passages in terms of instrumental playing. The first set of rules, set out below, is concerned with what to do when the melody in one of the two basic parts proceeds either to the same note (prime) or to a neighbouring note (Kiganda-second). The latter progression may be either upwards or downwards, while we should not forget that in one of the miiko you will get a Kiganda-seventh instead of a Kiganda-second (structurally the same interval, see Figure 5, 1/5 and 6).

The fundamental rules for amadinda music are:

1. Between two identical notes in one part, you may not put in the other part:
   (a) the same note (giving three similar notes following each other, e.g. I/1).
   (b) either of the two adjacent notes, upwards or downwards. (I/2 and 3).

2. If two notes of one part form:
   (a) a descending Kiganda-second (= rising Kiganda-seventh), neither of these two notes may be used in the other part (I/5 and 6).
   (b) a rising Kiganda-second (= descending Kiganda-seventh), the first of the two notes only is prohibited in the other part (I/4).

Note that the second note is very often put between, so much so that I have included this combination under the heading “Preferred Combinations” (III/6). This is an interesting case, and always takes place in one particular melodic context: it is meant to create a special okukoonera pattern, such as is found for instance in “Kalagala e Bembe” (no. 35). It occurs in many other
tunes as well. For further reference I should like to call this short note sequence the Kalagala-e-Bembe particle.

(c) a rising Kiganda-fourth (= descending Kiganda-fifth), you may not put the structurally intervening note in the other part, which would give an ascending run of Kiganda-seconds, e.g. 1-2-3 or 5-1-2 (1/7).

These seven strictly non-occurring passages yield a total number of \[7 \times 5 = 35\] "unpermissible" combinations in the whole system.

There are four further combinations under "Rare passages". (Section II).

It is very difficult to explain why these are comparatively rare. Finally those passages under "Preferred Combinations":

3. Where the first part forms a Prime (two identical notes):
   (a) the preferred note in the second part is a Kiganda-fourth down (= Kiganda-fifth up) (III/1).
   (b) Next in preference is a Kiganda-fourth up (= Kiganda-fifth down) (III/2).

4. Where the first part forms:
   (a) a descending Kiganda-second (= rising Kiganda-seventh), the preferred note in the second part is a Kiganda-fourth up, counted from the first note (III/3).
   (b) a rising Kiganda-second (= descending Kiganda-seventh), three possible notes are equally preferable for the second part: Kiganda-fourth up, -second up, and -second down, all counted from the first note (III/4, 5, 6).

5. Where the first part forms:
   (a) a rising Kiganda-fourth (= descending Kiganda-fifth), equally preferable for the second part are: Kiganda-second down, and -fourth up. (III/7 and 8).
   (b) a descending Kiganda-fourth (= rising Kiganda-fifth) the preferred note is the Prime (same as the first note). (III/9).

Note that the opposite harmonization of this interval, doubling the second note rather than the first, is among the rare passages (II/4).

Generally we can say that the most binding rules come into play when a prime or Kiganda-second occur in one part. In the case of a prime (Rule 3) out of a total of 174 cases in my statistical table, I had no less than 126 where the lower -fourth was used. In the case of a rising second (Rule 4b) in 85 cases I had the upper -fourth and in 62 cases the lower -second (out of 200) which means that both intervals are acceptable.

But the most unequivocal rule (Rule 4a) is applied to the descending second (III/3). Out of a total of 197 no less than 159 cases were harmonized with the upper fourth. As we shall see later this is a most important progression and almost a model example of the fundamental importance of the Kiganda-fourth as a harmonizing interval.

**INTERPRETATION OF THE RULES**

An important question now arises from this probe into the "behaviour" of amadinda patterns: why is it so? Why are certain progressions absent and other progressions so abundantly used?

The problem is not so straight-lined as to allow a single explanation for every rule. It is now clear that though okemaga and okwawula are dependent upon each other, this interdependence is not to the degree that one part could be deduced entirely from the
other by applying a single set of rules. There is always more than one possibility for the interlocking notes, although this is further limited by factors we have not yet touched.

The matter is, however, very complex and the "rules" found in the above section are in themselves already the outcome of this complexity. In composing Kiganda xylophone music quite a number of factors are at work simultaneously. Therefore, the actual setting of the two parts against each other is always a sort of compromise. Generally these factors may be classified as:

(a) a desire for harmonious sound, hence the preference of interlocking in fourths and fifths.
(b) the need for certain melodic passages to appear in the total pattern, for example the Kalagala-e-Bembe pattern or linking melodic runs.
(c) the desire for two or more tonal steps within one tune, which is emphasized by the creation of "harmonic segments."
(d) formal requirements, for example the tendency towards bipartite form in many tunes.
(e) the importance of the inherent-rhythm phenomenon in connection with the verbal associations it calls forth.
(f) the need for the vocal melody to be contained in the instrumental version, though it is not necessarily sung while playing.

There are many more factors. All of them interplay and produce as a result what we have experienced as a distinct "behaviour" of amadinda melodies. The balancing out of all these requirements has demanded great artistic skill and ingenuity of the traditional composers in Buganda, to create tunes which are perfect compositions in that all the requirements are fulfilled to the satisfaction of listeners and participants.

The preference given to Kiganda-fourths (resp. Kiganda-fifths) in interlocking is mainly due to two factors:
1. a desire for harmony, because these are the only harmonious intervals possible in a near-equipentatonic system. It is also essential to know that in this interlocking music, harmony proceeds in a zigzag fashion (in the total pattern), i.e. individual notes of either part harmonize with the preceding note of the other part. That is why in the composition rules we always count the interlocking note from the first one, when two notes are given.
2. the necessity for establishing the inherent-rhythm phenomenon. As I have outlined elsewhere (Kubik 1962 etc.) this gestalt-effect present in many types of African instrumental music depends on a number of things one of which is the presence of fast sequences of disjunct intervals. Within the miho system the largest interval is the Kiganda-fourth (ascending and descending). Its predominant use as an interlocking interval guarantees the appearance of this audio-psychological phenomenon, which is a strong stimulus for text invention. Fourths-interlocking greatly favours hearing at two or three pitch levels.

The aversion to interlocking in seconds is also explained on the same grounds. Such interlocking would cause a steady harmonic clash between consecutive seconds in this fast flowing music. It would extinguish the inherent-rhythm effect and with it the possibility of hearing word phrases in the total instrumental pattern. Therefore this kind of setting is strictly avoided, except for short melodic runs as a connection between the harmonic segments or particularly audible inherent melodies such as those okukoonera patterns where the characteristic Kalagala-e-Bembe particle occurs. There are a number of standard short melodic phrases which do not fall into the fourths-fifths-type interlocking, and which may be generally classified as Intermediate melodic runs. They connect the larger harmonic segments that stand on different tonal steps. The 3-2-1 particle is a typical example, obtained by interlocking a 3.1. progression in one part with a 2 in the other (see III/10). This gives a typical short downward run.
While ladder-type runs may be used for purely melodic (connecting) reasons, in order to link the harmonic segments these runs characteristically always appear in a downward direction. The retrograde version of the 3-2-1 particle, which would be 1-2-3 is absolutely avoided. (Figure 5, I/7 and Rule 2c.)

Like many other peoples in Africa south of the Sahara, the Baganda seem to have an aversion to ascending scalar melodies. In amadinda total patterns, for instance, you will never find more than two notes moving upwards in seconds. The ultimate psychological cause of this wide-spread African trait has not yet fully been assessed.

The most unexpected composition rule is the non-occurrence of more than two repeated notes. There is no argument against this on harmonic grounds, except that it would disturb the total impression of interlocking fourths-fifths harmony if this were the basic aim. But the rule is as strict as the one concerning runs of ascending seconds. In fact the combination never occurs except in extremely rare cases. Consequently the same note never appears more than twice in succession in the total patterns. But strangely enough this rule does not appear to be valid in the xylophone style that is most closely related to the amadinda: the embaire of Busoga. The styles are so close that it has been customary in Buganda to adopt embaire tunes from this former tributary state and play them on the amadinda. “Alisufudi” (no. 16) is an example in our collection, known in Busoga as “Mobuka nkomera” or “Moituma nkomera”. The Kisoga okwawula is slightly different from the Kiganda. Okumaga is the same. Obviously the Baganda musicians have altered what was not in accordance with their own composition rules.

In the second xylophone style of Buganda, akadinda, there is also no aversion to duplication of primes; on the contrary, akadinda harmonization emphasizes the prime and the Kiganda-fourth, as we shall see later. Up to three repeated notes are customary in the total patterns of akadinda music.

What then is the explanation for this strange fact? I am convinced that it is to be found in the field of technique rather than harmony.

It is common knowledge in Buganda that amadinda music and ennanga harp music have the same musical structure. Baganda musicians often insist that amadinda songs were originally played on the harp and later transferred to the xylophone. (cf. Sempewa in Kubik 1964). The same songs are played on these two instruments, the okunaga part being identical with the harpist’s right hand part (also called okunaga) and the okwawula part being identical with his left hand part.

In playing, however, it makes a great difference whether this combination has to be produced by two men on the xylophone, or by only one on the harp. If these songs were originally composed for voice and harp, it is likely that the playing technique of the harp has had an influence on the structure of the music. This is in fact what I consider responsible for the non-occurrence of prime-interlocking in amadinda music.

To pluck the same string on the harp several times with alternating hands at that enormous speed is technically very difficult and inevitably holds up the flow of the performance. Anyone who has tried to master the ennanga will discover this for himself.

Secondly, the Kiganda harp yields long notes that actually overlap more than those of the amadinda, which increases the harmonic impression, though on the harp too no notes other than octaves are played simultaneously.

Thirdly there is a special device on the harp, the rings made of varanus lizard skin, against which the strings buzz when plucked. This has a double purpose, to give the harp its characteristic buzzing or crackling sound, and also to increase the loudness of the notes and to lengthen their duration. If you pluck the same string repeatedly this effect is bound to decrease because thereby you also damp it.

7. I hope eventually to compare these two versions.
THE STRUCTURE OF NUCLEAR AND CONTRASTING PATTERNS

This statistical examination of the microstructure has brought to light a number of characteristics in the technique of composing an amadinda tune. Now this needs amplification. The first objection that comes to mind is whether the number of possible okwawula notes that can be inserted might not be subject to further limitation if we examined sections of not only two, but three, four, five and more notes in the okunaga, in fact whole groups. Is it not likely that composition techniques in Kiganda music apply to whole phrases rather than microstructures?

Theoretically we would now have to be consequent and start examining groups of three notes to see how the contrasting part behaves. But anyone who has operated with permutations in mathematics will understand that this is an almost impossible enterprise. Actually it is a computer’s work, which is unfortunately beyond my limited means. This would then have to be extended to an examination of four notes, five notes and so on. The value of such an investigation may, however, be limited, since there is no certainty that such arbitrarily chosen “groups” correspond with what Baganda musicians themselves consider to be groups.

But here we encounter a difficulty. What is a melodic group in an amadinda tune? Obviously amadinda patterns are thought as “additive” phrases rather than as recurrent metric sections. This can be dealt with from the angle of the total pattern, as well as that of individual patterns. Before we go any further, therefore, we have to give detailed consideration to the structure of the basic patterns, starting with an introduction into the Luganda terminology.

I have chosen the terms nuclear and contrasting patterns for the two basic parts in Kiganda xylophone music, to outline the traditionally accepted function of these patterns.

The terms used for these two patterns are okunaga and okwawula. Both terms are verbs. The one who plays okunaga is called omuna^i (pi. Abanasf). The one who plays okwawula is called Omwa^i (pi. Abaawusf). Mr. Charles Sekintu, Curator of the Uganda Museum, has proposed the following translations of these terms, which he also explains.

Luganda musical terms are not usually used in ordinary language, he says. Therefore it is often difficult to outline their meaning in clear terms. “Okunaga”, says Mr. Sekintu, conveys the notion “to hit”, which could mean “to start striking” the xylophone slats. The term “okwawula” seems to be related to “okwawu^a” (to divide). Okwawula conveys the meaning “to separate”, “to differentiate”, “to link”, “something between two that separates and at the same time links them, solders them together.” In another context the term okwawula is applied in religious practice to the ordination of a priest, who as a clergyman (omwawule) is separated from other people.

The third term, “okukoonera”, conveys the meaning of striking the two top slats of the xylophone. It might be related to “okukona” (to knock), says Mr. Sekintu. This could perhaps have the meaning “to make the music sound more regularly”. The term “okukoonera” is not used in ordinary language.

The word “amadinda” itself is explained as follows: “Edinda” is one xylophone slat, “amadinda” many xylophone slats.

It is interesting to note that in other East African xylophone musics there are terms with similar meaning, descriptive of the task of the players. The Makonde in northern Mozambique describe the task of the second player of a dimbila log xylophone, who plays an interlocking pattern, as kujulola. It might not be impossible that “kujalola” in Makonde and “okwawula” in Luganda are related. It would be elucidating to make a comparative linguistic examination of East African nomenclature.

The Luganda terms, however descriptive of the function of the individual parts, offer little indication as to their structural characteristics. I should like to outline below the main characteristics of the two basic parts in amadinda music based on my own observations in the field.
1. The okunaga and okwawula parts are equal-spaced tone-rows of similar structural characteristics and of equal right. This is emphasized by the fact that composition rules as applied to them are valid reciprocally. Each stroke covers two elementary pulses.

2. In a few compositions the okwawula part is only a short repetitive phrase. Similarly with the okunaga, in very rare cases (see “Musenze alanda”, no. 15). It remains to be found out whether this kind of xylophone tune represents another historical stratum.

3. Amadinda patterns are of various lengths. It is striking that the most important form numbers (= note numbers of individual parts) are 12, 18 and 24, which yields in the total pattern the form numbers 24, 36 and 48, the same as we shall encounter in akadinda music. There are also a few patterns of odd length, which have 25 and 27 notes (see the transcriptions). One composition, “Agenda nomulungi azaawa” has 35 notes, which yields a form number of 70 elementary pulses.

4. The speed of amadinda music is, on average, 300 M.M. for each stroke in the basic patterns. This gives a speed of 600 M.M. for the elementary pulses.

5. Generally the okunaga part is based on the theme of the vocal part (sung in the harp versions), the okunaga being an abstraction of, and in unison relation with the notes of the vocal theme.

6. The okunaga and okwawula part, though in themselves independent melodies, are a result of the technical organization of the music. It is the total pattern (combination of these two parts) that is clearly aimed at, because it is the total pattern which contains the exact “words” of the song: the vocal theme and all text variations. Connected with the total pattern is the inherent-rhythm phenomenon. These inherent note-patterns suggest words, and represent textual episodes in the song. (cf. Kubik 1966/67).

7. Most okunaga and okwawula patterns are “additive” in their inner structure, by which I mean that there are no recurrent metrical divisions, though the individual patterns are always absorbed in an overall meter defined by the form number of the total pattern.

How do the Baganda musicians conceive these irregular tone-rows? Do they think them as against a meter in 3/4, 4/4 or 5/4-time as for example Kyagambiddwa suggests in his transcriptions (1955)?

It is difficult to ask the musicians directly. There is, however, one valuable test to find out about traditional concepts of such patterns. This is to observe how these patterns are taught. When Mr. Muyinda taught me xylophone music, it was enlightening to see how he introduced his pupils to a new tune. He does not expect one to learn the whole tone-row of 18, 24 or more notes at once, nor does he proceed note by note. He always cuts the pattern into groups of notes or phrases. These groups are not metrical but generally irregular in length.

How these patterns are dissected for the purpose of teaching is in my opinion a sure indicator of how the musician himself thinks them. I should like to show this with an example that I remember very well. When Mr. Muyinda taught me the okunaga part of

![Fig. 7](#)

Teaching the okunaga part of “Ssematimba . . .”

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8. Some better term will have to be found to replace “additive”. It is useful when employed in opposition to “divisive”, but insufficient to describe concepts of such patterns in various areas of Africa. There is hardly an African musician who thinks additive patterns as an addition of metric particles such as 2 + 2 + 3, etc.
“Ssematimba ne Kikwabanga” in December, 1959, he split up the theme into four sections which he played to me one by one. After every single section he stopped until I had learned.

I could give many more examples. “Agenda nomulungi azaawa” with its 35 notes was also very interesting, since it was split up into several groups of different lengths. But what is important is the principle to be found here. Baganda musicians obviously do not think the nuclear and contrasting patterns of amadinda music as “against” a meter or anything like. They think them in phrases of often changing irregular lengths. I have noticed, however, that individual musicians often have their individual groupings. For example musicians near Nkokonjeru that I visited in 1960 taught me “Ganga alula” but in a different phrasing from Muyinda, though the notes were the same.

8. In many amadinda tunes there is a tendency towards bipartite organization, which is visible both in the individual parts and the total pattern. I only give one example but this factor is present in many xylophone pieces, sometimes being further subdivided:

\[
\begin{align*}
|2.1.2.5.2.2.2.5.5|2.1.2.5.2.1.2.4.4| \\
\text{Bipartite organization of amadinda tunes} \\
\text{(Example: “Naagenda kasana nga bulaba”, no. 12, okunaga part)}
\end{align*}
\]

This bipartite form seems to imply a contrast idea, which is also often expressed by a shift of the tonal steps. Compare the ending of the first section in the above example which is 2.2.5.5. with that of the second section which is 1.2.4.4.

Other amadinda tunes have more complicated forms, tripartite, etc.

9. An important characteristic of amadinda tunes is the presence of tonal steps. The tune always shifts from one to another in the unfolding of the composition, predominantly by step. These tonal centres are audible both in the individual parts, when taken separately, and in the total pattern. It is an important composition principle that the tonal steps be observed when the two basic parts are set out against each other.

With these nine points in mind we can now set out on a wider examination of amadinda composition techniques paying attention to melodic groups and other major structural features.

TYPICAL PROGRESSIONS AND HARMONIC SEGMENTS

In all musics there are kinds of melodic movement which we may call reduplicative. By this I mean continuous melodic progression in the same direction and by the same interval. The simplest example is a steady progression to an equal note, a series of primes. Another is movement from step to step in the scale (upwards or downwards)—in xylophone music to the next slat. This gives a ladder-type melody. Finally such movement may be a progression of disjunct intervals of the same type, for example a cycle of fourths, upwards or downwards.

These reduplicative movements have an enormous experimental value in the structural examination of African musics. For if they occur in one part they may demand similar progressions in the counterpart—or not! Whether they do or do not is a criterion that may help us assess to what extent rules are obligatory in a specific music. In the final part of this examination of amadinda composition techniques, the objective is to find out whether reduplicative movement in one part causes definite reactions in the other.

I. Reduplication of the prime

Repetitions of one note may occur both in okunaga and okwawula, apparently more often in okunaga though there seems to be no definite rule about it.
No one note, however, must appear more than three times in succession in either of the basic parts. The only exceptions I have found are “Balinserekerera balinsala okyambe” (no. 29) and one tune that originally came from Busoga (no. 10). Reduplications may also occur as a technique of variation (see “Kawumpuli”, no. 31) but this is a phenomenon outside the scope of this study.

What does the other part do when a note is played three times in repetition? The transcriptions show that such a pattern may be “harmonized” either in parallel or oblique movement, the latter both ascending or descending. Apart from the fact that only fourths and fifths must be used (in accordance with rules under section I) this examination gives us no novelty. No further rules seem to exist.

II. Joined reduplications of prime and Kiganda-fourths or -fifths

There are cases of reduplication which demand our special attention since the harmonic feel of the tune is largely determined by them. I mean those instances where the reduplication of one note is followed by a reduplication of another which is in harmonic relation to it (either a fourth or a fifth). For example, phrases like 1.1.4.4. etc. How does the other part then react?

Here a most significant thing occurs. In most cases the reaction is to produce a kind of “mirror image” by using the same notes in the opposing part but in a melodically complementary shape. There are many instructive examples in our transcriptions. I should like to give two typical ones in staff notation. The reader will find this a visual aid and discover many more for himself.

1. Phrase in “Mugowa t w a t a k ia e r” (No. 24)

2. Phrase in “Ala Bukerera kalagira umwanyi” (No. 48)

Such passages are typical of amadinda music. They cause a persistent harmony, for which reason I should like to call them “harmonic segments”. In a single composition there may occur two or more such segments on different tonal steps. These may be linked by all sorts of intermediate runs, sequences, etc.

The harmonic segments need not necessarily be as extensive as in the examples shown above. Sometimes they only comprise three or four notes harmonized in mirror-type
interlocking. But this always suffices to express distinct tonal steps. In addition they always yield a distinct okukoonera pattern.

Tonal steps are an essential constituent of amadinda and also akadinda music. The tune shifts from one to another. There is no composition in which one could say only one tonal step occurs. In many tunes there is a shift between two tonal steps, and there are good number with three or more. Theoretically five tonal steps are possible in the miko system.

III. Reduplication in Kiganda-seconds
(a) Descending

Melodic movement in descending seconds in amadinda music is regularly harmonized with the upper Kiganda-fourth, which starts one pulse later. Thus a parallel movement in Kiganda-fourths is produced. The harmonic effect of this is similar to that of singing in parallel “tempered” fourths with the difference that Kiganda harmony is not simultaneous. I should like to call this type of harmonization, which we are likely to meet in other areas of Africa as well, interlocking parallelism in fourths.

Most probably it is not by chance that this kind of melodic-harmonic progression is so consistently used in amadinda music. It is a most typical one that shows the very basis of Kiganda consecutive harmony. It is a significant fact that this basis is most clearly visible just in that kind of movement which is most comfortable to African musicians: a descending movement by step.

I have selected an example where it is carried out over a range of more than one octave. The illustration also shows how this type of harmonization appears in the miko system.

![Fig. 9](image_url)

Examples of interlocking parallelism in descending fourths: “Mugowa lwatakise”, no. 24.

In examining the above example we must not forget the miko system, otherwise the structural character of this combination may not be visible at once. That it is really interlocking parallelism can immediately be experienced, if you transpose the first note of the okunaga and the first three notes of the okwawula one octave higher.

The same kind of harmonic sequence also occurs in akadinda music in one of the most important okwawula patterns, the one called “Kulya-kulya-kulya” (see Part II, The Akadinda).

This type of interlocking parallelism has an interesting technical aspect. On the xylophone it appears as a kind of “span-process” (Überspringverfahren), in which the harmonizing interval is always the next key but one. I have found this span-process to be a most important African technique in multi-part vocal music in many parts of Central and East Africa (Kubik 1968). A number of apparently different types of multi-part music in this vast area are based on this common technical principle, which is that the harmonizing note for a given note is always found in the next note but one of the scale.

It can almost be considered an “instrumental technique”. It does not a priori entail a preference for certain intervals. When the span-process is applied by singers or players in different tone-systems in the various regions of Africa, it yields entirely different
results. In heptatonic music it gives thirds, in a near-equipentatonic musical system such as the Kiganda one it gives parallelism in Kiganda-fourths. In other areas it may give still stranger sequences of intervals. It may be present in those musics that use simultaneous harmony, but it may also be at work where consecutive or interlocking harmony is used, as in southern Uganda.

(b) Ascending

What happens when reduplication in seconds occurs in ascending movement? We may hardly expect similar interlocking parallelism because this would give an ascending ladder-type melody in the total pattern. The most typical and frequent combination I have found is the one in “Aka•tvologomd!” (no. 49). In the okwawula part there is a five note phrase ascending in seconds. It is harmonized in the okunaga as shown in the following illustration.

What we learn from the above illustration is surprising. At the beginning it looks like another fourths harmonization, but then a sudden change occurs which yields a 3-2-1 run in the total pattern, and it ends with a Kalagala-e-Bembe particle. Obviously the Baganda composers have tried to avoid parallelism in this case. In fact, a fourth-parallelism would not have given a harmonious result as it does in the descending form because a fourth up from the first note is a second to the following one, as can easily be seen. This contrasts with descending fourth-parallelism, in which all the constituent intervals (in the miko system—see page 00) are fourths, forming a kind of fourths cycle in the total pattern. It would also be disagreeable if the ascending pattern were harmonized with interlocking lower Kiganda-fourths. This would give interval progressions such as 1-4-2-5-3- etc. which is a cycle of upper and lower Kiganda-fourths, which does not sound very harmonious either. The best solution is the one the Baganda composers have found which is demonstrated by the above example. It is essentially this: the ascending pattern in seconds is countered with a kind of zig-zag movement in the opposing part, which creates an almost polyphonic interlocking.

Similar combinations to “Aka•tvologoma” occur throughout in the amadinda tunes. See for example “Agenda nomulungi azaawa” (no. 50) where the Kalagala-e-Bembe particle occurs at the beginning of such a phrase.

Ascending patterns are rare even in the individual parts, and therefore I am rather hesitant to give any final conclusions on this type. What we know for certain is that when one part moves in ascending seconds the other does not do the same in parallel but interlocks mostly in counter motion.

We now give a brief summary of what we have found in the composition techniques of amadinda music.

There are definite composition rules in amadinda music but the final appearance of a tune is a compromise determined by many often contradictory factors. These factors are not only musical ones, but there is also an influence from the text.

Most composition rules do not have absolute validity if considered separately. They are applied in combination. This makes composing Kiganda music a most complex
and skilful art. There are, however, a few strict rules which must always be observed, such as the seven non-occurrent combinations. Two very strict rules are applied from the point of view of the total pattern: that never more than two identical notes should be allowed, or two neighbouring notes in ascending motion. Okwawula can be considered as performers’ patterns with certain structural characteristics. They aim at creating the total pattern. Composition rules are to be understood primarily from the point of view of the total pattern.

A typology of melodic movement in amadinda music is possible both from the point of view of the total pattern and from each of the combining parts. We have enumerated a few important ones such as (a) mirror-type combinations, (b) interlocking descending fourths-sequences, and (c) various kinds of intermediate melodic runs which are always conceived in a descending direction.

An important feature of amadinda music is the existence of a shift between tonal steps, evident both in the total pattern and the individual parts.

Bipartite form is widespread in this music, and may be further subdivided. Generally individual melodic phrases may appear repeated in the total pattern at several places. The bipartite form expresses itself in many variants, for example A + B + A + B₁.

Amadinda tunes cause a picture-puzzle effect. Melodic and rhythmic elements in the total pattern may be perceived in various groupings and alternately felt to belong to this or that group.

The dominant type of interlocking practised in amadinda music is that of Kiganda-fourths, both upper and lower.

PART II

THE AKADINDA

THE NUCLEAR PATTERN

The basis of the following investigation is the 62 akadinda compositions in the transcription part of this paper. The major part is historical songs that were played in the Kabaka’s court. But as is known the akadinda has also been performed outside the enclosure for the last fifteen to twenty years, which was not its original use. It now forms part of the so-called Kiganda orchestra in which the xylophone—originally unaccompanied—now stands in the centre of an ensemble of four drums, rattles, flutes and fiddles (Kubik 1960, page 16).

It appears that Mr. Muyinda is the main initiator of the Kiganda orchestra. He is also the one who originally (1957/58) trained the now popular Kiganda orchestra of the blind musicians in the Agricultural Training Centre of the Uganda Foundation for the Blind, at Salama. Since 1959 the blind have, however, continued on their own. For over ten years they have handled the akadinda songs they learned from Mr. Muyinda as their own endogene tradition, without further outside instruction, and handed over the music to each fresh intake arriving to receive training in agriculture.

This fact makes Salama almost a natural scientific experiment, suitable for a study of change and stability in a tradition. It is also a place where new akadinda tunes have been composed in the traditional style and, therefore, a rare opportunity to study composition techniques live.¹⁰

Most of the compositions published here I collected from them. Usually I checked them with Mr. Muyinda, at least those they have learned from him. But where the blinds’ version is different from his, I have marked this specially.

The new songs composed by the blind follow the traditional composition techniques. But the blind only use two okwawula patterns (“Kulya-kulya” and “Katongole”). The

¹⁰. It is my intention to give a full account of the development of music among the Salama blind at a later date.
text of the new songs is topical, for the most part, no longer connected with the Kabaka’s court. Occasionally in the Kiganda orchestra the vocal melody is also sung, although the singers are drowned by the battery and the xylophone, and could hardly be heard on a panorama-type recording. A few of their modern songs are attributed to Mr. Muyinda, e.g. “Njagala okuddayo e Bukunja” (no. 62).

As is now generally known, akadinda music is different in structure and playing technique from amadinda music. The 22-key type can be played by six musicians, three sitting opposite each other, or by five, if one of the abawu^i takes the task of two people. The 17-key instrument can also be played by five or six people, but more often this shorter instrument is played by four or even three people. In the latter case one omunavy^i plays the okunaga part in parallel octaves. Two abawu^i sit opposite him and each plays the okwawula pattern an octave apart.

The Akadinda is played in triple-division interlocking. This important interlocking model was first discovered by Jones in drumming of the Bemba in Zambia (Jones 1949); it occurs in many parts of Central Africa, in fact it appears to be a fairly widespread rhythmic heritage of Bantu Africa. Akadinda music is structurally not an isolated phenomenon at all, though it may have appeared so. Recently Lois Anderson, who has completed a survey of xylophone playing in East Africa, appears to have found a parallel in another type of xylophone music in Uganda itself. “The only style which is comparable to this” she writes about the akadinda, “is that used by the Padhola, although an important difference is the scale structure used” (Anderson 1967, page 69).

An important difference between akadinda and amadinda music lies in the structure of the nuclear pattern. Another is the particular character of the okwawula in the akadinda: there are a limited number of standard okwawuLa patterns in the akadinda, which are used in many tunes, whereas no such restriction exists in amadinda music.

These are the main characteristics of akadinda nuclear patterns:

1. Like amadinda they are an equal-spaced series of notes.
2. Each note covers three pulses.
3. Akadinda nuclear patterns always have regular form numbers. The most common are 8, 12 and 16. A few have 18 or 20.
4. The average speed is 200 M.M. per note of the nuclear pattern, which gives a speed of 600 M.M. to the elementary pulses, the same as in amadinda music!
5. The nuclear pattern is laid under the vocal theme. It condenses the vocal theme into an equal-spaced note series in unison relation with it. Mr. Maurice Djenda, who visited Salama with me, feels the akadinda nuclear patterns as a kind of “bass” below the vocal melody. In the Kiganda orchestra the real “bass” is the Empunyi drum, which plays a series of regular beats coinciding with every second note in the nuclear pattern.
6. In contrast to the amadinda, akadinda nuclear patterns have a pronounced tendency towards divisive inner rhythmic structure (Figure 11). Played by themselves they may often give a rather un-African impression (see also Jones 1964, page 140).

![Fig. 11](image)

Example of divisive rhythm in an akadinda nuclear pattern: “Kisawo . . .”, no. 51.

7. There is always one note that tends to recur regularly. I propose to call it the guide-note. This note is of utmost importance to the composition rules.

The beats of the Empunyi drum in the Kiganda orchestra usually coincide with the guide-note in 8-note and 16-note patterns, which stresses its importance. I
should like to give an example of a pattern where the presence of the “guide-note”
can be seen. I have drawn a square around the guide-note in order to distinguish it.
(Figure 12).
At the beginning of a nuclear pattern the tune often jumps a fourth upwards
from the guide-note. Europeans are strongly inclined to hear this as an up-beat
and then put a barline after the guide-note, which is misleading.

![Fig. 12](image)
The guide-note in akadinda nuclear patterns: “Bogerera . . .”, no. 53.

In a few songs e.g. “Balinserekerera balinsala okyambe” (no. 52) the guide-note
occurs throughout, in other songs it may be left out in some places.

Studying this we make one more significant observation. In 16-note nuclear
patterns the guide-note principally occurs every 4th note. The same applies to
8-note patterns. Here it sometimes may also occur every other note, e.g. in “Matu
ga njobe” (no. 64). The situation is quite different with 12-note patterns, where it
occurs principally every third note. (See the above example, Figure 12). There are
a few exceptions to this rule in the present collection which have an important
significance (e.g. “Ganga alula”, no. 76).

A few compositions have no guide-note, e.g. “Kisawo kya muwabutwa . . .” (no.
51), “Abe mbuga basengeja” (no. 60), “Bijja bisamba endege” (no. 94) etc. All this
has an effect on the composition rules.

The guide-note may occur on any level. In most of the tunes in our collection
it is note 2, but it may also be 5, 4 etc.

8. The melodic compass of the nuclear pattern is five notes in most cases. In a good
number of tunes it is four notes. In one exceptional case (“Ssematimba ne Kikwa-
banga”, no. 58) it was six notes and in another (“Kawutayeggalidde”, no. 101) only
three notes.

9. Another striking feature of the nuclear patterns is their slightly falling melodic
line regarded as a whole. In almost all compositions the ending note is lower than
the starting one. The melodic peak may occur immediately after the beginning,
(e.g. “Matu ga njobe”, no. 64), or it may be saved for the second half of the pattern,
only to fall abruptly afterwards (e.g. “Envubu terindma busjba”, no. 97).

10. There is a pronounced tendency towards bipartite form. A typical example is
“Omulwadde w’envumea . . .” (no. 73). The two parts are of equal length and have
different tonal contents. The second section may be melodically reminiscent of the
first one in some parts. Some patterns may have a tripartite form, e.g. “Twewanye
. . .” (no. 102).

11. The nuclear pattern also implies tonal steps, which may number from two to four.
These can be recognized quite clearly by listening to the vocal theme behind the
instrumental layout. Bipartite form and tonal steps cause a kind of contrast relation
between the two sections of the nuclear pattern, the second one having almost a
responsorial quality.

**TYPOLOGY OF OKWAWULA PATTERNS IN AKADINDA MUSIC**

There is a limited number of fixed okwawula patterns in akadinda music. These are
combined with the nuclear patterns in a certain predetermined way. Each of these
patterns may appear in slight variants, that is, in a form adapted to the tonal progressions
of the okumaga part and/or to the notes of the vocal theme. The demands of harmony and
text melody may compensate or contradict each other, which then leads to a compromise. A typical example of a rather far-reaching adaption of an okwawula pattern is “Omulwadde w’emunza . . .” (no. 73).

In spite of these variants the main groups can easily be distinguished. Baganda musicians usually have mnemonic devices to identify them. At Salama the two most important okwawula patterns are referred to as “kulya-kulya-kulya” (to eat, to eat, to eat) and “Katongole” (small chief). See also Kubik 1964, page 151.

Formally the okwawula patterns are made up of two short note-series, one to be played with the left hand and one with the right. The two note-series have equal value and interlock like two parts. They may be appreciated by musicians as separate melodies in themselves (Kubik 1964). Staff notation tends to hide this fact, since the left-hand notes are written as quavers and the right-hand ones as crotchets. But the plain fact is that both have equal accent, equal duration and equal structural importance.

When starting any of the okwawula patterns musicians may play just the left hand or right hand notes alone. They may feel the metric basis or “beat” in either part. Many musicians, however, insert both patterns immediately.
The note-series in the left and right hand are mostly a Kiganda-fourth or -fifth apart, which gives them a distinct harmonic quality. In descending patterns the Kiganda-fourth is the preferred interval, in ascending ones the Kiganda-fifth.

The following is a brief typology of the most common okwawula patterns found in akadinda music. I give the basic form in staff notation.

1. The descending-fourths pattern or “kulya-kulya” pattern
   In its basic form it consists of six notes, three in each hand, which descend by step in parallel interlocking at the distance of a Kiganda-fourth. This is one of the most frequent patterns. It occurs in its basic form as well as in a number of slight adaptations. It is only used for the harmonization of 12-note okunaga parts.

   ![Fig. 14](image)

2. The “Katongole” pattern
   We call this four-note pattern “Katongole” because its melody evokes for many musicians the syllables Ka-to-ngo-le (small chief). It is a very common pattern and occurs in a few variants. It is used for 8-note and 16-note okunaga patterns and for a few 12-note ones as well.

   ![Fig. 15](image)
   Variants:
   
   (a) 24.35.
   
   (b) 14.35.14.35.13.35.14.35.
   
   
   (d) 14.35.24.35.14.35.23.35.

3. The ascending-fifths pattern
   This is the exact retrograde form of the descending-fourths pattern (no. 1). You can see this by comparing the two patterns at the level they occur in the composition “Njagala okuddayo e Bukunja” (no. 62) with for example “Bijja bisamba endege”. This relation is clearly seen in number notation: 41.35.24 compared with 42.53.14. The ascending fifths pattern is not found as often as the other two above patterns. We have only four tunes in our present collection.

   ![Fig. 16](image)
4. The “Basubira malayika” pattern
We call it this, because “Basubira malayika”, in which it occurs, is a frequently heard tune. Though it is one of the most beautiful and interesting in Buganda, there are few compositions in which it is used.

Fig. 17

Variant: 13.25.25.41.

5. The “Akakuba-mpanga” pattern
This pattern in the song “Akakuba-mpanga n’enkoko bagenda mangu” (no. 100) and a related version in song no. 99 are possibly developments of the “Katongole” pattern. But it has a rather distinct quality and so I have preferred to enumerate it separately. A characteristic is its “bass” melody in the left hand. This is a very rare pattern.

Fig. 18

6. The “Kawuta” pattern
This extraordinary okwawula occurs in the song “Kawuta yeggalidde” (no. 101), the most unusual composition in the akadinda repertoire. Its history will have to be investigated. Besides fourths and fifths this pattern also has a Kiganda-seventh jump.

Fig. 19

7. The bow-melody or “Tweyanze” pattern
This is a parallel fifths pattern characterized by a bow-shape melody. It occurs in the extraordinary composition called “Tweyanze, tweyanze wa Mugwanya” (no. 102).

Fig. 20

Variant form (as in “Tweyanze . . .”):
14.53.42.53.14.53.42.53.14.53.43.53.

Among these seven okwawula patterns only the first four are widely used. The most
common are no. 1 and 2. While we could call the first three elementary patterns, nos. 4-7 might be regarded as composed of elements found in the former.

In principle all okwawula patterns can appear at any level though in practice this is limited by the playing areas of the akadinda.

PRACTICAL COMPOSITION OF AKADINDA TUNES

To find out directly how the ancient composers proceeded when they created this material is no longer possible. But certain conclusions may be drawn from the behaviour of present-day musicians. To document the process fully one has to be on the spot at the right moment. I was very lucky in winter 1962/63 to be at Salama, when Mr. Amisi Sebunya (ca. 30 at that time), was just about to compose the piece “Ab’e Salama” (People of Salama) together with some other blind musicians.

It took him a few days to get a satisfactory total pattern. During this period I happened to make a series of recordings, showing the various stages of the composition process. I shall spare the full analysis for a later publication. But I should like to outline the principal stages of the technique, which are apparently of common validity in Salama. Although this may only provide limited evidence as to how the royal musicians in the Kabaka’s court once composed their music, the documentation of a living process of composition is valuable in itself.

At Salama when a new tune is composed the point of departure is always a vocal melody. The composer has a firm song in his mind which he may have sung on its own for some time. In order to set it out for akadinda he first tries to find an instrumental abstraction of his vocal theme. This is to be the okunaga part. It is then laid under the vocal melody like a regular equal-spaced “bass” in such a way that the instrumental notes are always in unison relation with those of the vocal theme under which they stand. This objective may involve the composer in various problems. The first difficulty is that the okunaga part should be in itself logical and predominantly divisive. The ancient composers have succeeded very well in this, as evidence the old tunes, by comparison with a few new ones that have been composed at Salama. Often the new songs have neither a pronounced guide-note nor are they divisive. This gives them a less restful, less balanced quality, even if composition techniques are applied correctly.

The first version Mr. Sebunya had for his song was an 18-note pattern. Then he decided to “stretch” the vocal melody so that it would fit a 20-note pattern (see no. 90). In order to find the right okunaga he used to assist himself by playing the entire vocal melody on the xylophone in single note or melodic style, which is an important solo style in akadinda music and often employed in the Kiganda orchestra. In this one man only plays xylophone, duplicating the vocal melody on the instrument and embellishing it. I have several recordings of this little known xylophone style.

When Mr. Sebunya was satisfied with the 20-note pattern, he then had to find a suitable okwawula. He described the composition process with the words: “At first you have to find the okunaga part and then see whether “kulya-kulya” or “Katongole” fits.”

During a brief visit to Uganda in winter 1967/68 I stumbled on another Salama musician just in the process of composing a tune: Mr. Abusolomu Mukasa, ca. 30, who is not blind, but has worked and lived with the Salama blind for many years. He has produced some remarkable vocal music in the traditional style. Already in 1962 I saw him participating in the composition of akadinda music, and if I am right he has a share in the song “Mpa waliyanda-yanda” (no. 84). Since his method is a typical one I should like to relate in detail how I witnessed his inventing the akadinda piece “Akabira kange.”

One day Mr. Mukasa came to the guest house where I was staying and said he was in trouble composing a tune. He had a new one for akadinda; the okunaga part was fine, but he had difficulty on his own finding the right place for the okwawula part. Certainly “Katongole” would have to go with it, but he would like to try several ways of fitting it
in. I followed him down to the shed where the akadinda was kept. We sat down each on our own side and Mr. Mukasa played and sang to me what he had already completed.

We can see from the above illustration how vocal theme and okunaga are related. The original vocal melody is represented on the akadinda by an equal-spaced note series that follows it in unison.

Now Mr. Mukasa asked me to play the “Katongole” pattern in between. We tried it at different starting points and different levels, until he suddenly asked me to stop. He had found the right combination. The one he was in favour of obviously had the convincing quality of supplementing the okunaga notes in such a way that we both could hear the total pattern “sing” the words “Akabira kange . . .”

Then Mr. Mukasa proposed to alter a few notes of the basic form of okwawula in certain places, in order to achieve greater unison with the vocal melody. The following illustration shows the complete instrumental version of Mr. Mukasa’s tune, and the total pattern resulting from the combination of the two parts.

From comparison of the notes of the vocal theme (Figure 21) with the total pattern (Figure 22) it can be seen how well the “song” is contained in the instrumental layout.

There are two general rules for the combination of okunaga and okwawula parts in akadinda music, one concerning the relation between (vocal) song and instrumental version, the other concerning “harmony”. (a) The total pattern of the combined parts must contain the song. This often demands slight alteration of the fixed okwawula patterns. (b) Each pair of notes in the okwawula part should as often as possible be in “harmony”, that is in the relationship of unison or Kiganda-fourth (or -fifth) with the preceding okunaga note. The function of the okwawula notes is to “harmonize” the preceding okunaga notes.
These two rules, which I have found empirically, may often contradict each other, in which case a compromise is found. The second rule shows that the fundamental harmonic concept in akadinda music is on the whole similar to amadinda music, regarding fourths and fifths as the "harmonizing" intervals. But in contrast to the amadinda there is also a strong emphasis on the prime. In akadinda total patterns identical notes may be joined up to three times. This is even desirable in certain passages. The importance of the prime in akadinda music is one of the most important differences from the interlocking harmony of the amadinda.

The nucleus of akadinda harmonization may, therefore, be described thus: The okwamaga note is reduplicated by the left hand okwawula note and "harmonized" by the right hand okwawula note which plays a Kiganda-fourth up. To hold this harmonization throughout all compositions would be stereotyped, of course; therefore many deviations occur. But at key points this "nuclear harmonization" usually occurs. If faced with the problem of how to combine a fixed okwamaga with a fixed okwawula (for example if one has forgotten the entrance point), these general rules may be helpful, because, of all possible combinations, only that which contains the greatest amount of consecutive harmony is the right one.

This may suffice to enable local composers to invent interesting akadinda tunes. But through analysis of all the akadinda tunes collected I have been able to find a few purely musical rules. These are strongly pronounced especially in the historical compositions. They permit one to find the suitable okwawula part for most given okwamaga melodies with almost automatic certainty.

In their application no attention is paid at first to the question of the vocal song being contained in the instrumental version. These being purely musical rules, it is possible that we have come across a different stratum of composition techniques whose significance as a historical phenomenon will have to be established.

This set of rules mainly refers to the patterns "kulya-kulya" and "Katongole". I have tried to find out about the other okwawula patterns as well, but there I shall only give a few suggestions, because far too little comparative material has been available.

We can see from the present collection that these two patterns enjoy a preference among all known okwawula patterns. For practical reasons it is therefore a good idea to first try one of these two patterns with a given okwamaga. This is how the blind do it today (which need not necessarily reflect what the Kabaka's musicians used to do). It is a practical procedure, however, and can always be corrected later. Certainly it may be the case that a particular song demands one of the rarer okwawula patterns. But this can be easily discovered by a final test of universal validity: once the okwawula is set out, you have to see whether the vocal theme is contained in the instrumental setting. If it is not then you know that you have to try one of the other patterns besides "kulya-kulya" and "Katongole."

What then is the practical procedure? The first thing to look at is the number of notes (form number) of a given nuclear pattern. If it has 8 or 16 notes, "Katongole" has to be tried. Neither the "kulya-kulya" pattern nor the ascending-fifths pattern could be used here, because naturally they would not fit in length. The rare patterns (see nos. 4-7 in the above classification) might also work, but since the probability is small, they should only be tried if it is certain that "Katongole" does not. The final criterion is always the vocal theme.

If the nuclear pattern has 12 notes it is the descending-fourth pattern or "kulya-kulya" pattern that should be tried first, and will work in most cases. But with all 12-note okwamaga we have to pay attention to another important distinction. If there is a guide-note we must see at what intervals it occurs. The strict rule says: if the guide-note occurs every third beat of the okwawula pattern, it demands "kulya-kulya", but if it occurs every second or fourth beat then "Katongole" must be used. This explains the fact, surprising
at first, why "Katongole" is used in the songs "Ganga alula" (no. 76), "Omusalaba" (no. 77), "Betunyuwa nabo omwenge" (no. 78) and "Banawulira ewumbe" (no. 79), though they have the form numer 12.

Another possibility for 12-note patterns is that the song might go better with the ascending-fifths pattern.

Further procedure is almost automatic. I now give the set of rules for finding an okwawula part to a given okunaga theme. As we shall see this follows laws so strict that there is only one combination possible for each tune with any of the fixed okwawula patterns.

I. 12-note okunaga with a guide-note
(a) The guide-note occurs every third beat

Both the entrance point and the level at which "kulya-kulya" should stand are found easily. First you find the guide-note. The strict rule is that the guide-note demands absolute harmonization. This means that in the okwawula it should be duplicated by the left-hand note, while the right-hand note should follow with a Kiganda-fourth up (nuclear harmonization). In the following illustration the guide-note is shown with an up-tail. The two notes with down-tails are the okwawula notes that must be inserted at this point. There is no exception to this rule. We can easily see that the left-hand note of the okwawula is identical with the guide-note and the right-hand note is the upper Kiganda-fourth to it.

\[ \text{Fig. 23} \]

Harmonisation with "kulya-kulya".

This is a sort of "iron" rule in this particular group of akadinda pieces (see the tunes under Group I, nos. 52-57, 59, and 61-63).

Once the harmonization of the guide-note is found, it is only a matter of seconds to deduce the whole okwawula pattern, because the second rule says that those okwawula notes that harmonize the guide-note are the middle two notes of the "kulya-kulya" pattern. In the case of Figure 23 the complete okwawula pattern is therefore 35.24.13.

To make certain that this important point is fully understood I should like to show this procedure with a full example. Let us take "Omusango gwa balere" (no. 55). The okunaga part is: 2..3..4..2..5..5..2..3..3..3..1..1.. First question: Which is the guide-note? Answer: The guide-note is the one that regularly recurs, in this case it is the 2. Second question: At what interval does it occur? Answer: Every three notes. Therefore we harmonize with the "kulya-kulya" pattern. Now we apply the first rule, saying that the guide-note demands absolute harmonization. Accordingly the two okwawula notes following it have to be 24, because the guide-note is 2. The second rule says that the okwawula notes following the guide-note represent the middle "kulya". Therefore the whole okwawula pattern is 35.24.13. It has to be inserted accordingly.

The final step in this procedure is to find out whether the combination contains the vocal melody. If it does, we know we are right with the pattern chosen. Often it will be necessary to alter the okwawula slightly at a certain place in order to adapt it better to the vocal melody. In "Omusango gwa balere" we alter it so that 53. falls between the 5..5.. in the okunaga, as can be seen in the full transcription (no. 55).

Such alterations also have a harmonic function. As can be seen, 53. harmonizes the note 5 much better than 13. would. The adaptation of the okwawula therefore has a double purpose.
18-note tunes (see no. 61) are treated like 12-note patterns provided that the guide-note occurs at 3-note intervals. If “kulya-kulya” does not suit the vocal theme the only other possibility would be to try its retrograde form: the ascending-fifths pattern.

(b) The guide note occurs every second or fourth beat
In this case the “Katongole” pattern is to be tried. It is used in the same manner as with 8-note and 16-note patterns (see below).

II. 12-note okunaga with pronounced divisive structure
There are a number of 12-note nuclear patterns that have no guide-note but a pronounced divisive structure in compensation for it, usually grouping the notes in 2 + 2 or 4 + 2 sequences (see “Kisawo kya muna butwa . . . ”, no. 51, “Ab’e mbuga basengejja”, no. 60). Here the rule for finding the okwawula is that the first note after the first melodic break in the okunaga part is to be taken for a guide-note and harmonized accordingly. For example in “Ab’e mbuga basengejja” the note 4 is repeated four times at the beginning. Then comes a melodic break: the tune proceeds to 1. Now this 1 is to be taken as the guide-note. It is then harmonized by 13. in the okwawula. The further process is identical with what has been said in the sections above.

III. 8-note and 16-note okunaga with a guide-note
Basically the procedure of finding the okwawula part is the same as with the 12-note patterns. First the guide-note must be found. Almost all compositions with the form number 8 or 16 have a guide-note. It may occur either at a 2- or a 4-note interval. In both cases the same rules are applied.
Harmonization is, however, slightly different with the 8- and 16-note patterns, for which “Katongole” should be tried. The “Katongole” pattern is, unlike “kulya-kulya” not a sequence of fourths, but consists in its basic form of two interval particles, the first being a Kiganda-fifth and the second a Kiganda-fourth.
For the harmonization the first particle must follow the guide-note. It is inserted such that the first note of okwawula (left hand) starts one step below the guide-note. This is shown in the following illustration.

Fig. 24
Harmonisation with “Katongole”.

Having got this far, no real problems are left. The second particle of “Katongole” has to be added, which gives in the above example the full pattern 14.35.
As I have pointed out the “Katongole” pattern is often played in a slightly altered version. As with “kulya-kulya” this is caused by a desire for harmonic adaptation as well as to suit the vocal melody. Salama musicians often prefer a contracted form of 14.35., which is 24.35. In this case the harmonization is such that the first okwawula note follows the guide-note in unison, which is quite natural because that is one step higher than the basic version.
20-note patterns are generally harmonized with “Katongole” and thus treated like 8- and 16-note patterns.

IV. 8-note and 16-note okunaga without a guide-note
This is very rare. “Muleke atabaale” (no. 91) is one such item. It is harmonized with “Katongole”. Usually in the present collection such patterns without guide-note are harmonized with the “Basubira-malayika” pattern. Since there is very little material, I
cannot say whether this happens as a rule. These patterns seem to have a pronounced divisive structure.

Where “Katongole” or “kulya-kulya” do not give the desired result other patterns have to be tried. There are probably similar rules for the other patterns as well. Although I have some definite ideas about them, I think it is too early to propose any definite conclusions. The following are mere suggestions which may or may not be valid.

1. The ascending-fifths pattern. It is only employed with 12-note okunaga. If there is a guide-note, as in “Nakulabudde” (no. 92) it appears that the middle particle should harmonize it, which corresponds to the practice for the “kulya-kulya” pattern. But here one important difference seems to occur: the note to reduplicate the guide-note is in the right hand of the okwawula, while the left hand plays a lower Kiganda-fifth to it. This is logical since this pattern is a retrograde version of “kulya-kulya”.

   In divisive patterns such as “Nantaza Lubanje” it is also the right hand that is in unison with certain key points of the okunaga melody.

2. The “Basubira malayika” pattern. In the present examples the pattern is inserted so that its starting point immediately follows the first note of the nuclear pattern. Whether this is a rule can only be determined when more compositions have been found.

   If there is no guide-note and no other means of determining the okwawula entrance, see whether the ending note of the given okwawula pattern is the same as the starting note (such is the case in the “kulya-kulya” pattern and the ascending fourth pattern). Here an additional rule is that these same notes in the okwawula expect the same note in the okunaga between them, which gives a triple repetition in the total image. In this way the exact entrance point may be found. The same thing can be observed in harmonizations with the “Akakuba-mpanga” pattern.

Summarizing the results of our investigation we may say that very strict rules exist in akadinda music for finding the okwawula. In fact, in most musical pieces the okwawula part can be deduced with a fair chance of accuracy by following certain rules.

   Both entrance point and level of the okwawula depend on the guide-note and at what interval it occurs, rather than on the form number of the okunaga part.

   It is a general phenomenon, however, that the guide-note is not usually repeated throughout a nuclear pattern, but remains “invisible” at certain points. Still it is very easy to find it, since it is a regularly recurring note.

PART III

ARE AMADINDA AND AKADINDA PIECES STRUCTURALLY RELATED?

Students of Kiganda xylophone music can observe that musical pieces in the two xylophone styles often have the same title. Titles such as “Ssematimba ne Kikwabanga”, “Ennyana okutudde”, “Omusango gw’abalero”, “Balinserekerera balinsala ekyambe” and “Ganga alula” to mention only those present in this collection appear both in amadinda and akadinda music. Many more such parallels existed in the traditional repertoire of the court musicians.

   From this fact an interesting question arises: Are these apparently different instrumental tunes based on different songs (that have the same title by chance), or are they identical structures arranged for performance on the two different kinds of xylophone?

   A musician, Mr. Livingstone Katongole of Kampala, once said to me about one particular akadinda piece: “This is the second tune that branches off from “Ssematimba ne Kikwabanga”. How do we interpret this statement?
A few more observations strike us. For example, we can easily discover that musical pieces with the same title have the same number of notes in the total pattern. "Ssematimba . . .", "Omusango gw'abalere", "Ganga . . ." and "Balinserekerera . . ." appear with an 18-note okunaga on the amadinda and accordingly with a 12-note one on the akadinda, giving them in both cases a total number of 36 pulses. Those tunes with 12 notes on the amadinda have 8 notes on the akadinda. Is it so by chance?

Investigation has eventually shown that the total patterns are intended to be identical, though this is often rather difficult to discover. I should like to show the structural relation between amadinda and akadinda pieces of the same title first with an example where it is obvious; the song "Ganga alula" (nos. 19 and 76). We write the total patterns of both versions in staff notation, since this shows visually the direction of melodic movement.

Having done so we have to look out for any recurrent passages that may serve us as key points of orientation. In the present example the notes 5-2-1 form such a passage, and we see that it occurs regularly in both the amadinda and akadinda version. In the following figure I have marked the sequence with asterisks.

The recurrent passages are a sure indicator for finding out how the two total patterns are structurally related. We write the amadinda and akadinda settings so that the corresponding notes stand below each other.

![Diagram](image)

The relationship between amadinda and akadinda tunes. Examples "Ganga alula", nos. 19 and 76.

Though the two patterns do not correspond in every detail, the coincidence is enough to recognize them as the same tune. In fact, the two 36-note patterns are different only by 6 notes! But what is even more important to the Baganda musicians themselves is that the "song" (the vocal melody) be equally inherent in the total patterns of both versions. This can be clearly seen from Figure 25.

The close identity of amadinda and akadinda total patterns of the same title is a fascinating aspect of the Kiganda musical system. One has to realize that it is produced with entirely different techniques. The okwawula parts in akadinda music for example are fixed patterns with little possibility of variation, and generally, composition in both xylophone styles in Buganda is subject to strict and specific rules as we have seen. One can only admire the ingenuity of the unknown composers who succeeded in arriving by different routes at such similar complex patterns.

It will be easy for the reader to find out the relationship between the amadinda and
akadinda versions of other songs as well, e.g. "Ennyana ekutudde" which is also quite easy, though an interesting study in itself.

There are a few compositions, however, where this reciprocal structural relationship is more difficult to trace. If we compare the total patterns of "Ssematimba ne Kikwabanga" (nos. 11 and 58) with each other, there is apparently not the slightest similarity. How can we explain this fact?

Here we must not overlook the most important conception in Kiganda xylophone music: the mikol. It is insufficient to compare the akadinda version with only one muko of the amadinda version. It has to be compared with every one of the five miko. Let us show this in "Ssematimba ne Kikwabanga". For the sake of brevity we use number notation.

Total patterns of "Ssematimba ne Kikwabanga"11
(a) On the akadinda (no. 58)
   552524413252224413552124113552324313
     2     1  1     13
(b) On the amadinda (no. 11)
   Muko I (no. 11)
   41542331253241322522524134244241411
   Muko II
   5215342431435243133135245355352522
   Muko III
   132145534254135442424135141141313
   Muko IV
   243251141531524155355352412522524244
   Muko V
   35431225214213521141413523133135355

At first glance I think very few readers will discover any similarity at all between the akadinda version and any of the five miko of the amadinda version. Looking carefully, however, we are struck by various note sequences in Muko V that are also found in the akadinda version, but strangely displaced towards one another, though in the same order. I think this can be better shown with an illustration.

![Fig. 26](image)

"Ssematimba ne Kikwabanga" total patterns12.

11. Octave positions of the notes have been disregarded since in Kiganda music they are irrelevant structurally. Therefore there is no underlining of the numbers in this comparison. Variant notes in the akadinda version are set below those which they may replace.
12. In order to compare the two versions I have changed the starting points, without of course changing the notes themselves. The original starting points as in the first diagram are marked with asterisks.
From this comparison a surprising fact becomes evident: although there are many identical or nearly identical sections they do not stand in line above each other, as was the case in “Ganga alula”, but appear irregularly shifted along the line of elementary pulses. At whatever point one starts to relate the two versions visually the sections will never completely coincide.

Further, between the identical passages there appear “fill-in” notes that bring both versions up to the same 36 elementary pulses. Often these fill-in notes seem to be mere reduplications of a previous note (see 222 in the akadinda version) or repeats or anticipations of other notes (see 41 in the amadinda which recalls the 411 immediately before it, or 35 which is an anticipation of the 35535 sequence at the beginning).

What is the explanation of all this? We have to remember that it is one of the primary objectives in Kiganda instrumental music that the vocal part be contained in the structure of the instrumental version. This is actually what gives their identity. It is, however, not always very easy to achieve. Amadinda and akadinda music follow different techniques. What we have seen in “Ssematimba” is a most interesting compromise: identity of patterns is achieved, but at the cost of stretching and compressing single phrases within the total pattern. The song is still contained in this version, because the patterns are—though rhythmically slightly different—melodically identical in most sections.

We have to make one more point. The impression of stretched/compressed sections to make up amadinda and akadinda patterns is certainly relativistic and emerges from comparison. The sections of the themes appear stretched/compressed against each other. Incidentally in European dodecaphony it is also the “melody” of the tone-row that is preserved, with individual notes being deliberately “stretched” either by repetition or by prolonged duration. Kiganda music also operates with tone-rows though in a near-equipentatonic system.

In summary we may now define the relationship between amadinda and akadinda pieces:

(a) Pieces of the same title are representations of the same song, achieved with different technical means.

(b) The total patterns of the two instrumental versions coincide, though not necessarily in every single note, and of course, only in one muko.

(c) The degree of identity must be such that the vocal melody is contained in both versions, and can be heard out of it as an inherent structural part.

(d) Various note sections in the two versions often appear shifted against each other along the axis of elementary pulses. This causes a slight difference in the rhythm of the vocal melody in each of the two versions.

THE TRANSCRIPTIONS

The present transcriptions can be used both for musicological analysis and for playing. An explanation of the number notation has already been given. I do not think that musicians who would like to play this music will find any difficulty in learning their parts from the numbers, provided that they have a suitably tuned log-xylophone at hand. There are, however, a few things to know about performance. Several distinct performance styles and ways of accentuation exist in Kiganda xylophone music, of which I have already given a brief account elsewhere (Kubik 1964). These styles of playing have technical names in Luganda and may be employed successively in a single performance. Generally I feel that it might be helpful for musicians to read my two earlier articles on Kiganda xylophone music (1960 and 1964), where the elementary structure is explained and the reader will find hints on how to fall in easily with the interlocking parts and how to play the okukoonera part.
The accepted way of performing Kiganda xylophone music is to repeat the combining parts over and over. Slight variation in the impact of the notes, a change in accentuation, phrasing, etc. are vital to this music and give it an almost "psychedelic" quality, where all sort of inherent patterns seem to puzzle up from the total image, which often makes it impossible for a listener to discover who plays which note. We know now that these "inherent rhythms" or "inherent melodies" have a text function. They "speak" and evoke verbal associations for the Baganda musicians. Various parts of the texts of the songs on which these instrumental compositions are always based are suggested by inherent note patterns. This comes to light in harp music, where the same instrumental patterns are played as on the amadinda but where the vocal part is also performed.

In addition to subtle variations achieved by accentuation and phrasing, or even leaving out a few notes as in the performance style called okusita ebyondo (to erect corners), melodic variation may also be employed in some cases. There are a few compositions where it is always used, for example "Ekyuma ekya Bora", "Emyana ekutuddde" etc., and there are others where it practically never occurs.

Melodic variations (ebisoko) in Kiganda music also have a text function. The purpose of playing instrumental ebisoko is to suggest other words by the new inherent melodic-rhythmic patterns which emerge from the total image as a result of the slight change of its structure. It would be a misunderstanding, however, to call this "improvisation". Kiganda xylophone music is composed in every detail even in the variations. When a musician plays ebisoko, he does not improvise in the strict sense of the word, that is to invent patterns ad libitum, but he plays fixed patterns of melodic variants, as he has played in other performances many times before. Europeans are impressed by the skilful use of these preconceived variants and thus often misled to take it for "improvisation". But what the performer in fact does is to draw on a reservoir of variant patterns in his mind and insert them at the right place in the total structure, thus temporarily replacing sections of the basic pattern. This is essentially a procedure of skilful exchange of fixed formulas.

The technique of variation in Kiganda xylophone music resembles that of neighbouring Busoga. The variant notes need not necessarily be in "harmony" with the other parts. Also they do not have an immediate effect on the third part in amadinda music, or on the lower octave duplications in akadinda music. Often the audible result of variation is that of dissonances which add to raise the tension. A slight heterophonic effect is a frequent outcome. If the same variant pattern is repeated over long periods in amadinda music the third player (omukoonera) may feel tempted to follow the new pattern that arises from the entengerengezi. But he may also duplicate it only approximately (this seems to happen in "Ekyuma").

The okukoonera part may also be slightly varied. Sometimes it only follows the entengerengezi pattern approximately; it may stop temporarily or a few notes may be left out to increase tension. But all this is not frequent.

In the transcriptions the okukoonera part is not transcribed. As is known it is deduced from the two lowest notes and does not add any new structural element to the composition (Kubik 1960). The reader can easily deduce it for himself from the present number transcriptions. Here I only mark the entrance point with an asterisk. This is to be taken as a suggestion. Musicians often start it at other points though the one I have marked is the most frequent. Normally the okukoonera part is itself constructed in two, three or more phrases which develop logically. The starting point should preferably be in accordance with this inner logic of development. I hope to explain this in greater detail some time.

The performer may wish to know which hand plays which note in the okukoonera. Here the general rule is that it should be an alternate motion of left and right hand, even
if the hands then have to cross sometimes. Another basic rule is that slat number 2 belongs to the right hand, slat number 1 to the left. The actual playing of okukoonera is usually a compromise between these two rules. I should like to give two examples of the motor patterns in okukoonera, in which both principles can be seen. r and l mean right and left hand beats.

1. Okukoonera of "Bonyana okutudda" (No. 6)

2. Okukoonera of "Ifoanga alimpa" (No. 5)

A certain amount of misunderstanding has been caused by the miko. The miko are a system of great theoretical importance in Kiganda music, but of well-defined and limited practical importance. In the present transcriptions of amadinda music I have only given that muko that is most frequently played.

Only one muko is played in a single performance. Individual players may have their preferences but there is hardly anyone who would play in one performance all five miko of a tune. There is even a natural restriction over uncontrolled use of the transpositions which comes from the fact that the vocal melody contained in the instrumental version cannot come out equally well in every muko. For reasons of demonstration, for instance (in a lecture, etc.), Mr. Muyinda and his musicians are glad to "show" all miko of a tune, but normally they will prefer the one they are used to.

If you ask a traditional musician in Buganda to show all the five miko of a more complicated piece, it will take him a few minutes of reflection until he has succeeded in "reconstructing" them.

Another misunderstanding is to believe that the miko of a tune may be strung together in sequence in a single performance, or be arranged in the form of a "suite." Perhaps in the future some musicians will find this a satisfactory way of representing the innate "mystics" of Kiganda music in a concert hall to a foreign public, to whom this music might otherwise sound "repetitive" or "monotonous", but traditionally it is never done.

Usually one or two miko per tune are popular. "Ssematimba ne Kikwabanga", "Omusango gw'abalere", "Walugenye eyana e Kkunywa", "Katego", to enumerate only a few examples, are well known in at least two miko.

In akadinda music there are no real miko. Transposition would be impossible because the okwawula, in itself an interlocking structure could hardly be octave-transposed in bits without destroying its motor structure. Nevertheless one night in summer 1962 Mr. Muyinda explained to me what he considered to be the miko of the akadinda. This refers to possible changes in the okunaga part only, where a few notes may be octave-transposed. This is then called another "muko."

In akadinda music there may also be variations which I have marked accordingly in the transcriptions. It is usually one of the top players that is entitled to vary, but the
other players need not necessarily follow him in the lower octaves. This also leads to slight heterophony.

In accordance with traditional custom I have arranged the transcriptions by the number of notes in the nuclear pattern, while the akadinda transcriptions are given in order of the different okwawula patterns.

When several versions of a piece were collected this is mentioned specially. Slight melodic variations are written under the respective notes that can be varied. If the variations are meant to form a group, this is marked by a horizontal bracket embracing this group. A particular form of variation is development of the theme. This is very rare but it occurs in “Ekyuma ekya Bora” (no. 3) and “Emnyana ekutudde” (no. 6).

For the sake of simplicity I have dropped octave duplications. But remember that the basic parts in amadinda are performed in parallel octaves, and in akadinda in three parallel octaves. An arrow means the entrance point of the second part. Like that of the okukoonera, marked by an asterisk, this should be taken as a suggestion. A few musicians prefer to enter at some other place. If they do they enter with the appropriate note, of course!

Two tunes in this collection have no title. The musicians who taught me were unable to give me one. Perhaps it will be possible some time to identify these tunes.

Those pieces of apparently recent date are marked by the letter M, following the translation of the title. Most of these “modern” tunes do not refer to events connected with the Kabaka’s court.

**AMADINDA PIECES**

(Ed. Note: The asterisk, which shows the start of the okukoonera part, follows the figure to which it refers).

**Group I** (12 notes)

1. **Banno bakoola ngosiga** (Your friends are pruning but you are sowing)
   - Ok. 4.314.1*3.3.4.2.3.4.2.1.
   - Okw. 5.3.3.5.5.3.5.2.3.5.1.1.

2. **Ndyeugudira ekkadde** (I will buy myself an old woman)
   - Ok. 2*1.2.2.2.5.2.1.112.3.5.
   - Okw. 5.4.2.

3. **Ekyuma ekya Bora** (The swinging machine of Bora)
   - Ok. 413.2*3.3.2.4.3.2.3.3.2.
   - Okw. 5.5.4.1.5.1.5.5.1.15.1.
   - Development of the okunaga: (a) 4.5.1.1.3.2.4.5.2.3.3.2.
   - (b) 4.51.1.3.2.4.4.2.3.3.2.
   - (c) 4.5.2.4.3.2.4.3.2.3.3.2.

4. **Abana ba Kalemba** or **Besibye bulungi** (The children of Kalemba—they are smartly dressed)
   - Ok. 4.314.4.2.2.4.3.2.4.2.1.
   - Okw. 5.2*2.5.2.1.5.2.2.5.1.1.

5. **Segomba ngoye Mwanga alimpa** (I don’t pine for clothes, Mwanga will give me)
   - Ok. 5.4.515.3.3.5.4.3.5.2.1.
   - Okw. 3.3.1*3.2.1.2.3.4.2.2.1.
(6) *Ennyana ekutudde* (The calf has broken loose)
Ok. 5,5,3,5.2,1,5,5.3,3,1,11
Okw. 1*2,4.
Variations of the okwawula: 
(a) 1,2,3,2,3,4,1,2,3,1,1,4.
(b) 1,2,3,1,2,4,1,2,3,1,1,4.
Variation of the okunaga: 5,1,3,5,2,1,5,1,3,3,1,1.

(7) *Olutalo olw'e Nsinsi* (The battle of Nsinsi)
Ok. 4,3,4,3,3,3,4,3,4,4,212.
Okw. 5,2*1.
Variation of the okivawula-
5,2,1,5,2,1,5,2,1,4,2,2.

(8) *Wavavanyaga* (proper name)
Ok. 4,3,4,3,3,2,1,4,3,4,3,3,1.
Okw. 5,2*1.

(9) *Ommuyoro atunda nandere* (The Munyoro sells nandere fish)
Ok. 5,4,3,5,4,3,5,4,314,4,2.
Okw. 2,2,1,2,2,1,2,3,1*2,1,1.

(10) Title unknown
Ok. 5,5,515,4,3,5,4,2,5,4,3.
Okw. 3,2*1.
(This song is said to have originated in Busoga)

**Group II** (18 notes)

(11) *Ssematimba ne Kikwabanga* (Ssematimba and Kikwabanga)
Ok. 4,5,2,3,3,5,2*1,2,5,212,1,4,4,2,1,1.
Okw. 5,4,3,2,4,4,4,1,1,4,3,1,2,3,4,3,2,2.

(12) *Naagenda kasana nga bulaba* (We will leave when it is daylight)
Ok. 2,1,2,5,2,2,2,5,5,2,1,2,5,2,1,2,414.
Okw. 2*3,4,3,2,2,2,4,5,5,2,3,4,3,2,3,4,5,4.

(13) *Omusango gw'abalere* (The case of the flute players)
Ok. 2*1,2,5,212,1,5,5,2,1,2,3,4,5,1,4,4.
Okw. 5,4,3,2,5,4,3,1,5,2,4,3,2,4,4,3,2,2.

(14) *Omuwa butwa wakyeko* (The poison-giver is daring)
Ok. 3,4,4,2,4,4,314,1,3,4,3,1,3,2,4,2,2.
Okw. 5,3,4,5,2*3,3,5,2,2,4,1,5,2,4,4,1,1.

(15) *Musenze alanda* (The settler spreads himself out)
Ok. 413,2*
Okw. 5,5,5,1,5,1,1,4,4,1,5,2,3,5,1,1,4,4.

(16) *Alisuledi* (proper name)
Ok. 4,3,4,3,515,5,3,4,2,2,2,4,3,4,4,3,1.
Okw. 3,3,1,5,2,4,4,2,1,5,1,1,5,2,1,5,2*1.
(This song is known in Busoga as "Mobuuka nkomera")
(17) **Omutamanya n'gamba** (The ignorant one)
Ok.  415.5.2*3.3.5.2.1.4.5.1.3.4.4.1.3.2.
Okw.  5.3.4.3.1.3.3.4.5.1.4.5.4.2.4.4.5.1.

(18) **Katulye ka bye pesa** (Let's spend of our money, i.e. eat well)
Ok.  4.3.4.3.3.2.4.3.5.3.4.3.3.2.4.3.11
Okw.  1.1.5.2.1.5.1.5.5.2.5.5.2*1.5.1.5.5.5.

(19) **Ganga alula** (Ganga had a narrow escape)
Ok.  513.5.4.3.2.3.2.1.4.3.2.4.2.2.4.2.2.
Okw.  5.5.2*1.5.1.3.5.1.1.5.1.3.5.2.2.5.1.

(20) **Balagana enkonge** (Those who warn each other of danger today)
Ok.  3.4.4.2.3.4.3.1.2.1.3.3.1.2.1.4.111.
Okw.  4.5.4.2*3.5.2.1.2.5.4.3.1.2.5.4.1.1.

(21) **Byasi byabuna olugudo** (Bullets all over the road)
Ok.  4.312*4.3.2.3.2.2.4.3.2.3.3.1.2.3.1.
Okw.  5.5.1.4.4.1.5.5.1.5.4.1.3.3.1.5.1.1.

(22) **Abe Busoga bogyala ngabo** (The people of Busoga use shields for doors)
Ok.  4.415.2*4.4.5.2.2.4.4.5.1.2.3.5.1.1.
Okw.  3.4.4.1.3.4.4.2.1.3.2.4.1.2.1.4.1.1.

(On one occasion Mr. Muyinda taught me this tune saying it was "Walugembe eyava Kkunywa", see no. 28. This may have been an error.)

(23) **Nanjobe** (proper name)
Ok.  5.5.415.1*1.3.5.4.1.1.1.3.5.4.3.2.2.
Okw.  5.3.4.5.3.2.1.3.4.5.3.2.1.2.5.1.3.2.

(24) **Mugoowa lwatakise** (When Mugoowa has not reported to court)
Ok.  5.5.5.3.3.2.3.3.1.3.3.2.1.5.4.5.112.
Okw.  5.4.3.3.5.1*5.4.1.3.3.1.5.4.3.2.1.3.

(25) **Gulemye Mpangala** (name of a chief)
Ok.  5.5.3.2*4.5.1.2.3.311.1.3.2.3.5.1.2.
Okw.  5.4.5.4.4.1.3.5.4.3.4.5.2.2.2.4.4.1.

(26) **Mawanda segwanga** (Mawanda the great)
Ok.  413.4.4.3.4.3.3.4.5.3.5.5.1.4.2.2.1.
Okw.  5.5.2*5.5.2.5.5.2.5.5.2.5.5.1.5.5.2.

(27) **Ebigambo ebibulire bitta enyumba** (Reported words ruin families)
Ok.  4.3.5.5.3.4.4.2.2.4.211.4.3.3.4.3.1.
Okw.  5.2.1.5.1.1.5.2.5.1.5.2*1.5.2.1.5.2.1.

(28) **Walugembe eyava e Kkunywa** (Walugembe who came from Kkunywa)
Ok.  5.511.3.5.5.1.3.3.5.5.1.2.3.4.1.2.2.
Okw.  4.5.5.2.4.5.5.3.2.4.3.5.2.3.2.5.2.2*
(29) **Omujooni: Balinserekera balinsala ekyambe** (Poor as I am, they will brutally murder me)

Ok. 5.4.4.2.3.4.1.1.4.4.4.4.2.3.4.1.2

Okw. 2.2.2.1.3.5.2.1.3.5.2.2.1.3.5.2*1.4.

(30) **Lutaaya yesse yokka** (Lutaaya has killed himself)

Ok. 2.3.4.3.4.2.1.1.2.3.4.2.2.4.2.111.1.

Okw. 5.4.3.5.2*1.5.2.1.5.4.3.5.2.1.5.2.2.

(31) **Kawumpuli** (The Plague)

Ok. 1.2.3.2.3.2.1.4.1.2.3.1.1.4.111.4.

Okw. 4.5.2.4*1.5.4.1.5.4.5.2.4.1.5.4.1.1.

(32) **Abalung'ana be baleta engoye** (It was the Arabs who brought cloth)

Ok. 4.412.3.2.2.4.5.2.3.3.3.2*3.1.1.3.2.

Okw. 5.4.1.

**Group III** (24 notes)

(33) **Atalabanga mundu agende Buleega** (One who has never seen a gun should go to Buleega)

Ok. 4.314.1*3.2.1.3.3.1.2.1.4.3.4.1.3.2.1.2.2.1.2.1.

Okw. 5.3.4.5.4.3.5.1.1.5.3.4.5.4.2.5.4.3.5.1.1.

(34) **Ezali embikke kasagasj kawunga** (The plantations which were well cared for are now waste)

Ok. 1*3.5.1.1.3.5.1.1.3.4.4.1.3.5.1.5.3.5.5.1.3.414.

Okw. 2.4.5.1.2.4.5.1.2.4.5.5.2.4.5.1.2.4.1.5.2.4.5.5.

| 1. | 1. | 1.1 | 5. |

(35) **Kalagala e Bembe** (Kalagala of Bembe)

Ok. 5.4.1.3.2.1.5.4.1.2.2.2.5.4.1.3.2.1.5.4.1.4.111.

Okw. 4.3.2.3.4.5.4.3.2*3.2.5.5.2.2.3.4.5.4.3.2.3.1.1.

This song is also known under the name “Nandikuivadde ennyanja e kalide”.

(I would have been generous but the lake has dried up). In this case Mr. Muyinda prefers to have two notes in the okumaga part changed:

Ok. 5.4.1.3.2.5.5.4.1.2.2.2.5.4.1.3.2.4.4.1.4.1.4.111.

(36) **Semakokiro no Jjumpy** (Semakokiro and Jjunju)

Ok. 3.5.5.2*4.3.1.5.4.3.1.1.4.3.414.4.2.5.2.2.5.1.2.

Okw. 2.2.1.2.2.5.2.2.5.1.5.3.5.5.1.2.3.2.1.5.4.1.1.4.

(37) **Agawuluguma emnyanja** (What rumbles in the lake)

Ok. 5.4.3.2.4.4.3.2.5.4.1.1.4.3.2*1.3.3.3.215.4.2.2.

Okw. 1.2.1.5.2.2.1.5.4.2.1.5.1.2.1.4.1.1.5.4.3.1.1.5.

(38) **Akaalo kekamu** (In the same village live the ruthless ones)

Ok. 5.4.4.2.4.3.4.5.411.1.4.3.3.1.5.4.2.3.2.5.2.2.

Okw. 4.4.5.2.1.3.3.2.3.4.1.2.2.5.1.3.2.4.4.1.5.3.2.1*1.
(39) *Afa talamusa* (The dead do not give greeting)
Ok.  515.1.3.5.1.3.2.5.1.3.4.5.1.3.4.4.1.3.2.5.1.3.
Okw.  2*4.5.5.2.4.5.5.2.2.5.5.2.4.5.4.2.4.5.2.2.5.5.

(40) *Okuranyira ku nyanja kutunda mwoyo* (To play by the lake is to sell ones spirit)
Ok.  4.3.4.2.4.4.12.3.5.1.1.1.4.3.5.1.2.1.4.3.5.5.2.1.
Okw.  4.4.2.1.4.4.5.1.3.2.5.4.5.1.3.2*2.4.5.1.1.4.4.2.

(41) *Ngabo Maanya ezirivangula Mugerere* (The shields of Kamanya will conquer Mugerere)
Ok.  5.4.3.1.1.4.3.4.14.4.2.5.2.2.5.1.2.4.5.5.2*4.3.1.
Okw.  2.2.1.2.2.5.2.2.5.1.5.3.5.5.1.2.3.2.1.5.4.1.1.4.

(42) *Ensiribaya ya munnana Katego* (The charm of my friend Katego)
Ok.  5.412.1.5.2.3.3.5.2.1.1.4.5.4.2.1.2.4.4.2.1.2.2.
Okw.  3.4.3.4.3.1.3.3.4.4.1.1.2*3.4.5.4.2.3.4.2.5.2.2.

(43) *Atakulubere* (He who will not assist you)
Ok.  5.4.5.1.2.3.4.3.312.2.5.4.5.1.2.3.4.4.2.5.2.2.
Okw.  5.4.2.2.1.2.3.5.2*2.1.2.5.4.2.2.1.1.3.4.2.2.1.1.

(44) *Nkejje nemunnuala* (The largest nkejje fish on the rack)
Ok.  5.4.5.4.3.1.4.4.2.4.4.1.5.1.4.1.1.5.1.2.1.3.3.1
Okw.  3.2*2.2.1.2.3.2.4.4.1.2.3.3.1.1.4.3.4.5.4.3.1.2.

(45) *Kansimbe omuggo awali Kibuka* (Let me plant my stick where Kibuka is)
Ok.  3.5.2*4.3.5.2.2.3.5.1.1.3.5.2.413.4.2.4.3.5.1.1.
Okw.  1.1.4.4.1.2.1.4.1.1.4.5.1.2.1.2.5.1.2.1.4.1.1.4.5.

(46) *Omukazi omunafu agayigga na ngabo* (The idle woman has to walk through her garden with a shield)
Ok.  1.3.3.4.1.2.3.4.1.2.2.4.112.2.4.1.2.3.4.1.2.3.4.1.3.3.4.
Okw.  3.5.1.1.3.5.2.3.3.5.2*3.3.5.1.1.3.5.2.3.2.5.2.2.

**Group IV (over 24 notes)**

(47) *Bakebei bali e Kitende* (The sly ones are at Kitende). 25 notes.
Ok.  3.4.4.1.3.2.3.4.5.2.3.3.1.1.4.5.2.4.4.1.3.2.2.5.11
| 5.5.5.| 3.
The melodic variants in the two parts are to be employed every other repetition of the 25-note pattern.

(48) *Abe Bukerere balaagira emwanyi* (The people of Bukerere live on coffee). 27 notes.
Ok.  515.5.3.5.5.4.5.1.3.3.4.5.1.4.4.5.1.3.3.4.5.1.2.5.2.2.
Okw.  3.3.5.5.3.2*1.4.3.5.2.1.4.4.2.1.4.3.5.2.1.2.5.2.2.5.5.
COMPOSITION TECHNIQUES IN KIGANDA XYLOPHONE MUSIC

(49) *Akawologoma* (The small lion) 27 notes.
     Ok. 5.3.3.5.4.5.3.2.3.1.4.1.1.4.3.2*13.1.4.2.2.4.3.4.2.1.2.
     Okw. 1.2.3.4.4.1.2.3.4.5.4.5.5.5.2. 3.4.1.1.5.1.1.4.1.1.5.3.

(50) *Agenda n’omulungi ezawa* (He who goes with the beautiful one loses himself) 35 notes.
     Ok. 3.2.3.3.1.5.2.2.3.4.1.5.1.1.1.3.3.1.1.4.3.2*5.4.3.215.4.1.5.3.1.1.
     Okw. 1.2.3.3.2.3.3.5.3.1.3.3.2.3.5.4.5.1.2.3.3.1.4.4.1.5.1.4.1.1.5.1.2.1.5.

AKADINDA PIECES

**Group I**

(51) *Kisawo kya mmva butwa kiwedemu emwanyi* (The bag of a poison-giver has no more coffee beans)
     Ok. 41.4..4. .4..2..2..5..5..3..3..1..1..1..51.

(52) *Omnjooni: Balinserekerera balinsala ekoyambe* (Poor as I am, they will brutally murder me)
     Ok. 2..4..4..2..3..3..2..4..4..2..1..51.

(53) *Bogerera mwayogerere* (One has to speak for him)
     Ok. 2..4..4..2..1..5..2..3..3..1..1..11.
     Okw. 35.24.13.

(54) *Omugenyi agenda Kyandanda* (The guest is leaving)
     Ok. 4..4..41.2..1..1..2..3..3..2..5..5..5..5..

(55) *Omusango gw’abalere* (The case of the flute players)
     Ok. 2..3..4..2..5..5..51.2..3..3..3..1..1..

(56) *Mwekume abatambala bajja* (Beware, the Batambala are coming)
     Ok. 1..3..41.1..3..3..1..3..4..1..1..1.1.
     Okw. 24.13.52.

(57) *Nkada banyisitanga mukadde* (They took Nkada for an old woman)
     Ok. 4..4..2..5..5..2..4..41.2..3..3..1..

(58) *Abasiba embu^i* or *Ssematimba ne Kikwabanga* (Those who rear goats—Ssematimba and Kikwabanga)
     Ok. 5..51.4..2..2..4..5..1..1..5..3..3..3..
     Okw. 24.13.52.
     Many variations of the *okwawula*; for example:
(59) *Sala akalagala kuliko emmamba ye* (Bring a young banana leaf for his lung-fish)

Ok.  5..4..3..5..2..21.5..4..3..5..1..1..

Okw.  13.52.41.

Extended version of *okwawula*:

13.52.41.13.51.41.13.52.41.13.52.41.

(60) *Ab'e mbuga basongeji* (People at the Chief’s residence are filtering)

Ok.  4..4..4..41.1..1..3..3..2..2..1..1..


(61) *Wakayayu azinide ebuko analya ki?* (Wakayayu has danced at his in-laws, what will he eat?)

Ok.  2..4..4..2..3..31.2..1..5..2..1..5..3..3..2..1..5..

Okw. 35.24.35.25.24.35.25.23.13.35.24.35.24.13.35.24.13.4.

(62) *Njugala okuddayo e Bukunja* (I want to go back to Bukunja). M.

Ok.  3..4..4..3..1..1J.3..2..5..3..2..2..

Okw. 41.35.24.41.35.24.41.35.24.41.35.14.

(63) *Uganda kwefuga* (Uganda Independence). M.

Ok.  4..4..41.2..1..5..1..1..5..2..1..5..

Okw. 35.24.13.

Variant pattern of *okwawula* by Mr. Waida, Salama:


Group II (Katongole-pattern)

(64) *Matu ga njobe* (The ears of the waterbuck)

Ok.  2..4..2..5..2..3..11.1..


The notes of this tune, as Mr. Muyinda taught me, are practically identical with those of “*Ommnyoro atunda nandere*” (no. 68)

(65) *Nzige buzige si rusejera* (Grown-up locusts are not young ones)

Ok.  21.4..2..2..1.1..2..5..

Okw. 14.35.

The blind musicians of Salama play *okwawula* as 24.35.

Some people call this tune “*Endwadde ya kaboongo*” (The disease of syphilis)

(66) *Yabba nandere* (He stole nandere fish)

Ok.  21.4..1..1..2..3..1..1..


Important variation of the *okwawula*:

13.35.13.35.13.33.14.35.

(67) *Omusango gw’enmama* (The case of the meat)

Ok.  5..5..4..1..1..2..3..21.

Okw. 24.35.24.35.13.35.24.35.

| 1 | 1 | 1 |
(68)  *Ommnyoro atunda nandere* (The Munyoro sells nandere fish)
This title was recently changed to "*Omusajja atunda Nandere*" (The man sells nandere fish)
Ok.  21.4..2..5..2..3..1..1..
Okw.  24.35.
Variation of *okwawula*: 24.35.24.35.23.35.14.35.
Many musicians prefer this *okwawula*: 14.35.14.35.13.35.14.35.

(69)  *Ennyana ekutudde* (The calf has broken loose)
Ok.  21.4..1..1..2..3..1..1..
Variation of the *okunaga*:
1 2.4..4..4..2..3..1..1..

(70)  *Bawala luga* (Nickname for a cruel person)
Ok.  14.35.24.35.14.35.23.35.

(71)  *Yalambula amasa^a* (He toured the counties)
Ok.  2..4..4..41.2..2..5..5..2..3..2..5..2..2..1..1..
Variations of the *okwawula*:
(These variations can also be mixed to form new variant patterns)

(72)  *Webale kujja Nakanta^a* (It is good you have come, Nakanta)
Ok.  2..3..2..5,.2!..2..1..5..2..3..2..5..2..2..1..1..

(73)  *Omulwadde w’envun^a analaba obuyinja* (Stones will hurt the feet of one with jiggers)
Ok.  2..4..4..41.2..2..1..2..3..3..3..2..1..5..5.

(74)  *Singa namera byoya singa mbuse* (If I had wings I could fly)
Ok.  2..4..4..4..2..3..2..5..3..5..5..5..2..2..21.5..

(75)  *Walulumba okyakukendula enkende kki?* (Wasp, what made your waist so narrow?)
Ok.  2..4..4..4..2..1..1..21.3..3..3..2..5..5..5..
Okw.  24.35.24.35.24.35.24.35.24.35.24.35.24.35.14.35.
Another version of *okwawula*:

(76)  *Ganga alula* (Ganga had a narrow escape)
Ok.  21.4..2..2..5..1..5..2..3..1..1..
(77) Omusalaba (The cross). M.
Ok. 4.1...1...1.3...1...1.5...5...1...2...11.
The above version of okwaivula is that of the Salama Blind. Mr. Muyinda’s version was slightly different:

(78) Be tmyunwa nabo omwenge (Those with whom we share the beer). M.
Ok. 4.4...4...1...2...1...51.1...3...2...1...1...3...3...5...

(79) Banawulira evvumbe (They will smell the aroma). M.
Ok. 41...3...4...4...2...1...2...2...4...3...1...1...
Okw. 14.35.
A few musicians play okwawula as 24.35.

(80) Emnyaanja ye Rwaje (The lake of Rwaje)
Ok. 31.4...4...4...3...2...2...2...3...5...5...1...3...1...1...
Okw. 34.44.34.41.25.41.25.41.35.41.15.41.35.41.25.41.2

(81) Baabirya bisooboza (They ate the beans at the leaf stage)
Ok. 31.3...1...1...2...1...4...4...2...2...2...1...5...5...1...5...

(82) Kyalale (Raleigh bicycle). M.
Ok. 31.5...3...3...3...1...2...2...5...5...2...2...3...4...3...1...
Okw. 25.41.25.41.25.41.25.41.25.41.25.41.25.41.25.41.

(83) Nali simanyi nga ndiwona esasi (I did not expect to survive the bullet)
Ok. 2...2...4...4...2...3...1...1...21.2...2...5...2...3...1...1...

(84) Mpa waloli yanda-yanda (Nobody will dance for me when I am dead). M.
Ok. 2...41.3...3...3...4...1...1...2...4...4...3...2...2...5...5...
Okw. 35.14.

(85) Kataza miti (Kataza tree)
Ok. 21.4...2...3...3...2...1...1...2...4...2...1...1...1...5...5...

(86) Omukanya bulo atuyanye (The eater of millet has perspired)
Ok. 1...41.4...2...1...2...1...1...1...4...4...2...1...2...5...5...
Okw. 14.35.

(87) Empuuta nagirya (I ate empuuta fish)
Ok. 4...41.3...2...2...3...5...5...3...3...2...1...1...2...1...1...
Okw. 53.24.
(88) *Muno omwa baba* (In this house of my grandfather)
Ok. \[3, 3, 3, 1, 3, 4, 31, 1, 3, 2, 1, 5, 3, 5, 5, 5, 5, 5, 5, 5\]
Okw. \[35, 41\]

(89) Title unknown
Ok. \[11, 3, 1, 2, 2, 2, 5, 5, 5, 1, 3, 1, 4, 4, 4, 4, 4, 4\]
Okw. \[13, 24, 13, 24, 53, 24, 13, 24, 53, 24, 53, 24, 53, 24\]

(90) *Ab'e Salama* (People of Salama). M.
Ok. \[2, 4, 4, 4, 3, 3, 3, 2, 1, 1, 2, 4, 4, 4, 21, 2, 2, 1, 5, 5, 5, 5, 5, 5\]
Okw. \[14, 35\]

(91) *Muleke atabaale* (Let him do as he pleases). M.
Ok. \[4, 4, 4, 4, 1, 1, 1, 4, 31, 3, 3, 3, 5, 1, 5, 1, 5, 1, 2, 2, 2\]
Okw. \[53, 24\]

Group III

(92) *Nakulabudee* (I warned you)
Ok. \[4, 5, 5, 4, 2, 2, 4, 3, 1, 4, 2, 21\]
Okw. \[53, 14, 25\]

(93) *Nantara Lubanjie* (proper name)
Ok. \[5, 5, 5, 5, 3, 1, 2, 1, 4, 4, 31, 3\]
Okw. \[53, 14, 25\]

(94) *Bijja bisamba endege* (They come rattling the anklet bells)
Ok. \[4, 4, 4, 1, 1, 1, 3, 3, 3, 2, 2, 2, 2\]
Okw. \[42, 53, 14\]

(95) *Omuyoro atikkira engule* (The Munyoro wears the crown)
Ok. \[3, 3, 3, 3, 1, 1, 3, 3, 2, 2, 5, 5, 5, 5\]
Okw. \[42, 53, 14\]

Group IV

(96) *Mukadde mwangu* (The fast old one)
Ok. \[41, 4, 1, 1, 3, 3, 2, 5\]
Okw. \[52, 14, 14, 35\]

(97) *Envubu terindwa bu^iba* (One does not wait for a hippo in deep waters)
Ok. \[4, 4, 4, 4, 21, 3, 2, 3, 5, 5, 5, 5, 3, 1, 1, 1, 1\]
Okw. \[42, 14, 14, 35\]

(98) *Basubira malayika* (They hope for an angel)
Ok. \[51, 5, 2, 2, 4, 4, 3, 1\]
Okw. \[42, 25, 25, 41\]

Other patterns

(99) *Kirema embegi okulya* (What the goat cannot eat)
Ok. \[4, 4, 2, 5, 5, 31, 2, 1\]
Okw. \[42, 24, 53, 14\]
On another occasion Mr. Muyinda taught me exactly the same patterns under the title “*Kiri ku luggi*” (That which is outside the door).
(100) *Akakuba-mpanga n’enkoko bagenda mangu* (The bird of prey and the chicken disappear fast)
Ok. 4.4.2.5.3.1.3..3.1.
Okw. 34.13.24.53.

(101) *Kawuta yeggadde* (Kawuta has shut himself up)
Ok. 21.1..2.1..2.1..2.5.
Okw. 24.35.14.54.

(102) *Tweyanze, tweyanze ewa Mugwanya* (We pay homage at Mugwanya)
Ok. 4.1.1.1.11.4.1.5.5.4.3.3.3.

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