Mbira/Timbila, Karimba/Marimba: A Look at Some Relationships Between African Mbira and Marimba

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Ancestors of the modern xylophone and marimba are found throughout Africa. The mbira (“thumb piano”) has a similar widespread distribution throughout the continent. This article explores a possible relationship between the two instruments by examining their common geographical distribution, tuning systems, linguistic origins, and repertory.

In 1586, Father João Dos Santos, a Portuguese priest, visited present-day Mozambique and wrote of a musical instrument called “ambira,” played by the people he referred to as “Kaffirs”:

The best and most musical of their instruments is called the ambira, which greatly resembles our organs; it is composed of long gourds, some very wide and some very narrow, held close together and arranged in order. The narrowest, which form the treble, are placed on the left, contrary to that of our organs, and after the treble come the other gourds with their different sounds of contralto, tenor, and bass, being eighteen gourds in all. Each gourd has a small opening at the side near the end, and at the bottom a small hole the size of a dollar, covered with a certain kind of spider’s web, very fine, closely woven, and strong, which does not break. Upon all the mouths of these gourds, which are the same size and placed in a row, keys of thin wood are suspended by cords so that each key is held in the air above the hollow of its gourd, not reaching the edges of the mouth. The instrument being thus constructed, the Kaffirs play upon the keys with sticks after the fashion of drum sticks, at the points of which are buttons made of sinews rolled into a light ball the size of a nut, so that striking the notes with these two sticks, the blows resound in the mouths of the gourds, producing a sweet and rhythmical harmony, which can be heard as far as the sound of a good harpsichord. There are many of these instruments, and many musicians who play upon them well (Theal 1901:202).

Dos Santos is here describing, for the first time in recorded history, the mbira known by some as a kalimba (Berliner 1993:9; see Figure 2). It is curious that both instruments are described as having the same name. It is the premise of this article that Father Dos Santos was not mistaken, and that the mbira and xylophone are indeed related.

Instruments of the xylophone family fall into the category of pitched idiophones, while those of the mbira family are considered lamellaphones, a term denoting an instrument whose sound is produced by the vibration of thin lamellae, or tongues of metal, wood, or other material plucked by the thumbs or fingers (Kauffman 1980:497). There is evidence suggesting a possible link between the two instru-
Kauffman’s (1970:74–75) map of mbira phones also play the mbira, or vice versa. This does not, however, necessarily imply that all ethnic groups who play the xylophone also play the mbira, or vice versa. Kauffman’s (1970:74–75) map of mbira distribution (based in Georges Montandon’s 1919 study of 85 mbiras) shows “a concentration of instruments along the waterways, particularly the Congo and Zambezi rivers. This is not surprising, when one considers that the portability of the mbira could easily account for its distribution along river routes.”

Jones (1959:205–206) suggests that both xylophones and mbiras have extensive distribution without regard to linguistic differences. In reference to the mbira, he states, “It is widely distributed and not only in the Bantu areas, yet as in the case of the xylophone, it is not used by some tribes at all.”

**TUNING**

Mbiras and xylophones use similar and, sometimes, identical tuning systems. The overwhelming majority use either heptatonic (seven-tone) or pentatonic (five-tone) scales. Heptatonic tuning is predominant in the areas represented by the distribution maps for mbiras and xylophones mentioned earlier. Pentatonic tuning is found with both instruments in the northernmost portion of the distribution area, especially in southern Uganda and the northern Congo River basin (Jones 1971:105; H. Tracey 1961:18.22–24; Kubik 1964:26–28; 1965:73).

According to Andrew Tracey, the whole of the Zambezi River basin up to Angola uses exclusively heptatonic tuning. Measurements taken by his father, Hugh Tracey, show that approximately 40 percent of Africans in central, eastern, and southern Africa use heptatonic scales, 40 percent use pentatonic, and the remaining 20 percent use either hexatonic (six-tone) or tetradonic (four-tone) scales (A. Tracey 2000).

The Shona karimba, variously referred to as the “Tapera ‘kalimba’ mbira” (A. Tracey 1961:44–46), the “Kwanangoma mbira” (Axelsson 1981:61), the “South Bank karimba” (A. Tracey 1972:90), and “Nyunganyunga” (Maraire 1984; see Figure 2), appears at first glance to employ a hexatonic tuning. While the instrument does indeed have six pitches to the octave, they function as a heptatonic scale with the fourth degree missing.

Both Jones (1971:34) and Hugh Tracey (1948:128, “Diagram V”) have made the case that some xylophones are tuned to an equidistant heptatonic scale. Likewise, Andrew Tracey (1970:10) describes the tuning of the Shona mbira dzavadzimu as “a seven-tone scale with all the intervals equal,” while Gerhard Kubik (1980a:499) describes it as a “nearly equidistant heptatonic scale.” It is, in fact, this similarity of tuning between the mbira and xylophone that led Jones (1971:34) to conclude that mbiras “derive from the same ultimate origin and are to be considered as small portable versions of the bigger instrument.” He finds the same equitonal principle applied to pentatonic xylophones and lamellaphones, as well (1971:111).

Hugh Tracey (1948:123) finds the tuning of the Chopi āmble (heptatonic xylophone from Mozambique) almost identical to the heptatonic njari type mbira of the Karanga people of southern Zimbabwe. While Tracey’s measurements indeed indicate equidistant tuning in both instruments, the equitonal principle does not bear the weight of scrutiny in more recent measurements of mbira dzavadzimu by Paul Berliner (1993:66) and Claire Jones (1996:7–8; tables 1 and 2).

These departures from equidistant tuning could be a result of the influence of western popular music, especially since 1954, when Shona radio broadcasts began (Kauffman 1970:201–202). Christian missionary activities certainly had an influence on African music prior to 1954, but would have had little impact on mbira tunings because the churches were particularly intent on suppressing mbira music (Brown).
In 1932, Hugh Tracey (1969:93) wrote:

Missionary activity, which has been of long standing in this district, has not, it appears, influenced the tuning of the mbira in the least. In no area I have visited has the European scale in the least affected the local instruments.

It seems logical to assume that xylophones would be subject to less fluctuation in tuning over the years than mbiras, simply due to the relatively fixed nature of the instrument. The portability of the mbira and its relative variability with regard to tuning could account for a gradual departure from an equidistant tuning system. Today, mbiras are played alongside guitars, keyboards, saxophones, and other instruments tuned to western scales. While some would argue against such a departure from “tradition,” others consider it a testament to the instrument’s adaptability and resilience.

**LINGUISTIC ORIGINS**

Linguistic comparisons provide some of the most compelling evidence of a relationship between the mbira and marimba. Throughout the Bantu-speaking area of Africa (including most of central, southern, and eastern Africa), the words marimba and mbira are used almost interchangeably for both xylophones and lamellaphones. The phonemes “R” and “L” are interchangeable in most Bantu languages, so marimba becomes malimba, karimba becomes kalimba, and mbira becomes mbila (Kubik 1980b:681–682). In addition, these words are often subjected to metathesis, a phenomenon described by G. T. Nurse (1970:32) as “a change consisting of a transposition of consonants with little or no alteration in meaning.” So the word mbira is related to marimba through metathesis, as is mbila to malimba.

According to Gerhard Kubik (1980b:681–682), the term rimba or limba refers to a single-note xylophone. Nurse (1970:35) suggests that the rimba/limba stem refers to “a firm flattish object sticking out,” such as the spur of a cock, or the flat, protrusive fin of a fish. “In short,” says Nurse, “to a lamella.” It can also refer to a xylophone bar.

According to Kubik (1980b:682), “Marimba (or malimba) is derived from the cumulative prefix ma to the stem rimba (or limba, r and l being the same phoneme in many Bantu languages). Marimba is, therefore, the full instrument, consisting of many rimba (notes).” Likewise, the term mbira refers to individual keys on a lamellaphone as well as to the entire instrument, or several instruments (Berliner 1993:9).

According to Hugh Tracey (1948:121), mbila is a single note on the xylophone of the Chopi people of Mozambique. This instrument or an ensemble of instruments is referred to as timbila. The rimba/limba stem is also found in the commonly used term kalimba to designate a lamellaphone. According to A. M. Jones (1971:153), ka-is a diminutive prefix indicating a “little limba,” furthering his claim that the lamellaphone is a “portable xylophone.”

We have already seen that Nurse (1970:35) considers the limba stem to indicate a lamella. He further states that the prefix ka-is an onomatopoetic ideophone referring to the sound of clapping or the striking gesture employed in playing the kalimba (1970:34).

Figures 3 and 4 show the wide distribution of both xylophones and lamellaphones according to the use of the rimba/limba or mbira/mbila stems. The word marimba refers to a xylophone on the islands of Zanzibar and Pemba, as well as on the coast of Tanzania, in southern Congo, and northern Angola. Farther inland in Tanzania and also in Angola, the same word refers to a lamellaphone. According to Kauffman (1980:497), in other parts of Tanzania and on Zanzibar, lamellaphones are called marimba madogo, which means “small marimba.”

Marimba also refers to xylophones in Mozambique and Zimbabwe, and to lamellaphones in parts of South Africa, Mozambique, and Malawi. Likewise, mbira refers to lamellaphones in Zimbabwe and throughout the lower Zambezi basin, and also to xylophones in parts of Zambia, Tanzania, and southern Congo. Mbila and timbila also refer to both xylophones and lamellaphones. Dimpila is a South African lamellaphone, dimpila a xylophone in

![Figure 3. Distribution of xylophones and lamellaphones according to rimba/limba stems. Map © 2001, B. Michael Williams.](image)
northern Mozambique. Simbila is a xylophone in southern Congo, silimba a xylophone in Zambia, and ilimba a lamellaphone in Tanzania. Lamellaphones in Malawi are called marimba, malimba, kalimba, and cilimba, while xylophones are valimba or ulimba. In terms of language, the two instruments seem virtually indistinguishable.9

The interchangeability of the words mbira and marimba carried over to the New World with the slave trade beginning in the 16th century (List 1968:58). According to George List (1968:55), lamellaphones are known in the Dominican Republic as marimba and in Cuba as marimbula. Both of these names refer to the same instrument in Haiti, and other names are applied to it, such as mbila, malimba, and marimbula. He notes the instrument was found in Louisiana under the name marimba brett. The name marimba is, of course, most closely associated with gourd-resonated xylophones of southern Mexico and Central America.

REPERTORY

If the mbira were indeed a “portable xylophone” as A. M. Jones suggests, it would be reasonable to assume that the instrument would share a repertory of tunes with its larger cousin. This assumption cannot, however, be verified by the existing published research.

Andrew Tracey has indicated that, in the Lower Zambezi area, much of the xylophone repertory can be analyzed as being very similar, particularly in harmonic structure, to the mbira music of the same area (A. Tracey 2000, 1984b:665). Whether or not the two instruments share indigenous tunes of the same name remains an open question.

Tracey also points to similarities in key layout and tuning between the West Zambian silimba xylophone and the ndimba lamellaphone (A. Tracey 1974:3). Tunes on these instruments can easily be transferred because the key layouts are so similar (A. Tracey 2000). Kubik (1988:65) points out that the basic layout of the eight-key kalimba is identical to the lower eight notes of the silimba.10

John Kaemmer (1998b:715–716) presents an interesting hypothesis concerning the relationships between xylophones and mbira relative to key layout. Some xylophones are played by two musicians—one on each side of the instrument. “This means,” says Kaemmer, “that for one player, the low notes are on the left, and for the other, they are on the right. Many mbira have low notes in the center, meaning they are on the left for one hand, and on the right for the other hand” (see Figure 2). These kinds of similarities certainly indicate the possibility of shared repertory with the xylophone, but further field research would be necessary to confirm this.

A more recent innovation in Zimbabwean music provides an excellent example of shared repertory between the xylophone and mbira. According to Olaf Axelsson (1981:61), the marimba existed in Zimbabwe during the Mwena Mutapa kingdom (circa 14th–16th c.) but has since become extinct as an indigenous instrument due to colonialism and forced migrations.

In 1960, The Kwanongoma College of Music was organized in Bulawayo, Zimbabwe with the primary aim “to foster and encourage the immense artistic values in African musical styles and its instruments, preparing the way for the emergence of an African musicology in modern African nations” (Axelsson 1981:60). Kauffman (1970:198) describes the Kwanongoma curriculum:

Students come for a two- or three-year course of study at Kwanongoma and are taught African music along with European music. Since several tribes are represented among the Kwanongoma students, an attempt is made to fuse the musical traditions of the represented groups. The most
dramatic and influential part of the Kwanongoma training includes the playing on specially-constructed marimbas capable of playing Chopi, Lozi, or Venda music. The marimba is presently not a part of Shona musical practice, but graduates of Kwanongoma have recently introduced the instrument into Shona communities with tremendous success.

Patterned after the Chopi timbila ensemble, the Kwanongoma marimba ensemble consists of four different-sized instruments (soprano, tenor, baritone, and bass), covering a four-octave range (See Figures 5 and 6). These ensembles play a wide range of musical styles, from traditional Shona vocal and mbira music to western popular and “Afro-pop” tunes, reggae, and even European classical music (C. Jones 1992:97–103).

Traditional mbira music is characterized by a polyrhythmic style predicated on an interlocking technique (known in western music as hocket) through which complex rhythmic and melodic patterns emerge. This interlocking principle is multiplied when two (or more) instruments play together, and displays an increasing complexity. One instrument plays the basic pattern known as kushaura (“to lead” or “to start”) while another plays a complementary pattern called kutsinhira (“to follow”) (Berliner 1993:73). The two parts may vary rhythmically, or they may be essentially identical, with the kutsinhira staggered one pulse behind or ahead of the kushaura (see Figure 7).

When traditional mbira tunes are arranged for marimba ensembles, these interlocking patterns are transferred to the alternating strokes of the mallets in the various voices. The result is a fuller ensemble version of the traditional mbira tune originally played by two musicians. The Kwanongoma-style marimba ensembles have become quite successful, spreading throughout Zimbabwe and neighboring countries. Marimba ensembles have also become highly popular in the United States, where the late Dr. Dumisani Maraire, a Shona musician and Kwanongoma graduate, introduced them at the University of Washington in Seattle (C. Jones 1992:85).

CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The evidence of a relationship between the mbira and the marimba is compelling. The instruments have been shown to share geographical distribution, tuning systems, and etymology. Since 1960, the instruments have shared repertory in Zimbabwe and neighboring countries, as well as in the U.S.

Further research is necessary to determine whether or not they share an indigenous repertory of traditional tunes. Much of the current published research has focused on a particular instrument or ethnic group. The question of shared repertory must be answered with extensive field study in the major centers of mbira and xy-
lophone activity throughout the Bantu-speaking area of Africa. Maps of distribution need to be formulated with greater accuracy and with regard to the overlap of mbira and xylophone playing traditions in central, eastern, and southern Africa.

With the current interest in ethnomusicology spreading throughout the world, this would be an excellent topic for young scholars to explore. It is my hope that the information presented here will pique the interest of the current generation of scholars in answering some of the questions that have heretofore been open to speculation.

BIBLIOGRAPHY

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ENDNOTES

1. Hornbostel (1933:304-305) lists both xylophones and mbiras (sansas) as pitched idiophones, the former struck and the latter plucked. Kauffman (1980:497) points out that the term “plucked idiophone” is not entirely accurate, as the tongues of the instrument are not actually plucked, but pressed and released.

2. Kauffman (1970:72–73) cites Jaap Kunst as stating the existence of an Indonesian version of the mbira used to replicate the interlocking parts of a gamelan orchestra. I have found no other reference in this regard. Even Jones (1971:153), who seems particularly bent on proving an Indonesian origin of the xylophone, acknowledges the African origin of lamellaphones. List (1968:54) regards the mbira as the only musical instrument with its origin in sub-Saharan Africa.

3. Dr. Hugh Tracey made numerous field trips throughout central, southern, and eastern Africa. The field recordings from these trips resulted in the 210 disc “Sound of Africa” series, distributed by the International Library of African Music in Grahamstown, South Africa, Andrew Tracey, Director. Web page: http://ilam.ru.ac.za. E-mail: A.Tracey@ru.ac.za.

4. Several reputable scholars, including John Blacking (1966) and Mantle Hood (1965), have criticized Jones’ method of arriving at tunings by calculating averages and allowing for “gapped” scales and “intercalary,” or added notes, explained as out-of-tune duplicate notes or notes created to fill in the “gaps” (Blench 1982:87). Jones’ hypothesis of an Indonesian origin of the xylophone is largely predicated on what he termed the “equitonal principle” (1971:54), his assertion being that equidistant scales were developed in Indonesia and brought to Africa in prehistoric migrations. Roger Blench (1982) presents a coherent synopsis of this highly controversial topic, with thoughtful and logical explanations of the problematic scholarship methods involved.

5. According to Tracey (H. Tracey 1948:123), the Karanga of present-day Zimbabwe are related to the Chopi of Mozambique, the two ethnic groups having separated some 500 years ago. The Chopi are famous for their equiheptatonic marimba orchestras called *timbila*.

6. Lynn Jessup (1983:39) reports a similar departure from equidistant tuning in Mandinka balaphones from The Gambia. “...perhaps, due to the influx of Western music,” says Jessup, “there has been an erosion in sensitivity to traditional tuning systems.” Eric Chary (2000:166-167) mentions “a general lack of conformity of balas to a theoretical equal-toned scale” that he finds “puzzling.” He attributes such tuning differences to regional preferences, even though the instruments “appear to roughly conform to a conception of an equal seven-tone scale.”

7. According to Wim Van Zanten (1977:125), the *limba* stem refers to characteristics of firmness, hardness, and strength. These are certainly qualities one would look for in a xylophone bar or a lamela. Van Zanten (1977:107-108) notes that the Asena of Malawi construct the soundboards of their bangwe zithers from *mlombwa* (also called *mbira*) wood, preferred because of its strength. The same wood is used for both the keys and the frame of the *valimba* xylophone.

8. Kubik (1964:30) also refers to *ka-* as a diminutive prefix, pointing out that it can indicate the “size” of the notes. *Kalimba*, therefore, would indicate a “soprano” instrument.

9. There are, of course, many other names given to xylophones and lamellaphones that do not use the *limba/nimba* stem or its metathesis. *Sanza* and *likembe* are common names for mbira, especially in central Africa. For more information on other mbira names, see H. Tracey (1961) and Kubik (1964/65). For xylophones, see Anderson (1967), and Nurse (1970).


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