

Musical Bows and the Spirit of Human Discovery*

GERHARD KUBIK

Abstract

In this article, the author attempts to identify and reconstruct *pathways of invention* in the remote history of musical bows in sub-Saharan Africa, as to their organology, acoustics and playing techniques. In this context several distinctive bow traditions with emphasis on the individual, creative performer are compared: !Kung' and Bantu-language traditions from Angola 1965, musical bows and related instruments in the raffia intensity zone of west-Central Africa, 1966, bow traditions in Mozambique, Malawi and Zambia, 1970s to 1990s. The article sketches out alternatives to unilinear evolutionistic interpretations of African culture history.

Gli archi musicali e lo spirito creativo dell'umanità. *Nell'articolo l'autore tenta di ricostruire i percorsi dell'invenzione nella storia remota degli archi musicali nell'Africa sub-sahariana, in riferimento alla loro organologia, acustica e tecnica esecutiva. In quest'ambito, vengono messe a confronto, ponendo l'accento sulla figura individuale creativa dell'esecutore, diverse singole tradizioni dell'arco: le tradizioni di lingua !kung' e bantu dell'Angola nel 1965, gli archi musicali e gli strumenti ad essi collegati nella zona ricca di raffia nella parte occidentale dell'Africa Centrale nel 1966, le tradizioni dell'arco in Mozambico, Zambia e Malawi tra gli anni '70 e i '90. L'articolo presenta alcune alternative alle interpretazioni evoluzionistiche unilineari della storia culturale in Africa.*

* The present paper was written in the context of research project P 30718 – 26 supported by the Austrian Science Fund, Vienna.

Although we cannot undertake a time journey into the remote past, it is safe to assume that sub-Saharan Africa was one of the earliest locations for humans to experiment with the acoustics of stretched strings. This was conducive to an increasing awareness of sound relationships based on pitch and timbre.

Khoisan speakers – probably the original inhabitants of much of the southern African savanna – must have discovered the properties of stretched strings from the moment they began to experiment with sound emanating from their hunting bows and that was probably since the beginnings of the bow technique as such. However, any evolutionary strands as proposed by Henry Balfour (1899) and others that link the invention of the musical bow to that of the hunting bow are twisted and by no means unilinear. Musical bows are complex devices. They are the outcome of several independent acts of experimentation. A preliminary stage in this process could have been a sudden increase in human curiosity about resonance: echo effects in rock shelters and caves, resonance in deep vessels and the use of special phonemes such as clicks in speech. All this would have stimulated further experimentation and promoted recognition of the natural harmonic series. Even by clapping one's hands in front of one's mouth while varying its size, one can produce notable melodic effects. This technique is widely known in central Africa and often demonstrated by children. In some parts of the world, humans also discovered diphonic singing (or “overtone” singing). Such vocal techniques survive in Mongolia, in Vietnam, and among the amaXhosa of South Africa and the Wagogo of Tanzania.

A dramatic step in early discoveries appears to have been the idea by Khoisan speakers to divide the single string of their massive hunting bows; stopping it with a finger or (in extension) with an external object or binding a tuning noose around the string and stave somewhere in the middle. Thereby the hunting bow was temporarily transformed into a musical instrument. Different methods were then tried out for sound amplification. One was to insert a bow's end into the player's mouth, pointing it towards the inside of the right cheek. When playing the player would articulate vowels and other sounds, using the mouth as a variable resonator (Fig. 1, [Audio example 1](#)). The ensuing vibrations in the performer's skull are known for their therapeutic effect, as I learned from conversations with my !Kung'-speaking research associate Joachim Manjolo in Kwitu-Kwanavale, Angola in 1965. In the loneliness of a solitary hunting trip it may help to find relief in periods of stress.

Converting a hunting bow into a mouth-resonated instrument, however, represents only one set of solutions within multiple processes of exploration that involve bow-stick and bow-string. For this reason the question that was posed by researchers early in the twentieth century, whether it was the hunting bow or the musical bow that was invented first, is somehow misguided. The question bypasses the fact that any invention is necessarily the product of an interplay of several discoveries leading to a patterned result. Hunting bow and musical bow are interconnected through experiments undertaken



FIGURE 1. Hunting bow transformed into a mouthbow by !Kung' speaking performer Ndala Lupupa. In this playing technique one end of the bowstick was inserted into the mouth, pointing it towards the inside of the right cheek. The bow was divided with a tuning loop. Thereby the musician obtained two fundamentals, A3 -20 cents and C4 -50 cents, which is approximately the interval of a natural major third. He created a three-tone melody by reinforcing partials through minute changes of the size of his mouth as a natural resonator. The instrument was called *n/ka*. The sign [ʎ] represents a dental click in the !Kung' language, the sign [!] a palatal click (Kumboyombacho near Kwitu Kwanavele, southeastern Angola, November 1965; photos: G. Kubik).

over long time periods. There could not have been an invention of the musical bow as such in a singular flash of the spirit.

That such processes are complex, covering long periods of history, now seems to be uncontested. It also makes us understand why a specific evolutionary sequence is not necessarily repeated everywhere on Planet Earth. There are cultures in which people have never thought of transforming a hunting bow into a musical bow, for reasons that may have been organological, ecological, social or something else. One cultural environment promotes the invention of certain techniques while another discourages it. In Africa and elsewhere there are many musical bow traditions that have no convincing evolutionary background derived from the hunting bow. Their history has evolved along different lines connected to different experiences of the acoustics of stretched strings. In west-central Africa, for example in the so-called raffia intensity zone – a geographical region in which the raffia palm (bot. *raphia farinifera*) provides basic materials for dozens of articles, beds, tables, chairs etc. and musical instruments – people developed a different approach. In some locations children have learned to carve out straps of the hard epidermis of a raffia leaf stem, then raise such a strap and push two bridges underneath. When struck it gives a sound. This device is known as the mono-idiochord zither. It is still a prominent instrument in the raffia zone and often used by youngsters (Fig. 2, [Audio example 2](#)).

If several straps are raised to form strings, one can construct a polyidiochord stick zither, such as the *muet* of southern Cameroon played by elders. The wide variety of



FIGURE 2. *Mpeli*, monoidiochord zither played by two youngsters: Maurice Djenda and Moise Mbongo in their village. They constructed their instrument from a length of raffia leaf stem from which the string was “peeled off” and raised. Two bridges were put underneath. One performer strikes the string with two sticks, the other one changes the pitch using a slider (Bigene village, Nola District, southwestern Central African Republic, May 1966; photo: G. Kubik).

musical instruments made of raffia materials in Central Africa can be admired in the collections of the Musée Royal de l’Afrique Centrale, Tervuren, Belgium. They were studied in great detail by Jean-Sebastien Laurenty (1960).

For us researchers who are sometimes thousands of years distant from all chances of direct observation – unless a discovery is repeated exactly by contemporaries – it is difficult, if not impossible, to reconstruct realistically all the historical factors that have contributed to these inventions. The friction bow, for example, incorporates yet

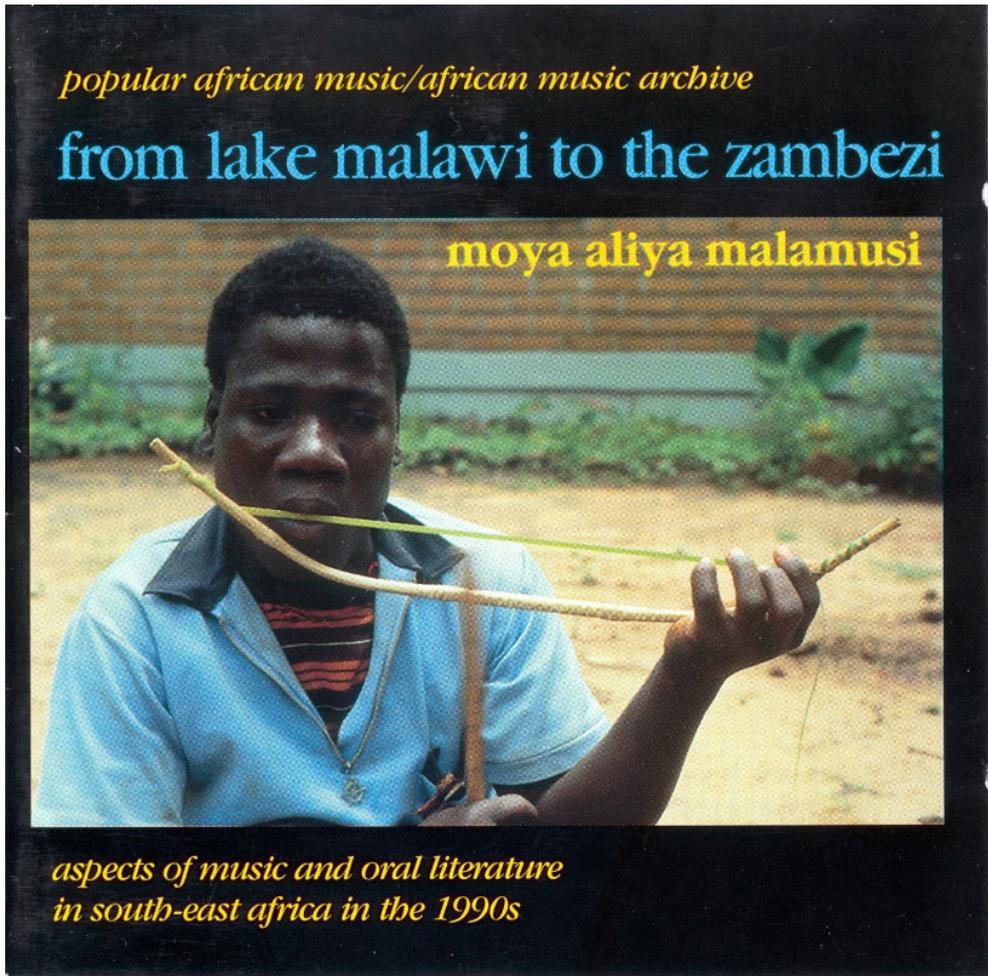


FIGURE 3. Daimon Tembo from Mozambique plays his self-constructed friction bow *nyakazeze*. This picture comes from the researcher Moya A. Malamusi's CD cover *From Lake Malawi to the Zambezi*, 1999 (Recorded at Singano village T.A. Kuntaja, Blantyre District, Malawi, 8 November, 1990; photo: M. A. Malamusi).

another idea, that of the scraper which itself may have been inspired ultimately by body experience, such as rubbing against one's ribs with the knuckles of one's hand. In 1967, Maurice Djenda and I recorded a young man in Malawi who demonstrated it (see picture in Kubik *et al.* 1982: 154-155).

Friction chordophones seem to stand at a more recent point of an evolutionary sequence not connected with hunting bows. Moya A. Malamusi studied one type, the *nyakazeze*, played by a Mozambican refugee, Diamon Tembo, in great detail in 1990. Diamon used to stop the bow's sounding tape (not string) in two places, thereby creating three roots to obtain partials by mouth amplification (Fig. 3, [Audio exam-](#)



FIGURE 4. Friction bow *kawayawaya* played by Kapokola Chimbau who was not only a great performer of this instrument, but also a notable storyteller in his language Lucazi (Chikenge Village, Kabompo District, Northwestern Province, Zambia, August 1971; photo: G. Kubik).

ple 3). Another type of friction bow, technologically different, is known across eastern Angola and northwestern Zambia under the name *kawayawaya*. The late Kapokola Chimbau at Chikenge village, Kabompo District, N.W. Zambia was recorded by us on several occasions in the 1970s. He was one of the greatest performers (Fig. 4, [Audio example 4](#)).

Once the technique of mouth-resonance and shaping of melodies from partials over two or three fundamentals had been mastered, other materials were also tried out to make such instruments, for example reed grass (bot. *Phragmites mauritanus*) for a mouth-resonated stick called *mqangala* in South Africa. It is played exclusively by women. In the late nineteenth century this invention spread with the Ngoni invasion across southeast Africa, where the name was modified, appearing as *nkangala* in central and southern Malawi, or *mtyangala* in southwestern Tanzania and northern Malawi (cf. Malamusi 2008, Adamo 2015, Kubik *et al.* 1982) (Fig. 5, [Audio example 5](#)).

In southern Angola, the culture of hunter-gatherers survived into the mid-twentieth century. I was fortunate in 1965, then still a student, to gather information on !Kung' musical practice. Thanks to a stipend obtained through Portuguese anthropologists Antonio Jorge Dias and Margot Dias, I spent five months of fieldwork in southern



FIGURE 5. Ryness Gondwe playing the *mtyangala* mouth-resonated musical stick made from reed (bot. *Phragmites mauritanus*). She puts one end of the stick to the right corner of her lips while pressing the other end with the left index finger, and stopping the string when necessary with the side of her middle finger. Ryness Gondwe relaxes in a comfortable position in front of her house. Her performance is meant to be intimate music, not for audiences. Over two fundamentals, approximately a whole-tone apart, she develops a pentatonic overtone melody reinforcing partials 2, 4 and 5 over fundamental I and 2, 3, 4 and 5 over fundamental II. In between her performance she sings while the fundamentals of the cycle are maintained (Yawulungu, Rumph District, Malawi, July 1967; photos: M. Djenda).

Angola. Besides studying Mbwela, Nkhangala, Lucazi and Cokwe cultural traditions, I also worked among !Kung' speakers around Kwitu-Kwanavale and Longa.

Now I realize that it was a last-minute field study, just before the onset of the Angolan civil war which only ended in 2002 with the near-genocide of entire populations and millions of undetected mines left behind in the savanna, making parts of Kwandu-Kuvangu Province uninhabitable. In 1965 I was surprised to learn that musical bows played by !Kung'-speaking performers were exclusively hunting bows converted often within a minute's notice. In the performers' opinion, this had been so since times immemorial, because the profession of a solitary hunter would often require to stay out hunting for days. When tired he would sit down in a shady place and pass time with his hunting bow transformed into a musical bow.

In southern Angola, there were three modes of usage among !Kung' speakers:

(a) The hunting bow's stave is passed by the player's lips, the leather string divided with a tuning noose near the middle (in Wila Province, southwestern Angola) (Fig. 6, [Audio example 6](#)).

(b) One end of the bow is inserted into the mouth and the string divided at an



FIGURE 6. Hunting bow (*onkhonji*) transformed into a musical bow (*sagaya*) by Pequenino from the ethnic group of the Ova-Nkhumbi. The bow is divided with a tuning noose and it is played mouth-resonated. The musician here passes the center of the bow stick by this mouth to produce a partials-derived melody. Obviously, this use of a hunting bow and the associated techniques were learned from !Kung' speakers living in the area (Kalova, area of Ndindi/Cilenge, Wila (Huila) Province, southwestern Angola, 15 July 1965; photos: G. Kubik).

appropriate point with a tuning noose to obtain a second fundamental (in Kwandu-Kuvangu Province, southeastern Angola) (Fig. 1, [Audio example 1](#)).

There was also, in my sample from around Kwitu-Kwanavale, an instance of a possibly more recent practice using material obtained from Bantu-language speaking agriculturists, the descendants of people who had migrated into the region during the seventeenth and eighteenth centuries, after the break-up of the Lunda Empire around 1625:

(c) This hunting bow is equipped with a gourd resonator held against the player's chest, allowing tiny movements to create wow-effects, i.e. systematic modifications of the timbre by moving the resonator slightly in front of the player's naked chest. The string is divided in the middle with a tuning noose (Fig. 7, [Audio example 7](#)).

It is, of course, conceivable that earlier !Kung' players had used other external vessels, for example the shell of a kaffir orange fruit (bot. *Strychnos spinosa*). A stamping tube with three such fruit shells connected was regularly constructed in 1965 by !Kung' women to accompany their songs. However, I did not see any bow players using a fruit shell at that time.

Gourd resonated musical bows with the stave made of other materials were popular in south-western Angola among speakers of Luhanda, Lunkhumbi and other languages of Bantu Zone R (cf. the songs of José Emanuel Virasanda analyzed by Marcelina Gomes 2015: 189-198). With the 18th and 19th century slave trade this type of musi-



FIGURE 7. Lithundu Musumali, a musical bow performer of the !Kung' ethnic group. He used to play his hunting bow in two different ways, mouth-resonated like Ndala Lupupa (Fig. 1) or with a gourd resonator. The bow is divided with a tuning noose near the middle. With the gourd resonator a kind of timbre melody is created by minute changes of the distance of the gourd's orifice in front of his chest. Lithundu Musumali called his instrument *n//kau* in !Kung' language. [//] presents a lateral click. Since the !Kung' were hunter-gatherers, the inspiration to use a gourd resonator must have come from Bantu-language speaking neighbors, though not from the present-day neighbors in southeastern Angola, such as the Vambwela, Vankhangala, Valuczazi and Tucokwe. They did not use musical bows. They had a trading relationship with the !Kung' hunters, exchanging agricultural products for meat from hunting (Camp Vimphulu, east of Kwitu Kwanavale, December 1965; photos: G. Kubik).

cal bow was exported to Brazil where the instrument became known as *berimbau* (*de barriga*) (cf. Kubik 2015). After abolition 1888 it became a principal accompaniment of the Capoeira fighting game. Tiago de Oliveira Pinto (1996) played Virasanda's recordings to capoeiristas in Brazil, noting their reactions.

In contrast to Khoisan-speaking hunter-gatherers of the southern savanna and the Kalahari, the other great hunter-gatherer population of Africa, namely the pygmies in the central African equatorial forests did not apparently develop any musical applications of hunting bows, let alone of the crossbow prominent among pygmies living in the Upper Sangha river area.

According to the results of joint research undertaken with Maurice Djenda in 1964 and 1966 in the southwestern Central African Republic, pygmies' early discovery of polyphony seems to be rooted in experiences very different from those of the !Kung' and other Khoisan speakers in southern Africa. The dense equatorial forests are a distinctive eco-space providing a soundscape that invites exploration of echo effects and the use of the human voice in certain manners to communicate over long distances. This probably led to the discovery of the yodel techniques, so prominent in pygmy musical cultures and the rise of an interlocking vocal polyphony.



FIGURE 8. Performance with *beng'* mouthbow by Fang'-speaking Obamndong' Nfung'afung'a, born 1938. His performance was part of a religious cult meeting in the *bwiti* church of priest André Mvome, in Oyem, Gabon. The musical bow in this religion stands for the male segment of the universe, while the harp *ngombi* stands for the female part symbolizing the house of the deity Nyingung-Möböghé, the central figure of this religion. During his performance the musician in this picture has placed a *ngombi* harp in front of him (Oyem, Gabon, July 1966; photo: G. Kubik).

From the background of our field recordings and the comparative study of musical expression among the !Kung' in Angola and the Bangombe and Bamberjele pygmies in the Central African Republic I would not recommend connecting pygmies and bushmen in vocal style as proposed by some researchers (cf. Grimaud 1956, Lomax 1968). These peoples display very different culture histories. Although vocal music among the

pygmies testifies to an awareness of the natural harmonic series, they do not seem to have discovered it instrumentally, unlike the !Kung' and other Khoisan speakers. In 1966 we also found no trace of any musical bows used by either Bangombe or Bambenjele pygmies of the Upper Sangha river area. Yet, mouth-bows were common among neighboring Bantu-language speakers in the Central African Republic, southern Cameroon and Gabon. Among the Fang' in Gabon the *beng'* mouth-bow is still a prominent instrument associated with *bwiti* religious cults (Fig. 8, [Audio example 8](#)). There is no verifiable historical connection with hunting bows. Polyidiochord stick zithers were also common in the region, manufactured entirely with materials obtained from the raffia palm. Once we saw such an instrument adopted by a young pygmy performer, but with a clear statement that it was not their instrument.

Summing up our discourse, we stress today that culture history is a multifaceted process, always branching out; it is never unilinear. It responds to a variety of changing ecological, social and other factors that stimulate, promote or prohibit certain developments. More recently, the memory of bow playing in southern Africa has affected the handling of other instruments as well. Mouth bow embouchure as in the *mqangala* played by women has influenced, if not modelled the oblique playing technique of flutes in *kwela*. A more general awareness of the mouth as a variable resonator is also the background to some timbre modifications on saxophones in South African Jazz (for example Winston Mankunku Ngozi) and *mbaqanga* (West Nkosi). And on the five-string acoustic guitar invented by Daniel Kachamba in Malawi during the early 1960s – now played by Sinosi Mlendo in the successor band – there is a gap instead of a fifth string, and the sixth string is isolated. It functions like a deep-tuned musical bow string, providing fundamentals (cf. Kubik 2017, Mlendo 2019).

There is now a vast body of literature on musical bows in African cultures: including their African-American extensions. Indispensable information on southern African bows is found in the works of Percival Kirby (1920s to 1960s), David Rycroft (from the 1960s to the 1980s), Giorgio Adamo (2015) and of Moya Aliya Malamusi for south-east Africa including Malawi, northern Mozambique and southwestern Tanzania. All these works are based on field studies. In addition: there are compilations such as by Jean-Sebastien Laurenty (1960) on Congo, Rwanda and Burundi, and Ulrich Wegner (1984) on African stringed instruments in general.

Audio examples

1. Hunting bow transformed into a mouthbow by !Kung' speaking performer Ndala Lupupa. [02:58]

Recorded by G. Kubik in Kumboyombacho near Kwitu Kwanavele, southeastern Angola, November 1965 (see Fig. 1).

2. Mpeli, monoidiochord zither played by two youngsters: Maurice Djenda and Moise Mbongo. [01:03]

Recorded by G. Kubik, at Bigene village, Nola District, southwestern Central African Republic, May 1966 (see Fig. 2).

3. Daimon Tembo from Mozambique plays his self-constructed friction bow *nyakazeze*. [01:39]

Recorded by Moya A. Malamusi at Singano village, T.A. Kuntaja, Blantyre District, Malawi, 8 November, 1990 (see Fig. 3).

4. Friction bow *kawayawaya* played by Kapokola Chimbau. [03:21]

Recorded by G. Kubik at Chikenge Village, Kabompo District, Northwestern Province, Zambia, August 1971 (see Fig. 4).

5. Ryness Gondwe playing the *mtyangala* mouth-resonated musical stick. [03:41]

Recorded by G. Kubik in Yawulungu, Rumphu District, Malawi, July 1967 (see Fig. 5).

6. Hunting bow (*onkhonji*) transformed into a musical bow (*sagaya*) by Pequeno. [01:54]

Recorded by G. Kubik in Kalova, area of Ndindi/Cilenge, Wila (Huila) Province, southwestern Angola, 15 July, 1965 (see Fig. 6).

7. Lithundu Musumali, a musical bow performer of the !Kung' ethnic group, playing his instrument *n//kau*. [03:14]

Recorded by G. Kubik in Camp Vimphulu, east of Kwitu Kwanavale, December 1965 (see Fig. 7).

8. Performance with *beng'* mouthbow by Fang'-speaking Obamndong' Nfung'afung'a. [05:49]

Recorded by G. Kubik in Oyem, Gabon, July 1966 (see Fig. 8).

References

- Adamo, Giorgio
 2015 “Elena and Sisiliya Kachepa, musicians. Playing Nkangala in a Malawian village”, in Brunner, Gruber, and Schmidhofer 2015: 51-74 (with video examples online).
- Ankermann, Bernhard
 1901 “Die afrikanischen Musikinstrumente”, *Ethnologisches Notizblatt*, III/1: I-X, 1-132 (reprint Leipzig, Zentralantiquariat, 1976).
- Balfour, Henry
 1899 *The natural history of the musical bow*, Oxford, Oxford University Press.
- Bastin, Marie-Louise
 1992 “Musical instruments, songs and dances of the Chokwe (Dundo Region, Lunda District, Angola)”, *African Music*, VII/2: 23-44.
- Brenner, Klaus-Peter
 1997 *Chipendani und Mbira. Musikinstrumente, nicht-begriffliche Mathematik und die Evolution der harmonischen Progressionen in der Musik der Shona in Zimbabwe*, Göttingen, Vandenhoeck & Ruprecht.
- Brunner, Anja, Cornelia Gruber, and August Schmidhofer
 2015 (eds.), *Transgression of a Musical Kind. Festschrift for Regine Allgayer-Kaufmann on the Occasion her 65th Birthday*, Aachen, Shaker Verlag.
- Dias, Margot
 1986 *Os instrumentos musicais de Moçambique*, Lisboa, Centro de Antropologia Cultural.
- DjeDje, Jacqueline Cogdell
 1999 (ed.), *Turn Up the Volume. A Celebration of African Music*, Los Angeles, UCLA, Fowler Museum of Cultural History.
- Djenda, Maurice
 1968a “L'arc-en-terre des Gbaya-Bokoto”, *African Music*, IV/2: 44-46.
 1968b “Les pygmées de la Haute Sangha”, *Geographica*, IV/14: 25-43.
 1969 *Instruments de Musique Mpyemo. Organologie, nomenclature et techniques d'exécution*. – Unpublished manuscript deposited in Culture Research Archive Gerhard Kubik/Moya A. Malamusi, Vienna.
- Evans, David
 1970 “Afro-American one stringed instruments”, *Western Folklore*, XXIX/4: 229-245.
 1998 “The reinterpretation of African musical instruments in the United States”, in Isidore Okpewho, Carl Boyce Davies, and Ali Mazrui (eds.), *The African Diaspora: African Origins and New World Self-Fashioning*, Bloomington, Indiana University Press: 379-390.
- Ganseman, Jos and Barbara Schmidt Wrenger
 1986 *Musikgeschichte in Bildern: Zentralafrika*, Leipzig, Deutscher Verlag für Musik.

Gomes, Marcelina

- 2015 “Cantigas de José Emanuel Virasanda com *embulumbumba* (arco musical)”, in Brunner, Gruber, and Schmidhofer 2015: 189-198.

Grimaud, Yvette

- 1956 “Note sur la musique vocale des Bochimán !Kung’ et des pygmées Babinga”, *Colloques de Wégimont*, XIII:105-126

Johnston, Thomas F.

- 1970 “Xizambi friction bow music of the Shangana-Tsonga”, *African Music*, IV/4: 81-95.
1971 “Shangana-Tsonga drum and bow rhythms”, *African Music*, VI/1: 59-72.

Kirby, Percival R.

- 1932 “The recognition and practical use of the harmonics of stretched strings by the Bantu of South Africa”, *Bantu Studies*, VI/1: 30-46
1934 *The Musical Instruments of the Native Races of South Africa*, London, Oxford University Press (2nd ed. 1965, Johannesburg, Witwatersrand University Press).
1961 “Physical phenomena which appear to have determined the bases and development of a harmonic sense among Bushmen, Hottentot and Bantu”, *African Music*, II/4: 6-9.

Kubik, Gerhard

- 1970 *Música Tradicional e Aculturada dos !Kung’ de Angola* (Estudos de Antropologia Cultural, 4), Lisboa, Junta de Investigações do Ultramar.
1975/6 “Musical bows in southwestern Angola 1965”, *African Music*, VI/4: 98-104.
1979 *Angolan Traits in Black Music, Games and Dances of Brazil. A Study of African Cultural Extensions Overseas* (Estudos de Antropologia Cultural, 10), Lisboa, Junta de Investigações do Ultramar.
1987a “Das Khoisan-Erbe in Süden von Angola: Bewegungsformen, Bogenharmonik und tonale Ordnung in der Musik der !Kung’ und benachbarter Bantu Populationen”, in Erich Stockmann (ed.), *Afrikanische Musikkulturen*, Berlin, Verlag Neue Musik: 82-196.
1999 “Reflections on Eli Owen’s mouth-bow: African-American one-stringed instrumental traditions and their African backgrounds”, in Jacqueline Cogdell DjeDje (ed.), *Turn Up the Volume! A Celebration of African Music*, Los Angeles, UCLA Fowler Museum of Cultural History: 186-193.
2010 *Theory of African Music*, voll. I-II, Chicago, University of Chicago Press.
2013a *Extensions of African Cultures in Brazil*, New York, Diasporic Africa Press.
2013b *Angola in the Black Cultural Expressions of Brazil*, New York, Diasporic Africa Press.
2015 “The 18th and 19th Century African Presence in Brazil. What we can learn from musical iconography”, in Brunner, Gruber, and Schmidhofer 2015: 125-161.
2017 *Jazz Transatlantic*, vol. I (*The African undercurrent in twentieth-century jazz culture*) and vol. II (*Jazz derivatives and developments in twentieth century Africa*), Jackson, University Press of Mississippi.

Kubik, Gerhard *et al.*

- 1982 *Musikgeschichte in Bildern: Ostafrika*, Leipzig, Deutscher Verlag für Musik.

Kubik, Gerhard (with Donald Kachamba, Moya Aliya Malamusi, and Lidiya Malamusi)

- 1987 *Malawian Music – A Framework for Analysis*, edited by Mitchel Strumpf, Centre for Social Research, University of Malawi, Limbe, Montfort Press.

Kubik, Gerhard and Moya A. Malamusi

- 1989 *Opeka Nyimbo. Musician-Composers from southern Malawi*. Double LP 33 rpm, MC 15, Museum Collection, Berlin, Museum für Völkerkunde, Abteilung Musikethnologie.

Laurenty, Jean Sebastien

- 1960 *Les Chordophones du Congo-Belge et du Ruanda-Urundi*, vol. II, Annales du Musée Royal du Congo Belge, Tervuren (Nouvelle Serie in-4°, Science de l'Homme, 2).

Lomax, Alan

- 1968 *Folksong Style and Culture*, Publication 88, Washington, American Association for the Advancement of Science.

Malamusi, Moya Aliya

- 1999 *From Lake Malawi to the Zambezi: Aspects of Music and Oral literature in South-East Africa in the 1990s*, CD with booklet, Popular African Music pamap 602.
 2006 *The African Mouthbow*, CD with booklet, DMR 003, Dan Moi Records.
 2008 "Musical bows in south-east Africa" in Regine Allgayer-Kaufmann and Michael Weber (eds.), *African Perspectives: Pre-colonial History, Anthropology and Ethnomusicology*, Frankfurt am Main, Peter Lang: 163-177.
 2011 *Endangered Traditions – Endangered Creativity*, CD + DVD with booklet, Popular African Music pamcwm 801.

Mlendo, Sinosi

- 2019 "From Kwela music of the 1950s to the Kachamba's Heritage Jazzband", in Giorgio Adamo, and Alessandro Cosentino (eds.), *Music Traditions, Change and Creativity in Africa. Past and Present*, Roma, NeoClassica: 33-38.

Mugglestone, Erica

- 1982 "The Gora and 'Grand' Gom-Gom. A reappraisal of Kolb's account of a Khoikhoi music bow", *African Music*, VI/2: 94-115.

Pinto, Tiago de Oliveira

- 1996 "The discourse about others' music. Reflecting on African-Brazilian concepts", *African Music*, VII/3: 21-29.

Rycroft, David

- 1966 "Friction Chordophones in South-Eastern Africa", *Galpin Society Journal*, XIX: 84-100.
 1975/6 "The Zulu bow songs of Princess Magogo", *African Music*, VI/4: 41-97.
 1980 "Musical Bow", in Stanley Sadie (ed.), *The New Grove Dictionary of Music and Musicians*, vol. XII: 811-814.
 1981/2 "The musical bow in southern Africa", in *Papers Presented at the Second Symposium on Ethnomusicology*, Rhodes University, Grahamstown, International Library of African Music: 70-76.

Schmidhofer, August

- 2015 "Musikbogen und Rassel. Ein Beitrag zur Debatte um die afrikanischen Wurzeln des *berimbau*", in Brunner, Gruber, and Schmidhofer 2015: 163-178.

Tracey, Hugh

- 1973 *Catalogue of the Sound of Africa Recordings*, vol. I and II, Roodeport, International Library of African Music.

Wegner, Ulrich

- 1984 *Afrikanische Saiteninstrumente*, Veröffentlichungen des Museums für Völkerkunde Berlin (Neue Folge 41, Abteilung Musikethnologie V), Berlin, Staatliche Museen Preussischer Kulturbesitz.